OPERATION



MANUAL

CORKER



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Persons operating this machinery are reminded to observe their own company safety policies. In addition, the following safety rules should be observed:

DO NOT REACH INTO THE MACHINE WHILE IT IS IN OPERATION.

USE ONLY THE CORRECT TOOL FOR THE JOB BEING DONE.

STAY ALERT, REMEMBER LOCATION OF CONTROL SWITCHES.

MAINTENANCE

The main electric switch supplying power to the machinery should be locked out or disconnected when repairs to work is performed on this equipment.

Machine should be cleaned and inspected regularly. All safety switches must be operable, attachments secure and machine free of broken glass and paper.

Do not hand lubricate when the machine is in operation.

Work area should be kept clean and as dry as is practical.

The repair or adjustment of this equipment should be performed only by persons qualified through technical training and ability, as assigned by your company.

OPERATION

All guards should be securely in place before operating the machine.

Company rules on eye protection should be followed.

Loose clothing or jewelry such as neckties, rolled sleeves, over blouses, bracelets, watches and rings should not be worn when operating the machine.

Report all malfunctions, unusual operation and defects immediately Please exercise caution with any moving parts, including the conveyor and any pinch or drive rolls.

Stop the machine before placing hands or arms near or into any area where moving parts are located.

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SECTION ONE – GENERAL INFORMATION

1.1 TERMINOLOGY OF MACHINE



- 1. Spindle/clutch Assembly
- 2. Entry Gate
- 3. Gripper/Exit Gate

- 4. Entry Gate Eye, Gripper Eye
- 5. Corker Chuck
- 6. Control Box

(not pictured is the vertical adjustment handwheel located behind the spindle motor)

1.2 SPECIFICATIONS – STANDARD MACHINE

ITEM	SPECIFICATION
Conveyor width	4 1/2 inches standard
Machine speed	variable
Machine weight	600 lbs
Overall dimensions	Variable, standard is 72"x48"
Electric requirements	110VAC @ 6 amps
Air requirements	60psi @ 3-4 cfm



1.3 FUNCTIONAL DESCRIPTION OF MACHINE

The In-Line Chuck Corker is a semi or fully automatic (as ordered) corker capable of placing a variety of corks on containers of various shapes and sizes. If the automatic sorter or bulk hopper are purchased, the machine will automatically sort and feed plastic top corks from a bulk hopper and deliver them to the escapement and cork applicator. The applicator will transfer the cork from the chute escapement on to the container and insert the cork in to the cork retainer, pressing the cork to its position on the neck of the container. The containers will be automatically indexed and centered under the application station for container to cork alignment and released after the cork has been applied.

1.4 BASIC MACHINE CONTROLS



SCREEN SETTINGS



System Settings	System Settings Screen:
Capping OFF Spindle OFF Backup Delay 0000 Spindle Speed 0000 Main Menu Timers Sorter Jog Functions	 Corking On/Off: Push to Toggle On or Off Spindle On/Off: Push to Toggle On or Off Backup Delay: Set to control when Exit Gate and Entry Gate will open to control discharge flow of bottles. Spindle Speed: Controls the speed of the Spindle Speed (Only Applicable to Capper)
Sorter IN-LINE	Sorter Screen:
Sorter Chain Stop Delay 0000 OFF Air Jet Length 0000 Jog Sorter Run Speed 0000 Sorter Low Speed 0000 Main Menu Timers Jog Functions	 Chain Stop Delay: Set to control stopping delay of Sorter Air Jet Length: Set to control the length of time the Air Jet blows Sorter Run Speed: Set to control the Speed of the Sorter
Jog Functions Jog Spindle OFF Jog Spindle OFF Jog Shuttle OFF Jog Shuttle OFF Jog Exit OFF Jog Exit OFF Jog Exit OFF Sorter Sorter System Settings	Jog Functions Screen: Jog Spindle: Jog Spindle Motor (Only applicable to Capper) Jog Plunger: Jog Plunger (Only applicable to Corker) Cap/Cork Press: Jog Shuttle: Jog Cork/Cap Shuttle Jog Inserter: Jog Cork/Cap Inserter Jog Exit: Jog Exit Gate Jog Entry: Jog Entry Gate Tamp Eye: Monitors the Tamping Mechanism Photoeye Gripper Eye: Monitors the Gripper Mechanism Photoeye Backup Eye: Monitors the Backup Photoeye Chute Eye: Monitors the Cork/Cap Chute detection Photoeye

SECTION TWO – UNCRATING AND INSTALLATION

2.1 POWER AND AIR CONNECTIONS

A grounded electrical male plug is provided with the machine, and is connected to the main electrical enclosure on the side of the machine. Plug this into any grounded receptacle. On machines with coders or that require air, an air filter/reservoir with a ¼" male quick disconnect fitting attached, is provided underneath the main electrical enclosure on machines that require compressed air. You can supply compressed air to the machine by either a mating quick disconnect on the end of an air hose, or you can permanently pipe air to the machine using standard pipe and connecting directly into the air filter using threaded pipe connections. If you permanently pipe air into the system we recommend a cut-off valve be mounted at the machine. Some changeover adjustments are easier if the operator is able to temporarily turn off the air pressure.

2.2 INSTALLING IN PRODUCTION LINE

Move the machine into its permanent location. Adjust the conveyor height of the machine to match the heights of the adjoining machines as required. Leveling Pads are provided with the Labeler that allow some vertical adjustment. If necessary, make spacing blocks to raise the height. Approximately 12 inches of lineal space (as a standard, extensions are available) is provided on each end of the machine to allow a crossover from or to the next machine. Butt the conveyor ends as close to each other as possible and then use conveyor rails to guide the bottles across narrow dead plates onto the conveyor.

2.3 LEVELING BASE MACHINE

Once the machine is installed, level the main conveyor through the machine by using a bubble level. Place the bubble level along the length of the machine and also perpendicular to the conveyor at the label station. Leveling the machine is important to the quality of labeling since this will affect the web path and container path. Verification that the machine is square and level will ensure proper operation.

SECTION THREE – PREPARING FOR OPERATION

3.1 LOADING CAPS OR CORKS

The machine can be ordered with a bulk hopper and cork chute, cork chute only, or corker only. If the hopper is ordered then level of the hopper should be set to allow only properly oriented corks to remain on the elevator chain, if corks are feeding backwards then the elevator/hopper should be adjusted to be more vertical to cause backwards corks to fall off. The hopper should be loaded with several hundred corks but not loaded completely full.

3.2 SET CONVEYOR RAILS TO CONTAINER SIZE

The guide rails are adjusted in from the front and rear adjustments so the bottles are centered under the cork chuck on the conveyor chain.

3.3 ADJUST HEIGHT OF TORQUEING HEAD TO CONTAINER

The vertical height of the cork chuck is adjusted using the handwheel located behind the spindle motor. This height is based on the cork being placed fully into or torqued on the container so that the internal spring on the chuck is fully compressed when the cork is fully seated. The vertical stroke length of the spindle is adjustable by removing the cover and adjusting the spindle travel screw and nut. The chuck must be high enough to allow bottles to move under it on the conveyor, and the stroke set long enough for corks to fully seat.

3.4 ADJUST GRIPPERS BASED ON ACTUAL SIZE

Round bottles require grippers made to the size of the bottle and may be changed from bottle to bottle. The gripper, rear bottle stop, and stripper plate are adjusted in so that the bottle when gripped is centered under the chuck and has enough pressure to keep the bottle from spinning while cork insertion is occurring.

SECTION FOUR – OPERATIONAL ADJUSTMENTS

4.1 ADJUSTING TIGHTNESS OF CAP OR PRESSURE ON CORK

Cork tightness is adjusted by increasing or decreasing the pressure on the torqueing clutch. The pressure should be set so the chuck stalls when the cork is tight, if the pressure is set too high and the cork is over-tightened premature wear to the torqueing pad in the chuck will occur.

The cork insertion depth is adjusted by increasing the stroke or height of the chuck mechanism.

4.2 CHUTE ADJUSTMENT



SECTION FIVE – PERIODIC MAINTENANCE, CLEANING, AND LUBRICATION

5.1 MAINTENANCE

Ensure that you perform a monthly visual inspection for wear. The torqueing chuck life will vary depending on cap design, characteristics, and desired cap tightness.

5.2 CLEANING THE MACHINE

The Corker comes in stainless and aluminum construction. Cleaning the machine regularly is recommended using soap and water.

5.3 LUBRICATION

The lubrication points on the machine are:

- 1. The conveyor idler sprockets inside the frame of the machine may need some grease once/year. The conveyor idler sprockets are located under the conveyor chain.
- 2. Any threaded rod for linear motion should have light oil applied to it periodically to keep the mechanism moving freely.
- 3. The spindle cylinder has grease fittings and should be lubricated bi-monthly.

SECTION SIX – TROUBLESHOOTING

6.1 NOTHING WORKS AT ALL

- 1. Check main power. Is machine plugged in? Is main power switch turned on?
- 2. Check fuses inside control panel.
- 3. Are speed controls turned up above zero?

6.2 NO CAP OR CORK HAS BEEN PLACED OR HAS BEEN PLACED INCORRECTLY

- Ensure that the photo-eye sensor is properly connected. A test for this is to identify if the green light located on the sensor is on and that when an object running past it causes the orange light to blink. This indicates a count. Ensure that the reflector is properly positioned directly across from the sensor.
- 2. If repetitive chuck actuation occurs ensure that the gripper eye is centered on the bottle and the sensor is adjusted to turn on and remain on from the time the bottle is detected until the bottle exits the gripper area. If the gripper eye flashes on/off after the capping has occurred the chuck will fire a second time.

SECTION SEVEN – PARTS DIAGRAM





EM NUMBER	QUANTITY	PART NUMBER	PART DESCRIPTION	ITEM NUMBER	QUANTITY	PART NUMBER	PART OKSCRIPTION
1	1	CCC-027	BAR-SLIDE FRAME REAR	35	1	CCC-042	BRACKET-END GUIDE HOLDER
2	1	CCC-025	BAR-SLIDE FRAME-FRONT	36	1	CCC-034-035	GUIDE-CAP NESTING GUIDE
3	1	CCC-028	PLATE-SLIDE FRAME-CYLINDER MOUNT	37	1	CCC-026	PLATE-UPPER MOUNTING MAIN PLATE
4	1	CCC-029	PLATE-SLIDE FRAME-LEFT				
5	2	CCC-038	ROD-SLIDE BEARING ROD				
6	1	CCC-032-A	PLATE-SLIDE BEARING MOUNTING PLATE				
7	4	CCX-077	RETAINING RING-TRUARC N5100-87				
8	2	CCX-075	BEARING-MAIN SLIDE BEARING				
9	1	CCX-069	COUPLER-SELF ALIGNING COUPLING				
10	1	CCX-068	CYLINDER-MAIN SHUTTLE 4"				
11	1	ANSI-35	CHAIN-MAIN ADJUSTMENT CHAIN				
12	2	CCC-045	PLATE-MAIN CHUTE-END MOUNT				
13	1	CCC-047	PLATE-CAP GUIDE REAR				
14	1	CCC-048	PLATE-CAP GUIDE FRONT				
15	1	CCC-046	PLATE-UPPER CAP GUIDE				
16	3	CCC-040	ROD-UPPER CAP GUIDE-SLIDE				
17	2	CCC-039	ROD-THREADED UDJUSTMENT ROD				
18	2	CCC-041	ROD-UPPER CAP GUIDE MOUNT				
19	2	CCXR-076	SPROCKET-ADJUSTMENT ROD SPROCKET				
20	1	CCC-CP121	CAP CARRIER BUTTON				
21	2	CCX-073	KNOB-CHUTE ADJUSTMENT KNOB				
22	1	CCC-022	BRACKET-MAIN MOUNTING BRACKET				
23	1	CCC-023	BRACKET-PLUNGER CYLINDER MOUNT				
24	1	CCC-024	BRACKET-SECONDARY MOUNTING BRACKET				
25	1	CCX-074	CYLINDER-NON ROTATING PLUNGER				
26	1	RSX019	CYLINDER-CORK INSERTER				
27	1	CCC-036	ROD-CYLINDER EXTENSION ROD				
28	1	CCC-031B	PLATE-SQUARE CYLINDER MOUNT				
29	1	CCC-030B	PLATE-CAP CARRIER PLATE				
30	1	CCC-043	GUIDE-CAP GUIDE-ESCAPEMENT LEFT				
31	1	CCC-044	GUIDE-CAP GUIDE-ESCAPEMENT RIGHT				
32	2	CCC-037	ROD-HINGE PIVOT				
33	4	CCX-070	SHOULDER BOLT				Labeling Equipment, Inc
34	4	CCX-071-072	SPRING-COMPRESSION SPIRAL	1			NINE
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SECTION EIGHT – RECOMMENDED SPARE PARTS

PSX411LR-M12QD PHOTOEYE (gripper, entry gate, backup)	-1
PSX915 AIR SOLENOID	-2
PSX634-RELAY	-2
PSX125 CONVEYOR CHAIN	-2 FEET
RSX019 GRIPPER/HOLDBACK/SHUTTLE	-1
BFX137 SPINDLE MOTOR	-1
CCX063 CLUTCH	-1
TORQUING PAD (CHANGE PART)	-4