



# HIGH QUALITY DEDICATED TO CAPPING

World renowned for its expertise of more than 80 years in capping solutions, Zalkin specializes in the design, manufacture and commissioning of customized capping machinery and cap handling systems. From application needing either high speed, high production volume, high precision or high capability for running a difficult closure or bottle, Zalkin has the capping machinery to meet your production requirements.

As a major player in the capping industry, Zalkin operates worldwide with over 13,000 capping machines installed in more than 120 countries.



Zalkin offers capping machines and cap handling systems for all bottle sizes and closure types including screwon caps, roll-on aluminum caps, oriented and non-oriented pushin and snap-on closures, plugs, lids, pumps, and trigger sprayers.



#### **GLOBAL SERVICE**

Robust construction, performance and versatility protect our customers' investment in Zalkin capping machinery for decades. An experienced and dedicated team makes exceptional service throughout the life of the machine our highest priority beginning with training of operating personnel, maintenance support, conversion of existing equipment, availability of spare parts and prompt response to customer service needs.

## FREESTANDING SINGLE-HEAD MACHINES

Single-head cappers suitable for roll-on, screw-on, push-in and snap-on capping at speeds ranging from 600 to 3,500 caps per hour (depending on the machine model and the cap being used). Three models are available:



#### TM3 Semi-Automatic Capper

TM3 single-head machine for application of roll-on, screwon and push-in caps. It is the ideal equipment for laboratory testing of heads or new products and small volume manual production. Caps are manually placed up to 800 caps per hour.



## TM135 Single-Head Capper

The TM135 single-head capper for applying roll-on aluminum closures (ROPP) or screw-on caps (Lux / Novatwist) to glass, PET or aluminum bottles at speeds up to 3,500 caps per hour (depending on the cap type and the bottle being processed). Capper features fully integrated system with a cap elevator incorporated within the framework of the capper. Fast closure and container changeovers.



#### TM300 Single-Head Capper

TM300 single-head capper is designed for applying any type of plastic or aluminum closure at a maximum recommended speed of 2,500 caps per hour. This machine can be fitted with single or dual stations to combine multiple functions (e.g. fitting of insert, followed by application of screw-on cap). Fast closure and container changeovers.

#### **OPTIONS AVAILABLE FOR TM135 / TM300 AUTOMATIC CAPPERS**

- · Steam or nitrogen injection systems
- · Programmable logic controller and operator interface
- · Various detections (presence of integrity seals before push-on capping, presence of caps at the machine outfeed, etc).

## FREESTANDING ROTARY MACHINES

Rotary capping machines can apply roll-on aluminum closures, plastic screw-on, push-in and snap-on caps at speeds ranging from 3,500 to 60,000 caps per hour (depending on the cap type and bottle being used).

Cappers can be equipped with 3 to 24 heads and offered in pitch circle diameters ranging from 300 to 720 mm. Rotary cappers available with single or multiple turrets to combine multiple functions (different caps on a single bottle).



#### Screw-On Cappers

Zalkin offers a variety of screw-capping machines for a wide range of industries and products. The high-speed capping heads provide repeatable and reliable cap application of the screw-on caps. The screw-cappers come with a settable top load and positive gripping. Fast closure and container changeovers.



#### Roll-On Cappers

These machines apply roll-on aluminum closures to glass and plastic bottles for a variety of industries at speeds up to 60,000 caps per hour. Each sealing head on the capper is equipped with multiple hardened steel rollers to form the shell precisely to the bottle finish, assuring a secure, leak proof, tamper evident package. Fast closure and container changeovers.



#### Push-In And Snap-On Cappers

Rotary capping machines specifically designed for press-on lids or plugs that are found on a variety of products. Machine versatility and fast turnover allows many different product designs to be carried out quickly. Fast closure and container changeovers.

#### **OPTIONS FOR CA-TYPE CAPPERS:**

· Synchronization with the filler (mechanical or electronic) in the case of very high speed or fragile bottles

• Programmable Logic Controller and operator interface (HMI)

## **CAPPING TURRETS**

Zalkin capping turrets are designed to be mounted onto a monobloc filler and are adapted to the pitch of the filler. They can be equipped with 3 to 48 heads and offered in pitch circle diameters up to 2000 mm. They are suitable for roll-on, screw-on, push-in and snap-on capping at speeds up to 100,000 caps per hour.



#### Screw-on Capping Turret

- For application of plastic screw caps to containers at speeds up to 81,000 caps per hour.
- Pick and Place technology with transfer starwheel with pockets or pegs.



#### Roll-on Sealing Turret

- For application of roll-on aluminum caps with short and long skirts onto glass or aluminum/metal bottles.
- · Direct pick-off of caps by bottle (cap transfer).



#### Push-In / Snap-On Capping Turret

- For application of a wide variety of push-in and snap-on closures to containers.
- Pick and Place technology with transfer starwheel with pockets or pegs.

#### **MACHINE OPTIONS**

- Various cap inspection and rejection control systems of misapplied or missing caps
- $\bullet \ \ \text{Head space steam or nitrogen injection systems}$
- Dust removal and sterilization system (via UV lamp or pulsed light)
- · Vacuum before capping
- Available with electrical package for Atex or EEx classification
- Servo technology

# **CAPPING HEADS**



BH5 TYPE SCREW-ON CAPPING **HEAD WITH JAWS** 



H6 TYPE SCREW-ON CAPPING HEAD



104 TYPE **ROLL-ON HEAD** 



SCREW-ON & ROLL-ON HEAD



SCREW-ON CAPPING HEAD WITH JAWS



SCREW-ON CAPPING HEAD WITH CHUCKS



CAPCO TYPE PUSH-IN

CAPPING HEAD



SERVO CAPPING HEAD



**DRB TYPE** DECAPPING HEAD



DRZ TYPE **DECAPPING HEAD** 

# **CAPPING HEADS**

# Used to position the cap on the bottle

ZALKIN MODELS	TYPE	APPLICATIONS & ADVANTAGES
BM5 / M5	SCREW-ON CAPPING	Magnetic Screw-On Capping Heads (M Series)  • Flexible and robust  • Torque ensured by two concentric permanent magnets  • Graduated torque settings  • Torque range up to 55 inch pounds
BH5 / H5 / H6		Hysteresis Screw-On Capping Heads (H Series)  Smooth (non-ratcheting) magnetic torque control  Accurate and repeatable application torque  Standard quick release chucks or jaws  No tool, quick change torque adjustment  Available in low-maintenance all stainless steel  Three torque ranges up to 52 inch pounds  Optional watertight design for H5 heads
		<ul> <li>H6 Heads:</li> <li>Designed and developed to meet the specific requirements of beverage industrements.</li> <li>Constant application torque at a variety of spindle speeds improves removal torque performance.</li> <li>Watertight design and elimination of water retention areas.</li> </ul>
81 / 97 / 104	ROLL-ON CAPPING	For Aluminum Roll-On Closures  • Standard bronze or stainless steel construction  • Heads available in different diameters: 81 mm, 97 mm, 104 mm  • Fitted with thread rollers and/or tuck-under rollers for closure application  • Incorporates no cap/no roll mechanism
VS110	SCREW-ON & ROLL-ON CAPPING	For Wine And Spirits Industry  Dual function cap application (screw-on and roll-on)  Quick release head  Cap pick-up with jaws  Screw-on capping via hysteresis coupling  Toolless torque adjustment  Excellent repeatable torque  Roll-on operation via arms and tuck
CAPCO / TPV	PUSH-IN AND SNAP-ON CAPPING	For Snap-On Lids And Push-In Plugs  • Fully adjustable for varying top load requirements  • Friction grip chuck or TPV solid, vacuum-assist chuck for shaped or very thin, flat caps  • No tool quick change chucks available
DRZ / DRB	DECAPPING	For Plastic Or Aluminum Caps  • Equipped with 4 arms or jaws  • No cap, no grip safety system
	SERVO CAPPING	For Screw-On Caps Or Push-In And Snap-On Closures  · Application of a constant torque  · Centralization of remote torque adjustment  · Traceability of each head and bottle  · Indexing system for orientation of the closure before application

# COMPLEMENTARY CAPPING SOLUTIONS



#### FILLCAPP Integrated Filler / Capper

The single-station FILLCAPP offers a space saving solution for low speed filling and capping requirements up to 1,800 containers per hour. The machine features quick changeover and superior fill accuracy for brands in the beverage, food, personal care, chemical and distilled spirits industries.

The FILLCAPP applies roll-on, screw-on or push-in/snap-on caps for versatility and flexibility.

- · Top-fill for light to semi-viscous liquids with and without particulates
- · Bottom-up fill for semi-viscous to viscous and light, foamy liquids
- · Level overflow for light products with fill to level
- · Top-fill/ball valve for large particulates



#### Inline Belt Cappers

Our beltorque® line of belt cappers offer unique continuous motion that screw and tighten caps to the required torque. Semi-automatic and high-speed in-line models available.

- High-speed inline capper with cap feeder and cap chute up to 18,000 per hour
- · Repetitive and stable torque adjustment
- Synchronized technology tightens cap with belts
- · No tool quick change-over



#### DR And MS-Type Decappers

Zalkin Rotary decappers remove plastic and aluminum caps from returnable PET and glass bottles at speeds up to 60,000 caps per hour. They are equipped with 3 to 24 decapping heads and offered in pitch circle diameters from 360 to 1050 mm.

· DR decapper equipped with in-line conveyor

- · MS decapper equipped with parallel infeed and discharge conveyors
- · Quick release, no tool bottle handling changeover
- Fitted with no cap, no decapping feature to prevent bottle neck damage

#### **OPTIONS FOR DR & MS-TYPE DECAPPERS:**

- Discharge back-up table to allow safe emptying of bottles on the discharge
- "Bottle stop" device to empty the machine when stopped
- ${\boldsymbol{\cdot}}$  Programmable Logic Controller and operator interface (HMI)

# CAP HANDLING EQUIPMENT

### Cap Feed Elevators, Orienters and Conveyors

Zalkin cap feed elevators provide a continuous supply of unoriented closures to the capper and/or ancillary equipment



INCLINED CAP ELEVATOR

# Inclined Or Vertical Cap Elevator

- · Used to transport fragile, heavy or bulky closures without friction or noise
- Cap bin sizes from 50L to 3000L

#### Blower-Type Elevator

- · For light, sturdy closures
- Feed hoses swivel 180° and can supply closures for multiple machines
- · Cap bin sizes 400L and 1000L



HORIZONTAL CAP CONVEYOR

## Horizontal Cap Conveyor

- Used in conjunction with cap elevator to provide bulk, unoriented closures to an elevated rotary cap sorter
- Can be furnished with diverting gates to discharge closures at more than one location
- · Reversing drive available to empty full conveyor back to load area for cleanout
- Allows increased flexibility in tight layouts, including turning corners or to remote cap elevator



WATERFALL SORTER/ELEVATOR

#### Waterfall Sorter / Elevator

- Waterfall-style cap sorter/elevator for handling any type of small or large diameter closure where the diameter is greater than the height
- Provides a steady supply of oriented caps directly to the capper or other ancillary equipment
- Multiple models to provide caps at speeds from <6,000 caps per hour to >120,000 caps per hour
- · Stainless steel construction
- · Optional quick-change cleats
- Optional integral bulk cap storage bins up to 80 cubic feet / 2,265 L

# CAP HANDLING EQUIPMENT

### Cap Orienters

Zalkin cap sorters automatically orient closures before they enter the capper.



#### **CA12**

- · Designed to sort caps with diameters greater than height
- Speed: up to 36,000 caps per hour with 28mm cap



#### Universal

- Can sort caps of various shapes, long or short skirt, and different diameters
- · Stainless steel construction
- For speeds up to 60,000 caps per hour
- · Requires use of a cap feed elevator
- Optional quick release disc segments available for quick cap changeovers without tools
- · Optional foil detect sensor



#### GC

- Designed for high-speed orientation of caps with diameter greater than height
- · Stainless steel construction
- Electronic design automatically sets disc height via HMI selection (no disc change at cap changeover)
- Speed up to 90,000 caps per hour
- · Requires use of a cap feed elevator



## Vertical Cap Buffer

- Allows the accumulation of oriented caps to feed high-speed Zalkin capping turrets mounted to a combination filler/ capper monobloc
- Max speed up to 80,000 caps per hour with 28mm cap
- · Can accommodate caps of all shapes and sizes
- · Compact design allows mounting on the monobloc guarding
- Stainless steel and HDPE construction

#### Cap Conveyors

For conveying the caps towards the heads













#### Single-Lane Conveyor

- Used to transfer oriented closures from a floor-mounted rotary sorter to the capper's sweep starwheel (Pick & Place)
- Can be mounted on support legs or suspended by flanges
- · Stainless-steel construction

#### Air Conveyor

- Used in conjunction with remotely-located waterfall cap orienter/elevator or stand-mounted rotary sorter to transport oriented closures to the capper
- Can transport oriented caps 100 feet / 30 m or more from remotely located sorter
- Intended to be suspended from ceiling
- · Equipped with self-contained blower(s)
- · Optional HEPA filter/blowers available
- Multi-lane configurations available
- · Can accommodate layout requiring turns and changes in elevation

#### Cap Chute

- Relies on gravity to feed closures from elevated sorter to capper's sweep starwheel (Pick & Place)
- · Single cap chute may accommodate multiple caps of similar diameter
- Telescopic vertical section available for waterfall cap sorter/elevator or standmounted rotary sorters to accommodate different bottle/turret heights

#### Cap Transfer

- For positioning the caps under the capping heads or directly onto the bottles
- Pick-and-Place by means of cap transfer starwheel with pockets or pegs
- Direct Cap Transfer (Bottle Pick-Off)

#### **Bottle Transfer**

- All bottle handling equipment is designed specifically for the bottle to be run to ensure maximum control and handling
- Bottle handling equipment of quick release design requiring no tools for changeover



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