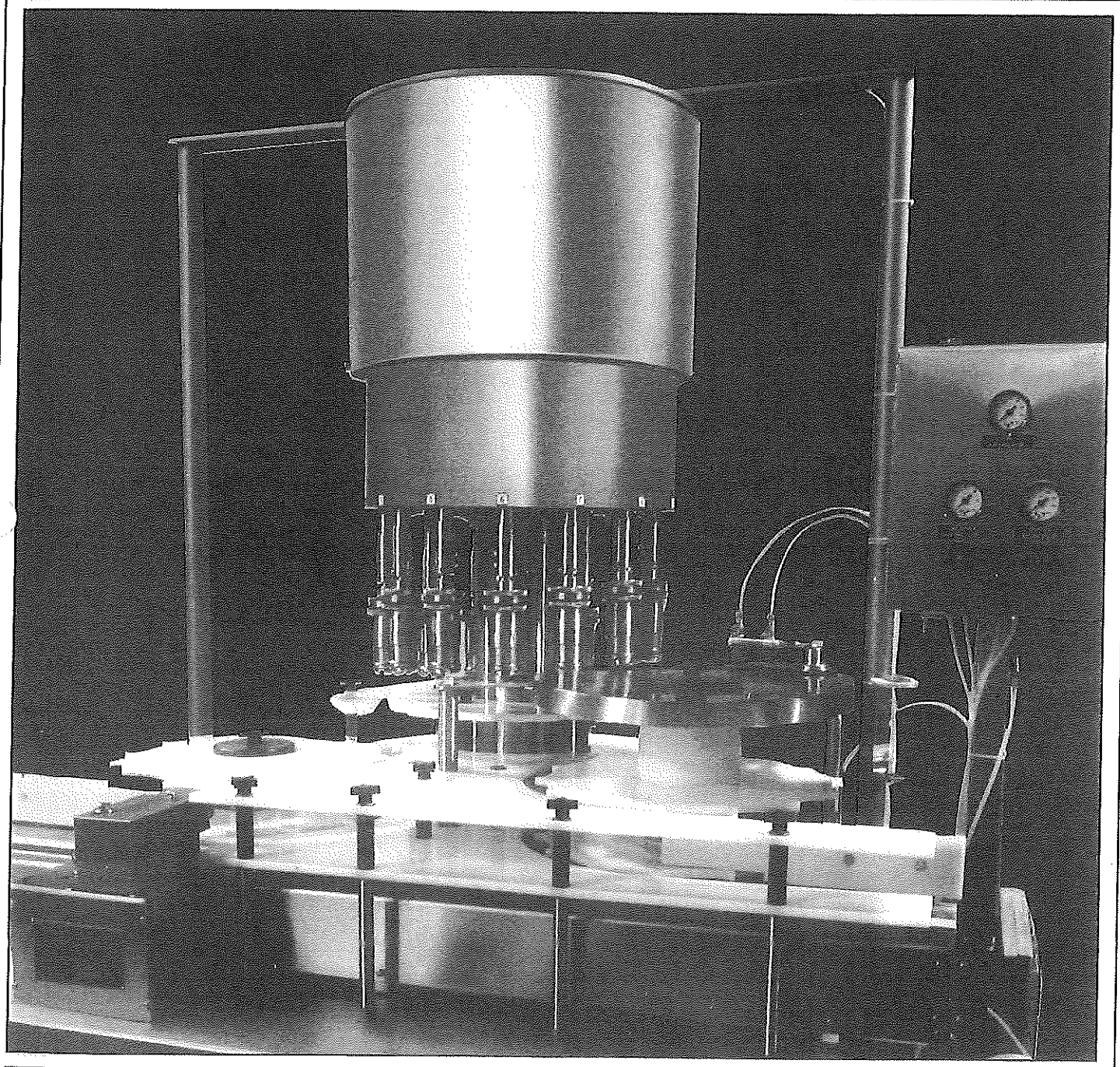
Rotary Screw-Type Capper



Capper Overview

U.S. Bottlers, Rotary Chuck Style Capper has been designed using the same high quality rugged construction found on other U.S. Bottlers rotary machines. Since its introduction in 1983, the capper has become a solid performer in the USBM arsenal. The popularity of this capper is best understood by reviewing some of the components of the machine design.

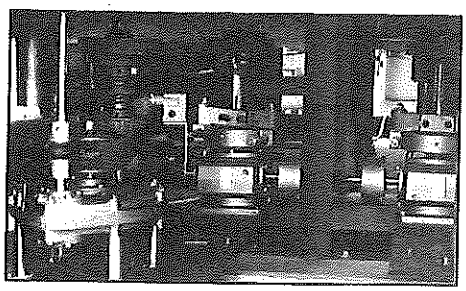
***The photograph above** shows a typical pneumatic rotary chuck style capper for a food packaging application. This is a 14-head capper with all stainless steel construction.*

US Bottlers Machinery Company

ROTARY CAPPER COMPONENTS

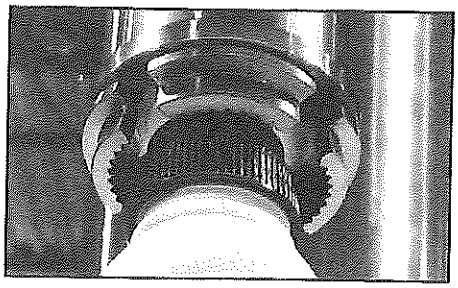
Main Drive

Whether designed around a synchronous drive or a stand-alone machine, the main drive of the equipment incorporates a double gearbox, double clutch philosophy with a heavyduty worm drive. This distributes the load between the infeed and discharge star and eliminates the old roller chain worm drive hardware of the early cappers. The stand-alone machine comes standard with an AC motor and frequency controller for ease of speed variability and digital tachometer feedback in the operator control panel.



Capping Chucks

The capping chucks are standard with an exterior stainless steel construction and can be designed for a caustic environment. Torquing adjustments are easily made by the two torque locking rings and customized chuck jaws are manufactured for either serrated caps or smooth finish caps. Caps have been run from as small as tiny hot sauce caps to large metal peanut butter caps. Whether the caps have flip-tops, pour spouts, smooth tapers, serrated edges, or tamper-evident seals, they have all been run on U.S. Bottlers cappers.



Controls

Unlike most U.S. Bottlers standard equipment, the capper comes complete with controls incorporating an operator panel on the left side of the machine and a pneumatics panel interface to the right. Both of these panels are tied to the separate controls and PLC panel external from the equipment. All hardware represents top of the line vendors for a complete package, allowing the operators to quickly understand fault conditions, bottle-per-minute readouts, and variable speed adjustments.

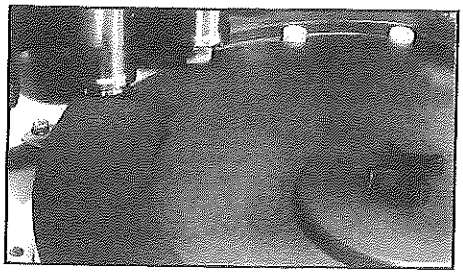
U.S. Bottlers' electrical engineers can customize all of the controls, components, and design if the customer so requires. Each panel and schematic is laid out on CAD, pretested, and only requires simple point-to-point wiring for field installation by the customer.

When a synchronous line or multiple machines are provided, the additional controls for these devices can be combined with the capper controls for a complete package at a reduced cost increase to the customer.

PickUp Star

A prime advantage of the pickup star design of the cap transfer plate in the U.S. Bottlers capper ensures that no chuck components touch the underside of the cap. This maintains the integrity of the sanitary feature of the cap prior to being sealed on the container, which is violated by some of the competition in their cap pick and placement applications.

Note that the pickup star is pretimed as part of the discharge star assembly.

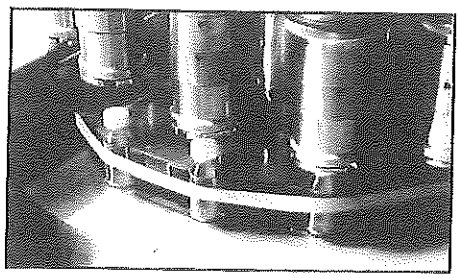


***The metal pickup star** is made out of stainless steel to insure that the star will last the lifetime of the attachments.*

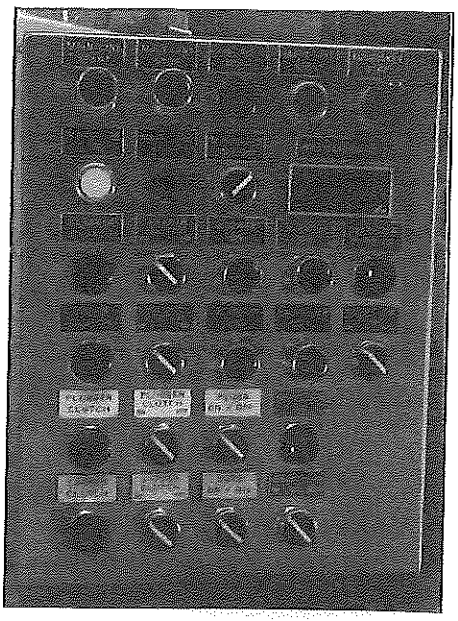
Clamping Belt

One of the unique features of the U.S. Bottlers capper is the traveling clamping belt in the rear of the machine that holds the container in place during torquing. This is far superior to the non-rotational rail as found on much of the competition. The belt take-up automatically adjusts for bottle diameter variations and provides better gripping on round shapes.

However, if desired, a non-rotational rail is available as an option.



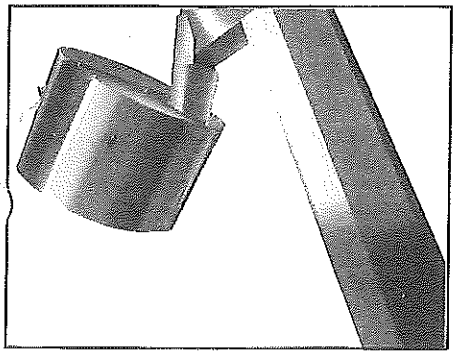
***Belt widths** are available from 1/2-inch to 1-1/2 inches, depending on the bottle height and diameter.*



***A Nema 4X** stainless steel operator panel is shown here, mounted and prewired to the cabinet.*

Sorters

Depending on the cap application, a variety of sorter combinations are available for ensuring that the cap is in the proper orientation for the discharge star on the capper. In the past, a 36-inch or 48-inch inclined sorter has been provided for pneumatically orienting the cap, but if the cap requires, a centrifugal, pinwheel, or vibratory sorter is available. Furthermore, the new hopper/elevator vertical sorter has become quite popular for some of the more common cap configurations.

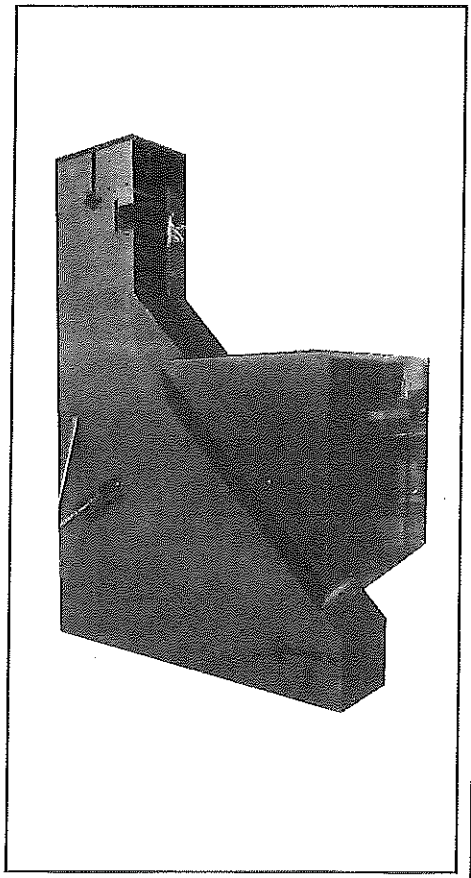


Hopper/Elevator

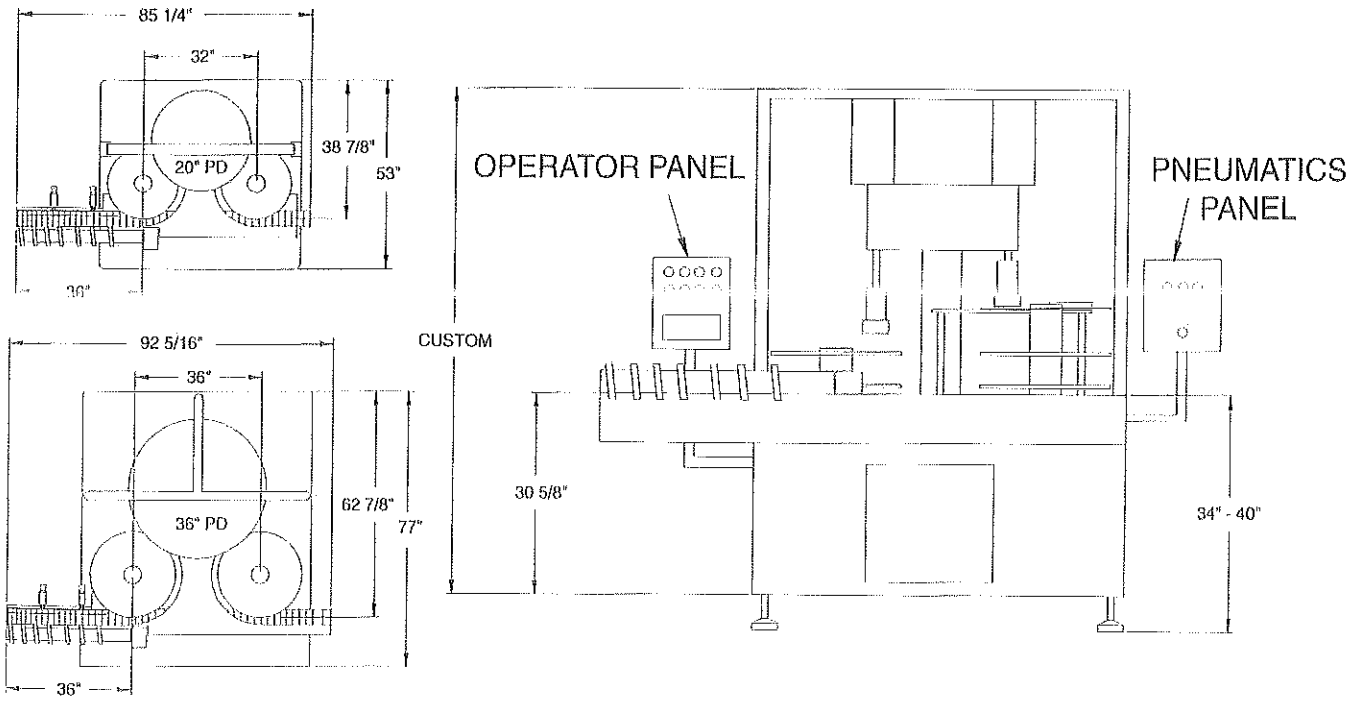
The hopper/elevator sorter, shown to the right, represents the latest in sorter capabilities for customer's caps. It is a simple concept of sorting the cap during a vertical elevation process, thus removing much of the "difficult-to-set" pneumatical sorting applications of the past. This also allows less space to be required for the same process of bulk feeding, elevating, and sorting than was handled in the previous separate hopper/elevator sorter combinations. To determine what sorter works best for your cap, please send samples to the Charlotte facility for review.

The photo on the left *shows the horizontally inclined sorter which requires a prefeeder for maintaining the correct level of caps in the tumbling application.*

To the right, *the vertical style hopper/elevator is often used when space limitations require a more compact design, while at the same time incorporating the sorting during the elevating process. This reduces tumbling and turbulence on the cap when feeding the capper at high rates of speed.*



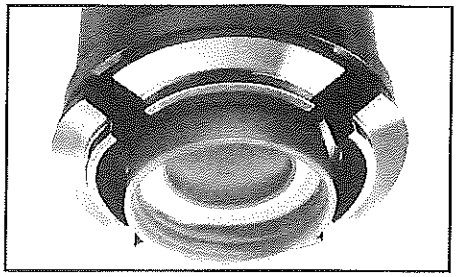
GENERAL FLOOR PLAN



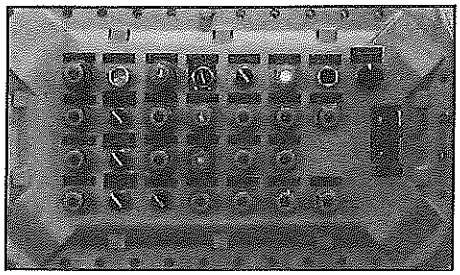
Specific machine dimensions may vary

CAPABILITIES AND OPTIONS

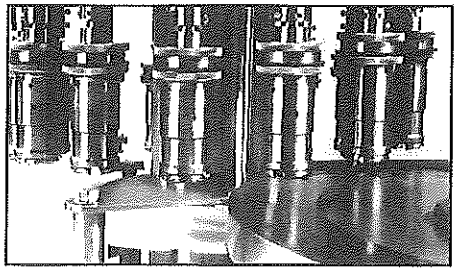
- COMPLETE CONTROLS
- HEAVY- DUTY CONSTRUCTION
- ALL SS OPTIONS
- NO BOTTLE, NO CAP
- ALL PLC LOGIC
- GUARDING AVAILABLE
- VARIABLE DRIVE
- SYNCHRONOUS CAPABILITY
- OVERCAPPER APPLICATIONS
- SPECIAL SENSORS
- REVERSE DIRECTION
- EXPLOSION PROOF
- GLASS/PLASTIC/METAL
- PLUGGING APPLICATIONS
- CUSTOM SORTERS
- SIMPLE TORQUE ADJUSTMENTS
- QUICK RELEASE OF CAP
- ERROR INDICATORS
- PRODUCT FLEXIBILITY
- MONOBLOCK CAPABILITY
- FULL WARRANTY



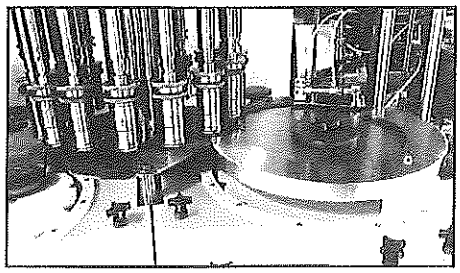
***Chuck jaws** can be manufactured for serrated or smooth rimmed caps.*



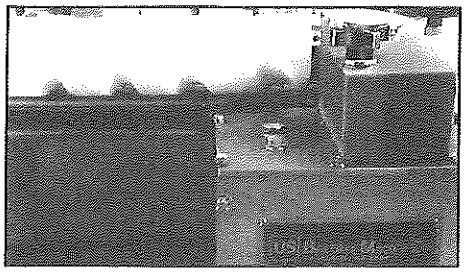
***Panels** for explosion-proof environments are available as applications require.*



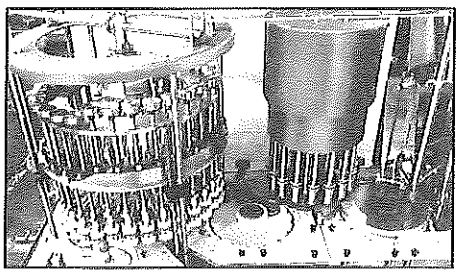
***Torque adjustments** are simply handled by adjustments on the knurled torquing rings.*



***Changeover times** are improved by removing the use of hand tools as practical.*



***Heavy-duty worm** and star drives are standard on stand-alone and synchronous cappers.*



***Monoblock** capability is available with the U.S. Bottlers' arsenal of fillers.*

If your product and containers can be capped on a rotary capping machine, the sales and engineering staffs at U.S.B. will be able to suggest many variations that will provide you with one of the simplest and most efficient cappers available.

Should you desire additional information concerning this machine or any U.S. Bottlers equipment, your interest will be best served by sending us a complete set of containers with caps and required speeds. We can then determine your exact requirements, make the proper recommendations, and quote accordingly. Our sales and engineering departments offer this service without any obligation on your part. Samples should be sent to the main office in Charlotte, N.C.

Bottlers Machinery Company

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