



GENERAL INFORMATION SECTION



GENERAL INFORMATION

This manual contains programming, operation, and complete parts and electrical wiring diagrams.

The V21 controller is a microprocessor which will permit pricing per selection from 0.00 to 99.99. This machine also has space-to-sales programming as well as energy savings modes.

MODEL		V21 621	V21 721	V21 821
SELECTIONS		7-8	9-10	9-10
DIMENSIONS (HEIGHT X WIDTH X DEPTH)				
CURVED DOOR		72" x 32 1/2" x 34 3/4"	72" x 39 1/2" x 35"	79" x 39 1/2" x 35"
SINGLE COLUMNS		7-8	9-10	9-10
CAPACITY PER COLUMN	12 oz. CAN***	68	68	80
	16 oz. GLASS	28	28	34
	20 oz. **	30	30	36
SHIPPING WEIGHT		640 lbs	685 lbs	750 lbs
OPERATION VOTAGE		115V 60Hz.	115V 60Hz.	115V 60Hz.
AMP. RATING		10	10	10
REFRIGERATION VOLTAGE		115V 60Hz.	115V 60Hz.	115V 60Hz.

*Dimensions and shipping weight will vary slightly due to manufacturing tolerances, shipping boards and whether or not coinage is installed.

** 20 oz. PET capacity may vary based on the shape and size of the bottle.

***12 oz. can capacities are listed using a 4-deep set up.



INITIAL SET-UP

A. UNPACKING

Remove all plastic film, cardboard and tape from the outside of the vendor. Loosen any shipping devices used to secure interior parts during shipment (backspacer, shims or spacers).

To remove shipping boards from base, raise vendor on a well-stabilized lifting device. Remove the leveling bolts which hold the boards in place and remove the boards. Replace bolts to equal heights in the threaded holes. Another method to remove shipping boards is to split the boards apart. Using a pinch bar or a heavy screwdriver and hammer, insert tool into the slots and force the boards apart. **The leveling legs shall not raise the vendor more than 1 1/8 inch above the ground.**

B. POSITIONING

IMPORTANT: PLACE THE VENDOR IN DESIRED LOCATION AT LEAST THREE TO FOUR INCHES (7.6CM TO 10.2CM) AWAY FROM ANY REAR OBSTRUCTION. This is for proper air flow through the refrigeration compartment. The refrigeration system requires rear to front air circulation for proper operation.

C. POWER SUPPLY CONNECTION

CAUTION: DO NOT USE AN EXTENSION CORD!

The vendor's power requirements will vary depending upon the country it was purchased for. To verify the power requirements of the vendor, check the serial plate located on the hinged side of the outer door (see Figure 4 on page G-4). The power requirements are listed on the serial plate.

To insure safe operation of the vendor, the vendor's power supply must be a properly grounded and polarized outlet. Before plugging the vendor into the outlet, test the outlet to confirm it will meet the vendor's power requirements. If the power supply of the outlet is different from the power requirements of the vendor, a transformer may be necessary.

If the power requirements are not properly met, contact a licensed electrician and have the necessary correction made.

Should you require additional information, contact the Technical Services Department of the Vendo office in your area.




APPROVED FOR OUTDOOR USE


MODEL **BASIC UNIT**

SERIAL NO.

CHARGE **OZ. R-134a** **AMPS**

DESIGN PRESSURE - PSig
LOW SIDE 90 HIGH SIDE 295

 **REFRIGERATED VENDING MACHINE 239L**

 **MFD IN U.S.A. BY THE VENDO CO., FRESNO, CA.**

105/115	VOLTS
50/60	CYCLE
1	PHASE

POWER REQUIREMENTS →

FIGURE 1

NOTE: The **Model** number of the vending machine is located on the top, left hand corner of the serial plate. **Do Not use the "BASIC UNIT" number.** The BASIC UNIT number is the cabinet size, which is used on a number of different machines. A typical model number could read "721TDD00029". The 721 is the model number, TDD represents the product line of the vendor, and the remaining digits tell what options are included.

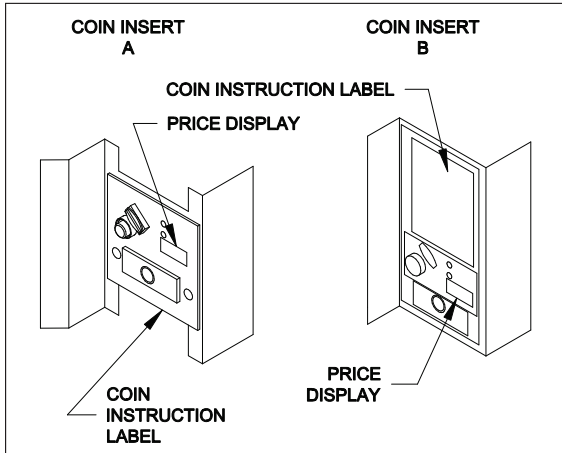


FIGURE 2

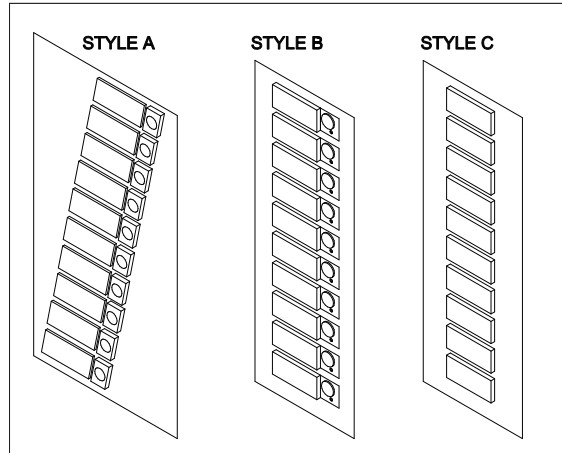


FIGURE 3

LABEL INSTALLATION

COIN INSTRUCTION LABEL & PRICE LABEL APPLICATION:

Apply labels to a clean and dry surface. Peel backing from label and apply with firm, even pressure.

INSTRUCTION LABEL

(Refer to Figure 2 for the following information.)

Coin insert “A” has a separate validator opening, and insert “B” shows the validator opening built into the coin insert. Apply instruction label to area shown (as needed by the vendor).

FLAVOR LABELS INSTALLATION:

In Figures 3 & 4, corresponding styles are indicated by A, B, C, D, or E notations.

Insert flavor labels to the side or top of selection window or button depending on the style. See Figure 3 for selection style. Rear views of windows and buttons are shown in Figure 4. Arrows point the direction to insert labels.

Selection window and selection button labels identify product contained in columns.

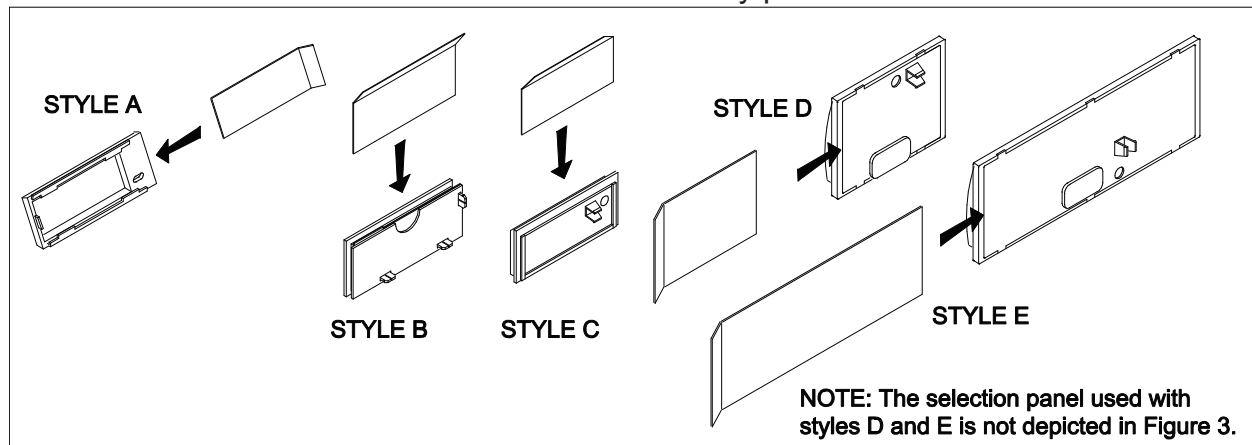


FIGURE 4

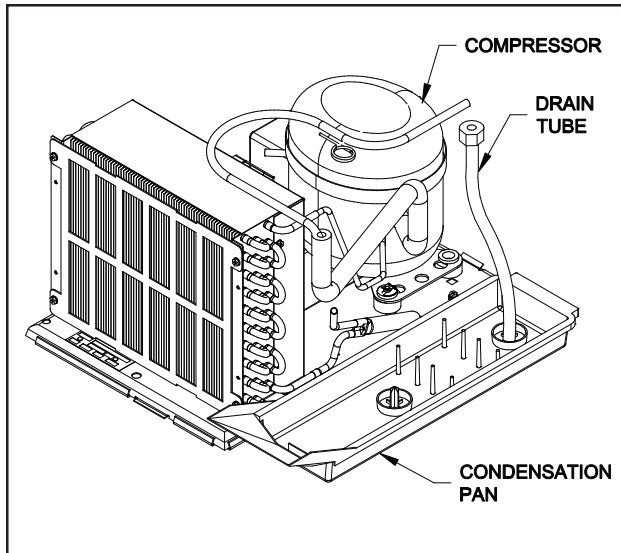


FIGURE 5

ALIGNMENT CHECKS

REFRIGERATION AREA CHECK:

Check the position of the condensation pan (see Figure 5). The correct position of the pan is on the right hand side of the vendor with the ramp of the pan just outside the right hand air dam. Be sure the drain tube is attached to the pan and is free of kinks. A water trap is installed into the condensation pan and will prevent warm, moist air from reaching the evaporator area.

LOADING INSTRUCTIONS

BASIC LOAD SET-UP (see Figure 6 on next page):

The V21 machine is capable of vending a variety of products. For specific information, refer to the product set-up label on the machine inner door or contact the Technical Services Department of the Vendo office in your area.

Load product evenly. Product is to be loaded differently depending on the type of product being vended. Use the directions in Figure 6 in the **PRODUCT LOADING** section to determine how to load a specific product.

To maintain the integrity of the stack, never move a vending machine when it is loaded.



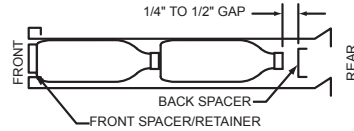
V21 PRODUCT SETUP AND LOADING INSTRUCTIONS

FOLLOW THE 3 STEPS BELOW WHEN SETTING VENDOR UP FOR A PRODUCT

1

BACK SPACER

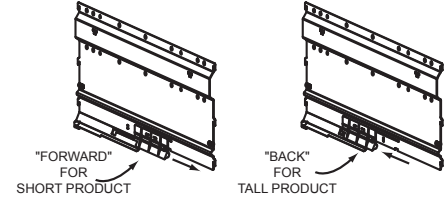
Adjust the back spacer to provide approx. 1/4" to 1/2" gap between the front spacer, product and back spacer.



2

PRODUCT STEP

For short product vending, move the product step to the "FORWARD" position.
For tall product vending, move the product step to the "BACK" position.

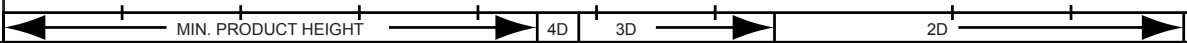


3

DEPTH SETTING (ELECTRONIC CONTROL MODE)

The "DEPTH SETTING" for each column must correspond to the number of products in the column. For example; the depth setting for a column vending double depth bottles must be set to "2", and a column set to vend quadruple depth cans must be set to "4". Refer to the VEC 12 programming instructions for details on how to access and change the depth setting mode.

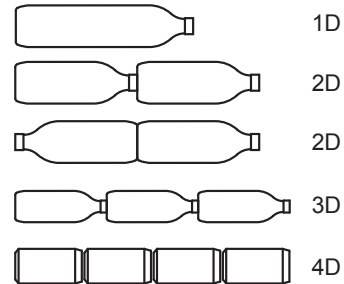
- 4 Deep: Cans between 4.50" and 4.85" tall.
- 3 Deep: Bottles or cans between 4.85" and 6.50" tall.
- 2 Deep: Bottles between 6.50" and 9.95" tall.
- 1 Deep: Bottles taller than 9.95".



PRODUCT LOADING

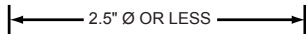
- Single depth bottles should be loaded with cap toward the back.
- Double depth bottles may be loaded with caps toward the back, or butt to butt.
- Triple depth bottles must be loaded with caps toward the back.
- Quadruple depth cans may be loaded any direction.

FRONT
VENDOR
REAR

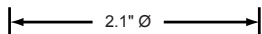


SMALL DIAMETER PRODUCT SETTING

- Small diameter products (less than 2.5" Ø) such as 500 ML water bottles require the use of side spacer PN 1122928.



- Small diameter 250 ML energy drink cans (2.1" Ø) require the use of conversion kit PN 1121638.



NOTES

- Side spacers **ARE NOT** required for 12 oz. can vending.
- Vend mechanism is self priming. No need to manually prime after initial load or reload.
- For questions regarding product settings, contact the Vendo Technical Services Department at 1-800-344-7216 ext.3368 (US/Canada) or 559-439-1770 ext.3368.

1124035

FIGURE 6



VEND MECHANISM PARTS DESCRIPTION

The parts listed below are part of the vend motor mechanism (refer to Figure 7 on page G-9). One mechanism is required per column. The parts are interchangeable. Setting will differ between single, double, triple, and quadruple depth.

VEND MOTOR ASSEMBLY: P/N 1122820

The motor is attached to the mech plate by two screws.

VEND BUCKET: P/N 1122815

The vend bucket holds the product(s) in a “ready to vend” position at the base of each column.

MOTOR COUPLING CAM: P/N 1122817

The coupling cam couples the motor to the bucket. It is located behind the motor, on the motor shaft. It is also a means to provide feedback to the controller to determine when the motor has reached maximum clockwise and counterclockwise positions.

GATE: P/N 1122871

The gate holds product above the vend bucket.

GATE LINK: P/N 1122819

The rotation of the coupling cam moves the gate link. This opens the gate, allowing one layer of product to drop into the bucket.

CAN STEP: P/N 1122856

The can step is located at the bottom of the stack partition. It is pulled forward when vending cans and is moved back for bottle vending.

REAR BUSHING: P/N 1122816

The rear bushing provides a low friction pivot for the rear of the bucket.

FRONT SPACER: P/N 1122814

The front spacer helps to guide product into the bucket.

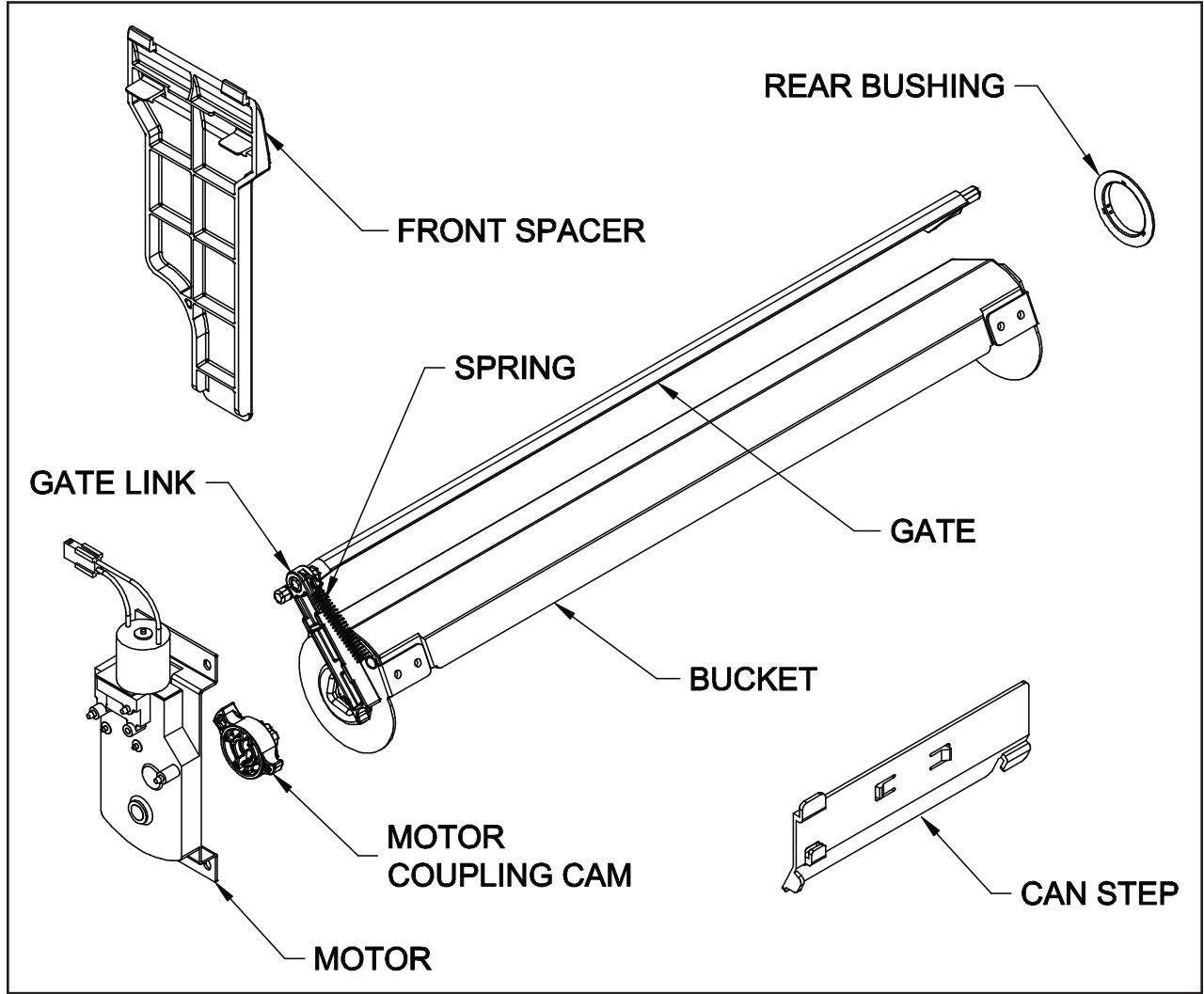


FIGURE 7



VEND CYCLE

Several operations take place during the vend cycle: When a selection is made, the coupler and bucket rotate, product is dispensed and the bucket is then reloaded. The sequence of these operations change slightly when the column's depth setting is changed. With the single depth setting, one purchase is made and the bucket is reloaded. With the double depth setting, two purchases are made before the bucket is reloaded. With the triple depth setting, three purchases are made before the bucket is reloaded. With the quadruple depth setting, four purchases are made before the bucket is reloaded. (See Figures 8 & 9)

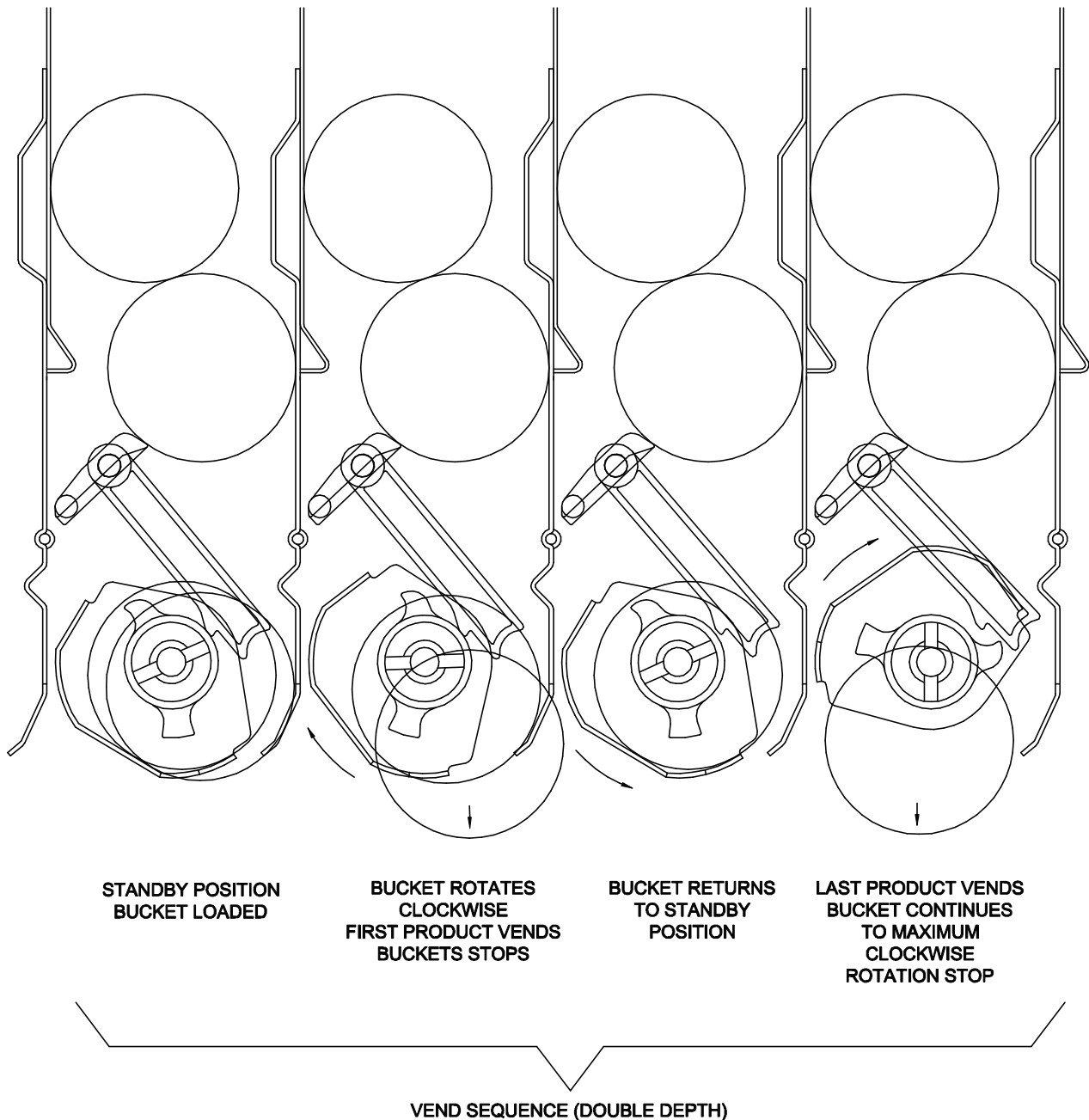
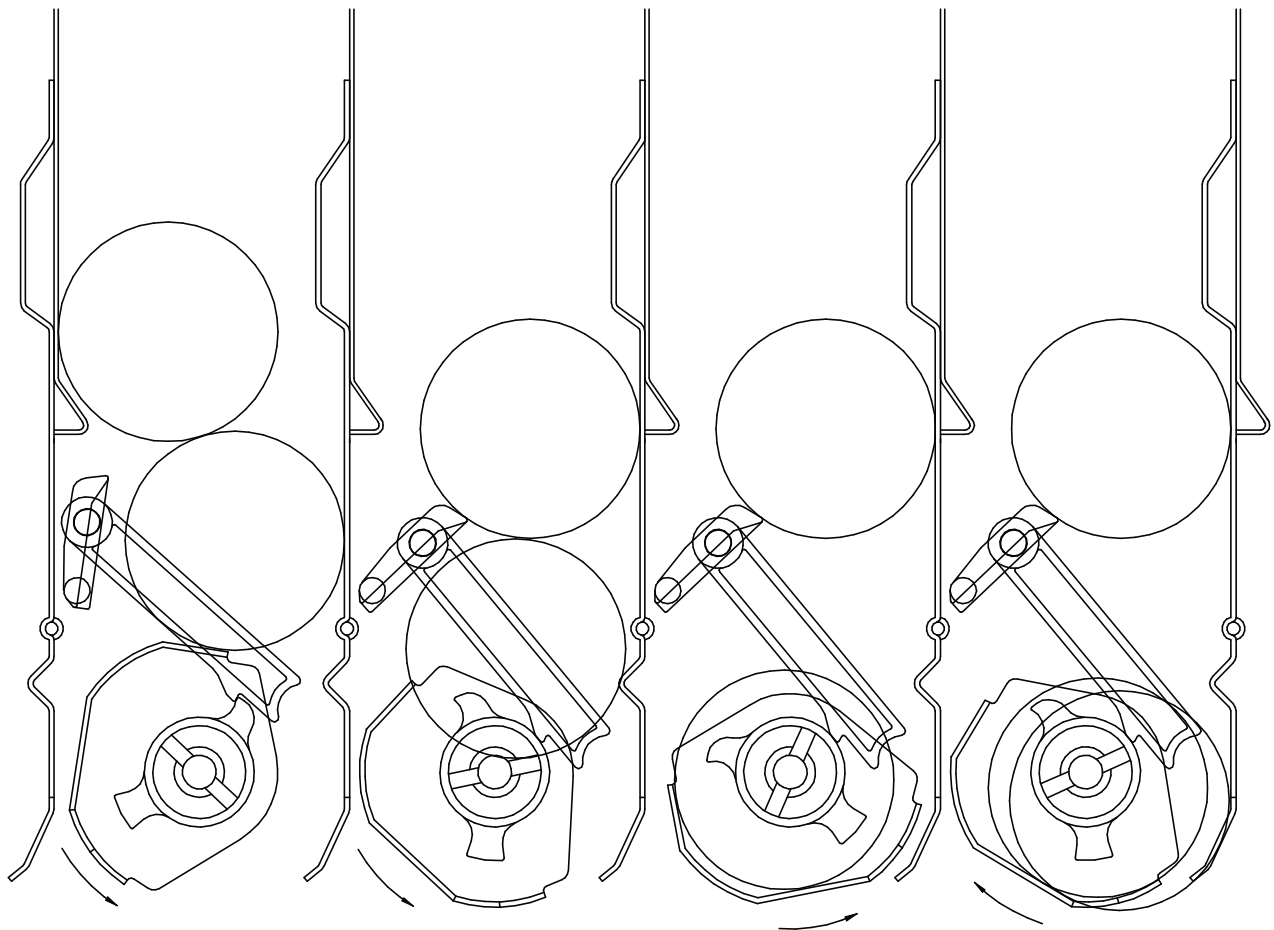


FIGURE 8



**BUCKET ROTATES
COUNTERCLOCKWISE
CAM PUSHES LINK
LINK OPENS GATE**

**BUCKET CONTINUES
COUNTERCLOCKWISE
GATE CLOSAS AS
PRODUCT LOWERS
INTO BUCKET**

**BUCKET REACHES
MAXIMUM
COUNTERCLOCKWISE
ROTATION STOP**

**BUCKET ROTATES
CLOCKWISE UNTIL IT
REACHES STANDBY
POSITION**

RELOAD SEQUENCE

FIGURE 9



NOTES