BOTTLE CLEANING - INERT GAS INJECTION

Inert Gas can now be injected into bottles immediately after air cleaning in the NEW Model #54 Orbit Cleaner.

The NEW Model Cleaner operates as follows:

- For clockwise rotation, the bottles first slide at 10:00 down into a specially designed neck guide that allows the stainless steel rinse tube to enter the neck of each bottle approximately 2″ to 3″.

- The bottles are next air rinsed CONTINUOUSLY for 2 - 45° long segments from 10:00 to 12:00 and 12:00 to 2:00.

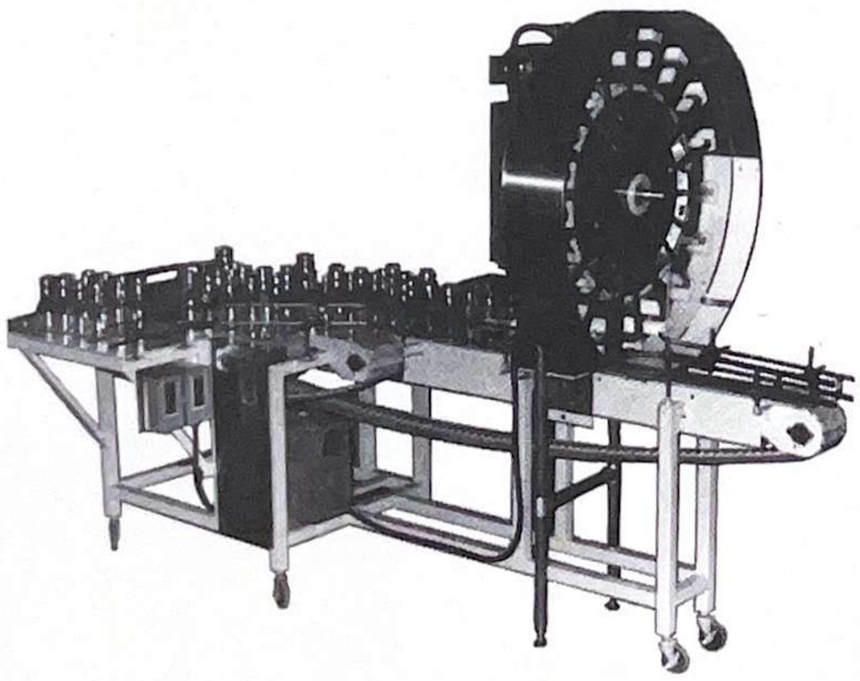
- A 3rd segment for the inert gas injection is located from 2:30 to 4:30. The gas is injected while the bottles are held up into the rinse tubes.

- At 5:00 the bottles are allowed to drop away from the tubes and Neck Guide in order to discharge from the Cleaner at 6:00.

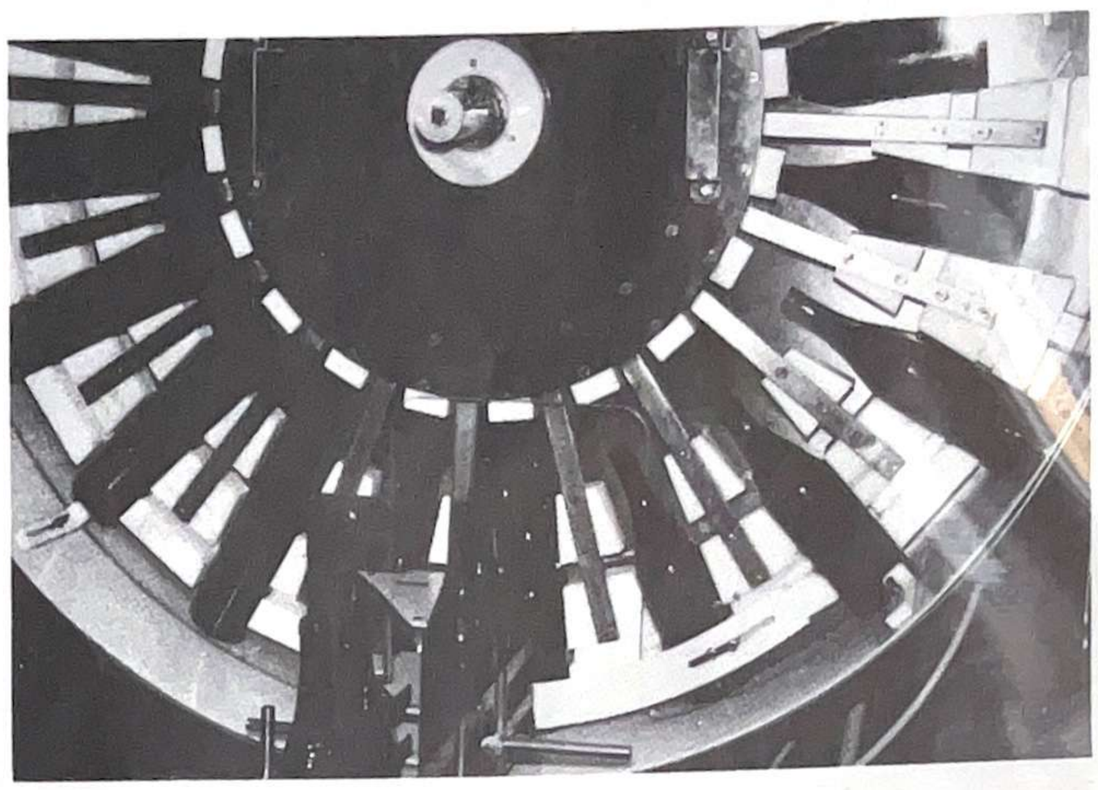
Based on the above sequence the following cleaning and gas injection time intervals result for 750 ml wine bottles at speeds of 60 bpm and 120 bpm.

Model	Speed	Air Cleaning	Gas Injection
100	60 bpm	5.0 sec	3.4 sec
200	120 bpm	2.5 sec	1.7 sec

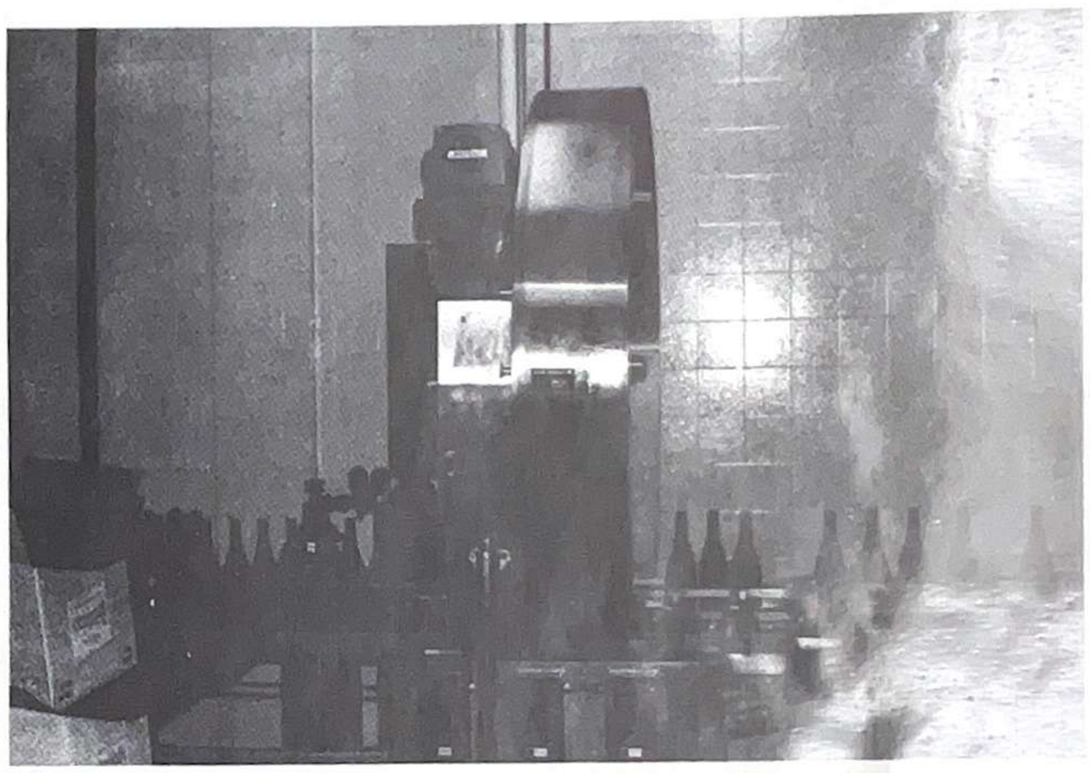
Also available with this NEW TYPE of Cleaner is our 4 Belt Unscrambler. This COMBINATION provides a single unit to unscramble, single line feed, clean and gas inject all in one assembly.



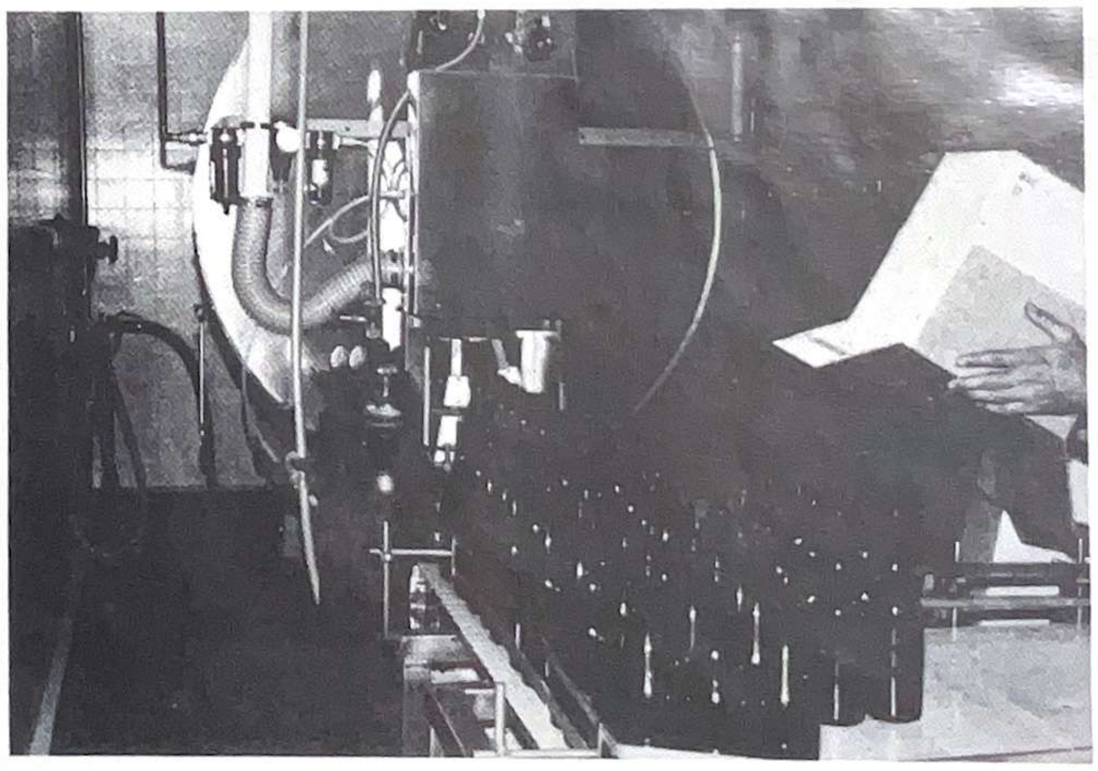
Combination cleaner & unscrambler



2″ to 3″ tube insertion



Compact - only 25″ to 40″ line space



Carbon Dioxide for gas flushing

MEMBER PMMI USA

REPRESENTED BY:

McBrady Engineering, Inc.

P.O. Box 204 East Hazelcrest, Illinois 60429 Phone (312) 798-6565
TWX 910-651-2985 Cable: MC BRADYEN EHZC

CHANGE PARTS LIST

McBrady Engineering, Inc.
Cleaner: S/N W54-2436
Date: 1/30/85

1) Rotor A - 3L & 4 Liter

- 14 Pocket Rotor A
- Plastic Linded Discharge Guide A
- Dust Collection Pan A B C D
- Infeed Timing Screw A-M7529-1 with 33 Teeth Spur Gear
- Change Gear - 77 Teeth
- Water & Gas - Ramps A B C D
- Ramp Position - 3-1/2" out (A B)

2) Rotor B - 1.5 Liter

- 18 Pocket Rotor B
- Plastic Lined Discharge Guide B
- Dust Collection Pan A B C D
- Infeed Timing Screw B-M7529-2 with 28 Teeth Spur Gear
- Change Gear - 84 Teeth
- Water & Gas Ramps A B C D
- Ramp Position - 3-1/2" out (A B)

3) Rotor C - 750 ML

- 22 Pocket Rotor C
- Plastic Lined Discharge Guide C
- Dust Collection Pan A B C D
- Infeed Timing Screw C-M7529-3 with 24 Teeth Spur Gear
- Change Gear - 88 Teeth
- Water & Gas Ramps A B C D
- Ramp Position C D E F, 1/2" out

4) Rotor D - 375 ML

- 26 Pocket Rotor D
- Plastic Lined Discharge Guide D
- Dust Collection Pan A B C D
- Infeed Timing Screw D E F -M-7529-4 with 21 Teeth Spur Gear
- Change Gear - 91 Teeth
- Water & Gas Ramps A B C D
- Ramp Position C D E F, 1/2" out

5) Rotor E - 187 ML

- 26 Pocket Rotor E
- Plastic Lined Discharge Guide E
- Dust Collection Pan E F
- Infeed Timing Screw D E F -M-7529-4 with 21 Teeth Spur Gear
- Change Gear - 91 Teeth
- Water & Gas Ramps - E F
- Ramp Position C D E f, 1/2" out

6) Rotor F - 187 ML (labelled)

- 26 Pocket Rotor E
- Plastic Lined Discharge Guide F
- Dust Collection Pan D E F
- Infeed Timing Screw D E F -M-7529-4 with 21 Teeth Spur Gear
- Change Gear - 91 Teeth
- Water & Gas Ramps - E F
- Ramp Position C D E F, 1/2" out

McBrady Engineering, Inc.
Cleaner: S/N W54-2436
Date: 1/30/85

CHANGE PARTS LIST

1) Rotor A - 3L & 4 Liter

- 14 Pocket Rotor A
- Plastic Linded Discharge Guide A
- Dust Collection Pan A B C D
- Infeed Timing Screw A-M7529-1 with 33 Teeth Spur Gear
- Change Gear - 77 Teeth
- Water & Gas - Ramps A B C D
- Ramp Position - 3-1/2" out (A B)

2) Rotor B - 1.5 Liter

- 18 Pocket Rotor B
- Plastic Lined Discharge Guide B
- Dust Collection Pan A B C D
- Infeed Timing Screw B-M7529-2 with 28 Teeth Spur Gear
- Change Gear - 84 Teeth
- Water & Gas Ramps A B C D
- Ramp Position - 3-1/2" out (A B)

3) Rotor C - 750 ML

- 22 Pocket Rotor C
- Plastic Lined Discharge Guide C
- Dust Collection Pan A B C D
- Infeed Timing Screw C-M7529-3 with 24 Teeth Spur Gear
- Change Gear - 88 Teeth
- Water & Gas Ramps A B C D
- Ramp Position C D E F, 1/2" out

4) Rotor D - 375 ML

- 26 Pocket Rotor D
- Plastic Lined Discharge Guide D
- Dust Collection Pan A B C D
- Infeed Timing Screw D E F -M-7529-4 with 21 Teeth Spur Gear
- Change Gear - 91 Teeth
- Water & Gas Ramps A B C D
- Ramp Position C D E F, 1/2" out

5) Rotor E - 187 ML

- 26 Pocket Rotor E
- Plastic Lined Discharge Guide E
- Dust Collection Pan E F
- Infeed Timing Screw D E F -M-7529-4 with 21 Teeth Spur Gear
- Change Gear - 91 Teeth
- Water & Gas Ramps - E F
- Ramp Position C D E f, 1/2" out

6) Rotor F - 187 ML (labelled)

- 26 Pocket Rotor E
- Plastic Lined Discharge Guide F
- Dust Collection Pan D E F
- Infeed Timing Screw D E F -M-7529-4 with 21 Teeth Spur Gear
- Change Gear - 91 Teeth
- Water & Gas Ramps - E F
- Ramp Position C D E F, 1/2" out

SPECIALISTS IN BOTTLE RINSING,
CLEANING & UNSCRAMBLING EQUIPMENT

TEL: (312) 798-6565
TWX: 910 651 2985
CABLE: MCBRADYEN EHZC

MEMBER PMMI USA

McBRADY ENGINEERING, INC.

ORBIT CLEANER-RINSER

P.O. BOX 204
E. HAZEL CREST, ILLINOIS 60429
U.S.A.

February 5, 1985

Mr. Robert Detjens
Wente Bros. Winery
5565 Tesla Road
Livermore, CA 94550

Dear Mr. Detjens:

We shipped your Bottle Rinser last week on February 1st. This order was complete except we had to back order the set of change parts for the 375 ml bottles. We expect to ship this set of parts the week beginning February 10th.

Attached is a list of the change parts for each of the six (6) sets. We shipped two copies of the list with the machine, as well as two copies of the installation manual.

Because of the large number of change parts, we would appreciate it if your people would take great care in storing the rotors so that the arms do not get bent by standing the rotor up against a wall. The rotors should preferably be stored suspended on a flat wall surface with a bar passing through the center hole.

Thank you for the order, please let us know if you would like any additional information.

Very truly yours,

William J. McBrady

WJM/mpho
Encl:

cc: Tom Hill
King Sales & Engineering Co.
4949 East 12th Street
Oakland, CA 94601

McBrady Engineering, Inc.
Cleaner: S/N W54-2436
Date: 1/30/85

CHANGE PARTS LIST

1) Rotor A - 3L & 4 Liter

- 14 Pocket Rotor A
- Plastic Linded Discharge Guide A
- Dust Collection Pan A B C D
- Infeed Timing Screw A-M7529-1 with 33 Teeth Spur Gear
- Change Gear - 77 Teeth
- Water & Gas - Ramps A B C D
- Ramp Position - 3-1/2" out (A B)

2) Rotor B - 1.5 Liter

- 18 Pocket Rotor B
- Plastic Lined Discharge Guide B
- Dust Collection Pan A B C D
- Infeed Timing Screw B-M7529-2 with 28 Teeth Spur Gear
- Change Gear - 84 Teeth
- Water & Gas Ramps A B C D
- Ramp Position - 3-1/2" out (A B)

3) Rotor C - 750 ML

- 22 Pocket Rotor C
- Plastic Lined Discharge Guide C
- Dust Collection Pan A B C D
- Infeed Timing Screw C-M7529-3 with 24 Teeth Spur Gear
- Change Gear - 88 Teeth
- Water & Gas Ramps A B C D
- Ramp Position C D E F, 1/2" out

4) Rotor D - 375 ML

- 26 Pocket Rotor D
- Plastic Lined Discharge Guide D
- Dust Collection Pan A B C D
- Infeed Timing Screw D E F -M-7529-4 with 21 Teeth Spur Gear
- Change Gear - 91 Teeth
- Water & Gas Ramps A B C D
- Ramp Position C D E F, 1/2" out

5) Rotor E - 187 ML

- 26 Pocket Rotor E
- Plastic Lined Discharge Guide E
- Dust Collection Pan E F
- Infeed Timing Screw D E F -M-7529-4 with 21 Teeth Spur Gear
- Change Gear - 91 Teeth
- Water & Gas Ramps - E F
- Ramp Position C D E f, 1/2" out

6) Rotor F - 187 ML (labelled)

- 26 Pocket Rotor E
- Plastic Lined Discharge Guide F
- Dust Collection Pan D E F
- Infeed Timing Screw D E F -M-7529-4 with 21 Teeth Spur Gear
- Change Gear - 91 Teeth
- Water & Gas Ramps - E F
- Ramp Position C D E F, 1/2" out

SPECIALISTS IN BOTTLE RINSING,
CLEANING & UNSCRAMBLING EQUIPMENT

TEL: (312) 798-6565
TWX: 910 651 2985
CABLE: MCBRADYEN EHZC

MEMBER PMMI USA

McBRADY ENGINEERING, INC.

ORBIT CLEANER RINSER

P.O. BOX 204
E. HAZEL CREST, ILLINOIS 60429
U.S.A.

Wente Bros. Winery

5565 Tesla Road

Livermore, CA 94550

Date: 1/29/85

Purchase Order No: Letter of 8/22/84

S/N: W54-2426

Job No.: 1203

PACKING LIST

Quantity	Description
1	54" dia. Model #200 Combination Bottle Water Rinser - Gas Injector
1	Water Collection Tank
1	Drain Chute (fastens to the Water Rinser's Drum).
1	2" x 2" square tubular leg assembly.
2	10" long conveyor mounting angles
1	1-1/2" x 1-1/2" x 8" long discharge height adjustment bracket
1	Air-Water Mix Assembly (attached to the Water Collection Tank).
5	Sets of Change Parts (Rotor D - 375 ML will be shipped in 2 Weeks) consisting of the following:
5	- Rotors: A - 3 & 4 L, B - 1.5 L, C - 750 ML, E - 185 ML (Tall Bottles) & F - 187 ML (Short Labelled)
5	- Plastic Linded Discharge Guies A, B, C, E & F
2	- Dust or Water Collection Pans ABCD & EF (semi circular)
2	- Sets (2/set) of Water & Gas Guide Ramps ABCD & EF (Guides raise bottles up to tubes for water rinsing & gas injection).
4	- Change Gears: A - 77, B - 84, C - 80, DEF - 91 teeth
4	- Infeed Timing Screws with spur gears: A - M7529-1 with 33 teeth spur gear B - M7529-2 with 28 teeth spur gear C - M7529-3 with 24 teeth spur gear DEF - M7529-4 with 21 teeth spur gear

PAN ABCD?
?

Complete Selection of Equipment for Cleaning/Rinsing of Bottles and Containers

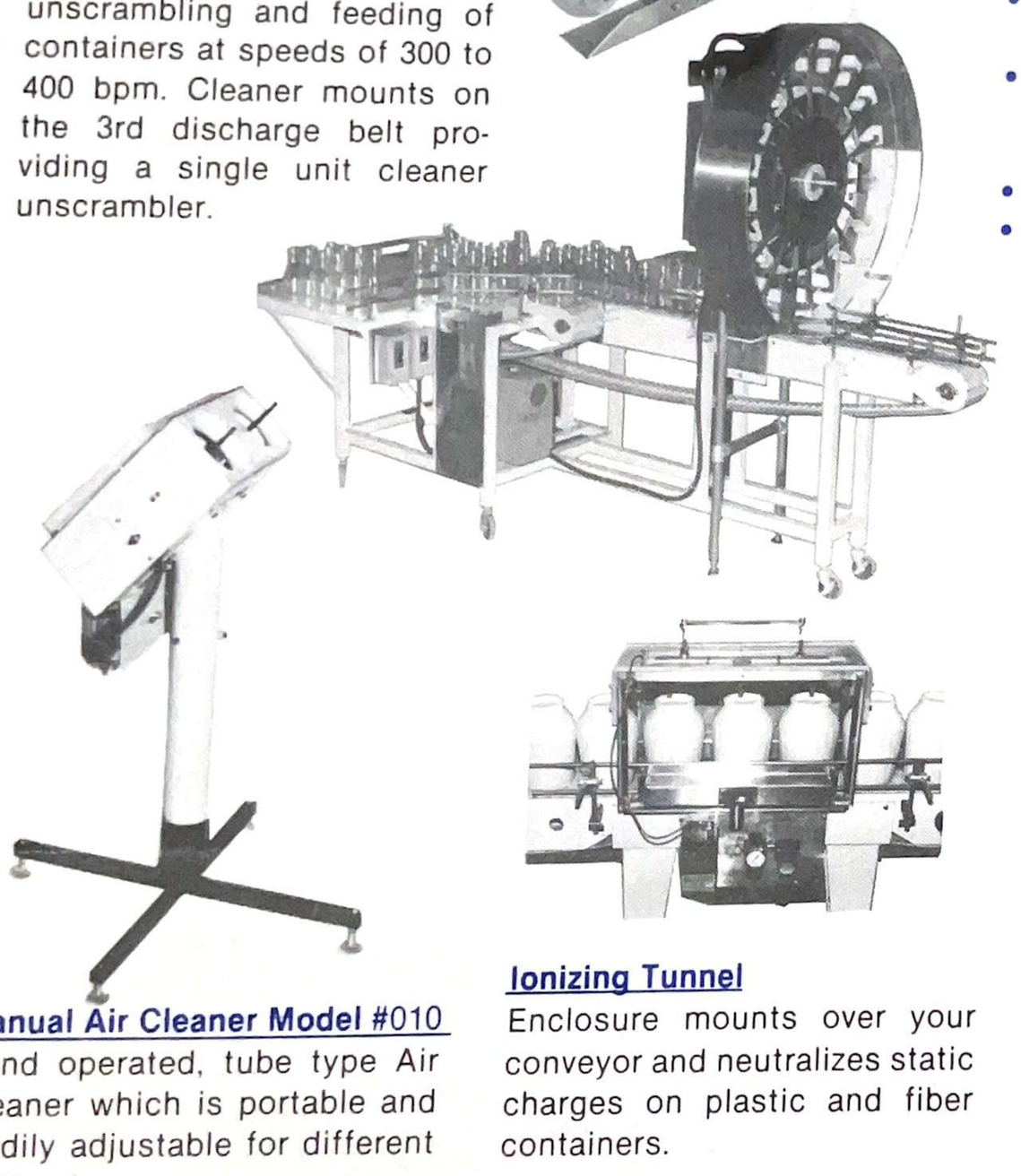
ORBIT CLEANER-RINSER™

Inverts Bottles . . . Cleans by Air, Steam or Water at Speeds up to 400 per Minute!

- Continuous Rinse — Bottles are inverted and rinsed by a tube inserted in their neck CONTINUOUSLY over a 90° arc. Jars are rinsed by 3 stationary nozzles that air blast the jar while inverted.
- Stainless steel and plastic construction.
- 5cc to gallon bottle size
- Odd Shaped Bottles — taper, hour glass, or flat.
- Wet bottles can be handled equally well.
- No Glass Breakage — Bottles are not gripped or squeezed. They are simply contained within a POCKET while inverted and rinsed.
- 400 CPM for the Orbit Air Cleaner Model #400 and up to 200 CPM for the Water Rinser.
- 25" Conveyor Length — Air Cleaners mount on your conveyor occupying as little as 25" for our Model #100. Model #400 is 68" of conveyor length.
- Repair Parts — Practically none.
- Easy change over — Requires only the interchanging of parts no adjustments.

Combination 4 Belt Unscrambler-Cleaner

Unscrambler has 3 progressively faster forward moving belts and 1 return belt for the unscrambling and feeding of containers at speeds of 300 to 400 bpm. Cleaner mounts on the 3rd discharge belt providing a single unit cleaner unscrambler.

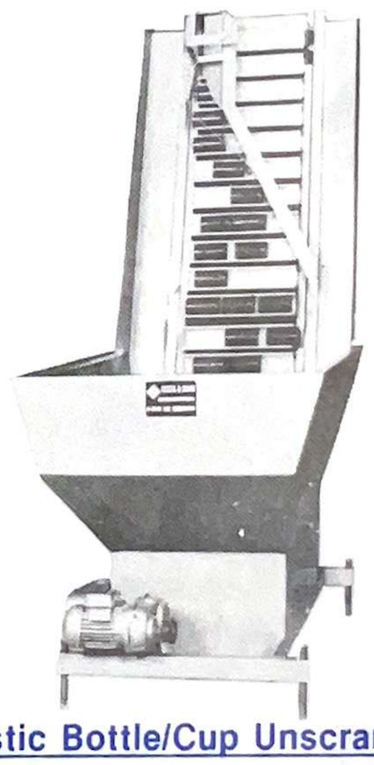


Manual Air Cleaner Model #010

Hand operated, tube type Air Cleaner which is portable and readily adjustable for different bottle sizes.

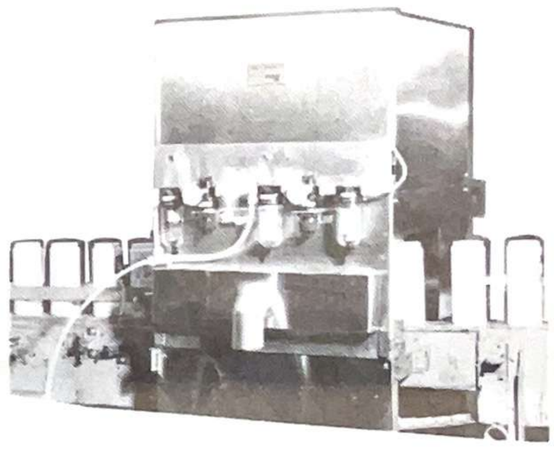
Ionizing Tunnel

Enclosure mounts over your conveyor and neutralizes static charges on plastic and fiber containers.



Plastic Bottle/Cup Unscrambler

Compact, low cost bottle sorter. Features bulk loading, large capacity. Floor level hopper.



Model #020 Bottle Duster

Bottles are neutralized with compressed ionized air. Bottle exterior is then soft brushed and again rinsed with compressed air.

McBRADY Engineering, Inc.

P.O. BOX 204 • EAST HAZEL CREST, IL 60429, U.S.A. • PHONE 312-798-6565

708

MEMBER PMMI USA

TWX: 910-651-2985 CABLE: MCBRADYEN EHZC

1-708-798-6565

INSTALLATION AND OPERATING INSTRUCTIONS

After uncrating and either locating the Orbit Cleaner in your line if a conveyor was supplied, or after mounting the Cleaner on your conveyor, the following items should be checked or adjusted:

Fasteners

Check all fasteners on the Orbit Cleaner, Rotors, and Conveyor (if supplied). Very ofter screws or nuts will have vibrated loose while in transit.

Reducer Oil

For both U S Motors and Reeves, Reliance Variable Speed Drives oil has been supplied in the reducer.

The oil level should be checked per the instructions either on the motor nameplate or the wired tag attached to the unit.

For both motors the NPT plug should be replaced by the "air vented plug" attached to the motor.

Torque Limiter

On all Orbit Cleaners a Morse No. 500A-1 Torque Limiter has been installed as a safety to control the Rotor. The Morse Torque Limiter is located at the "upstream" end of the Rotor Shaft under the chain guard.

To adjust the Torque Limiter, simply loosen the 3 - 1/4 - 20 NC brass cap screws for less force. The setting can be checked by releasing the 3 cap screws and then gradually tightening all 3 uniformaly as a full load of bottles are rotated without stalling the Rotor. More detailed instructions are on the Morse Instructional Sheet in this Manual.

The Torque Limiter must be set at the minimum level to keep the Rotor revolving and at the same time provide"stoppage" of the Cleaner if a jam should occur.

INSTALLATION AND OPERATING INSTRUCTIONS

A. UTILITIES

1) Electricity

Orbit Cleaner - 1/4 hp. (.19 KW), 220/440 volt, 3 phase 60 hertz, totally enclosed, 10:1 speed ratio, US Motors Variable Speed Drive.

2) Water & Air Rinsing

The Orbit Bottle Rinser provides a direct rinse liquid injection into bottles thru individual stainless steel tubes inserted into the neck of each bottle. Rinsing occurs CONTINUOUSLY over either a 60° or a 90° arc from 7:00 to 9:00 or 10:00 for clockwise rotation. After rinsing the bottles are allowed to drain for 120° or 90°. The selection of the 60° or 90° water rinse depends on the type of Valve Plate that is shipped in the Rinser. Generally the 60° rinse is provided where because of small bottle openings as much drain time as possible must be provided.

Included with the Water Rinser is an Air-Water Mix Assembly. This consist of an air pressure regulator to mix compressed air with the rinse liquid. The compressed air helps to more fully disperse the rinse water inside the bottles as they pass thru a horizontal position. For most operations the water and air pressure should be 20 to 30 psi.. However, this should be adjusted to meet the requirements of each individual application.

Also, provided is an air filter-pressure regulator to control the air pressure during the Drain period of the rotation. The amount of air used depends on how little residue rinse water can be left in the bottles. The bottles will never be completely dry.

There are 2 Ramp Assemblies provided to rinse the bottles up into the rinse tubes. Ramp A, B, C, D is for the 4 1., 3 1., 1.5 1, 750 ml and 375 ml bottles and Ramp E, F is for the 2 - 187 ml bottles. Both Ramps are positioned next to the Drum's Backwall except for Rotors A (3 & 4 1) and B (1.5 1). A second position is provided 3-1/2" away from the Backwall.

3) Gas Injection

After the above water and air rinse, the bottles can then be flushed with an inert gas from 2:30 to 4:30. A "Guide or Ramp" is also provided for this part of the revolution to hold the bottles up into the stainless steel tubes. The Ramp should be adjusted to hold the bottles as far up as possible.

There are again 2 Ramps and 2 locations for the Ramp ~~4, 3 and~~ the same as for the Water Rinser.

B. INSTALLATION

The Orbit Cleaner has been designed to mount directly over your conveyor and to fasten to its sides. Installation should proceed along the following steps:

1) The location of the Orbit Cleaner must be determined between the Filler and the Unscrambler. The Cleaner occupies 20" (508 mm) of conveyor length without an Infeed Timing Screw; in addition, at least 24" (610 mm) of access space should be provided on each side of the Cleaner.

   At the Infeed to the Cleaner, space must be available for no less than 4 bottles to properly feed the Rotor or Infeed Timing Screw.

   On the discharge side of the Cleaner, sufficient conveyor length should be allowed between the Filler and the Cleaner in order to avoid a back-up of bottles from the Filler which could possible "jam" the Cleaner.

2) In the area selected all guide rails should be removed.

3) The 1st step in mounting the Cleaner on the conveyor is to attach to the conveyor the 2 stainless steel mounting brackets, 10" (254 mm) wide x 3-3/4 (95.3 mm) x 6 (152 mm) x 3/16 (4.76 mm) thick. The brackets must be attached either directly to the sides of the conveyor or with the plastic spacers, if provided. See the enclosed SKETCH, the top of the bracket must be 9/16" below the top of the conveyor belt's surface.

4) The Cleaner must now be lifted up over the conveyor and mounted on the 2 Mounting Brackets. Use 2 - 3/8" (9.53 mm) cap screws on each side of the Frame to attach to the brackets.

It is VERY important to check for the proper height of the Cleaner's Drum. It must be possible to "slide a bottle off - of the nylon liner onto the conveyor belt without tripping the bottles during the transfer."

A 1½" x 1½" x 8" (38.1 x 38.1 x 203 mm) long Angle bracket is provided, see Sketch, which should be attached to the conveyor under the discharge side of the Cleaner. If required this can be used to obtain the proper height.

5) Attach the 2" x 2" sq. Tubular legs next to the Cleaner. These are necessary only if additional support for the Cleaner is required and to prevent any side swaying.

6) Conveyor Speed.

The Conveyor's speed must be properly set to both feed the bottles into the Rotor and to also match the speed of the bottles as they leave the Rotor. If a Timing Screw is provided, the conveyor speed should be set as close as possible to the speed of the bottles as they leave the Timing Screw (to prevent the Timing Screw from pushing the bottles over) and yet still match the speed of the discharging bottles.

7) The surface of the conveyor belt should be smooth and kept clean of any "sticky" material. Lubrication may in some cases be required.

8) When possible, the conveyor should be driven by a variable speed drive in order to properly "tune" the conveyor to the Cleaner.

9) Guide Rails must be measured and mounted on the conveyor.

10) A Water Collection Tank has been provided to mount under the Rinser and the Conveyor. Mounting brackets have been provided in order to fasten the Tank to your conveyor.

Before mounting the Tank, attache the Drain Chute to the lower side of the Drum.

INSTALLATION AND OPERATING INSTRUCTIONS

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There are 2 Ramp Assemblies provided to rinse the bottles up into the rinse tubes. Ramp A, B, C, D is for the 4 1., 3 1., 1.5 1, 750 ml and 375 ml bottles and Ramp E, F is for the 2 - 187 ml bottles. Both Ramps are positioned next to the Drum's Backwall except for Rotors A (3 & 4 1) and B (1.5 1). A second position is provided 3-1/2" away from the Backwall.

3) Gas Injection

After the above water and air rinse, the bottles can then be flushed with an inert gas from 2:30 to 4:30. A "Guide or Ramp" is also provided for this part of the revolution to hold the bottles up into the stainless steel tubes. The Ramp should be adjusted to hold the bottles as far up as possible.

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