



**EZ COMPACTOR  
CHUTE Source  
3/3/20**

## What is EZ

### Reasons EZ means added safety

- a) As an option the control can interface with electrically operated doors. Thus, in the event of a fire or while the unit is being serviced, floor doors can be locked to protect the operator.
- b) The EMERGENCY STOP, ACCESS DOOR LSS, LOW OIL LEVEL, HIGH OIL TEMPERATURE all use normally closed contacts. This is failsafe since a broken wire will look like an alarm.
- c) The door switch monitoring the access door carries an IEC safety rating. It requires a special door interlock key.
- d) All pressure and limit switches have been eliminated. What's not there cannot cause a service issue.

### EZ installation

- a) Level and mount the compactor to the floor.
- b) Top off the oil with AW32 if necessary.
- c) Connect the power pigtail to a wall mounted disconnect with 20 amp fuses.
- d) Check the motor for proper rotation.
- e) Reset the motor overload and release (twist) the EMERGENCY STOP pushbutton.  
With the machine in MANUAL, pulse the motor in the forward direction. The motor should spin clockwise.  
If the ram does not move or moves in the wrong direction, with the wall disconnect turned off, exchange any two of the three incoming power leads and repeat the test.

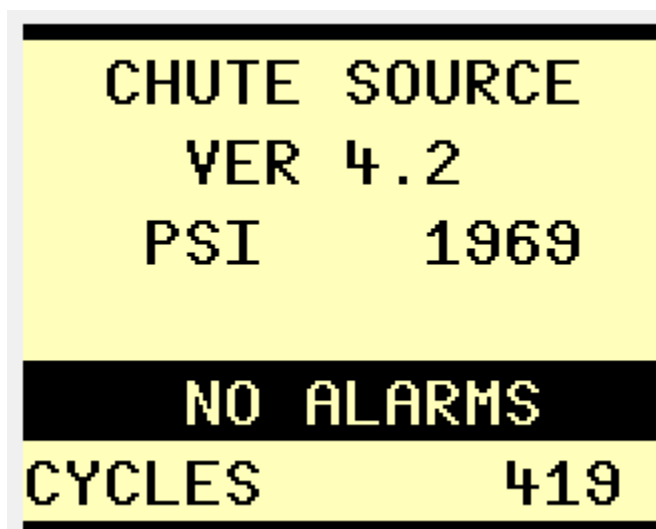
### Advantages of an EZ self-contained system

- a) Smaller foot-print – no longer necessary to mount a separate power pack.
- b) Hydraulic hoses are no longer on the floor, less likely to wear or leak.
- c) Oil is less susceptible to low temperatures.
- d) Emergency stop pushbutton is on the machine.
- e) Manual controls are industrial rated pushbuttons.
- f) A strobe light on the side of the control box demands attention when an alarm is present.



#### Reasons for an EZ Alarm Relay.

- a) The display is mounted on the inside of the box to better protect it.
- b) It identifies the software version of the control and displays the lifetime machine cycles.
- c) The screen displays the peak pressure during ram travel to aid in trouble shooting the machine.
- d) It provides visual text identifying any system alarm.
- e) The alarm relay outputs are rated for 8 amps. A PLC normally has 3 amp outputs.
- f) The system software can be updated with a Mini SD card.
- g) An ethernet connection is standard, allowing for Optional remote alarm monitoring.



#### EZ messages make trouble shooting the system easier.

- a) ACCESS DOOR OPEN – the compactor will not run until this door is closed.

- b) The MOTOR OVERLOAD is tripped – the system has seen excessive current. Checking the incoming fuses to be sure the system hasn't been single phased. Systems are also shipped with the overload tripped to remind the client to check motor rotation.
- c) OIL TEMPERATURE – the temperature of the oil has exceeded 185 degrees. The alarm will automatically clear when the temperature drops below 165 degrees. This will help to prevent the degradation of the oil and reduce any risk of fire.
- d) OIL LEVEL – Add AW32 to the tank. This alarm must be reset by switching from AUTO to MANUAL.
- e) TRANSDUCED FAIL – This is normally caused by a damaged transducer wire, or a bad connection.
- f) PRESSURE – The trash container is approximately 80% full.
- g) CONTAINER FULL – The system has seen high pressure and will prevent further compaction in either MANUAL or AUTO to protect the container. In Auto the ram will automatically return to the fully retracted position. In Manual the ram can be jogged. If the ram is left in the forward position for more than 5 minutes, it will return to the fully retracted position. Switching from AUTO to MANUAL will reset this alarm. To safely replace the container; engage the EMERGENCY STOP pushbutton and shut off the wall disconnect.
- h) CHECK PHOTO EYE indicates that the trash photo has been blocked continuously for more than 30 minutes. This usually indicates a dirty or misaligned photo eye. If left uncorrected a compactor could run continuously for hours or days, overheating directional solenoids while degrading the hydraulic oil. However, if the alarm shuts down the machine, trash can back up quickly. The EZ solution is to cycle the machine. 30 minutes of compaction following by a 10 minute cool. The cycle will continue until the photo eye is cleared. The CHECK PHOTO EYE only displays during the cool down cycle and will clear automatically.

## SETPOINTS

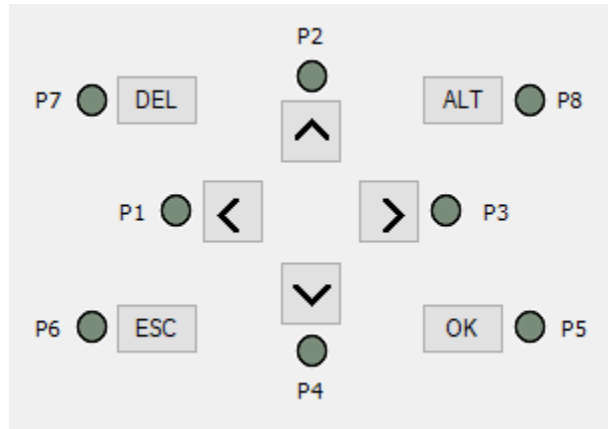
SET POINTS	
80% PSI	800
MAX PSI	1200
FOR MOVE	16.000

Three settings control the operation of the compactor. P1 will display this screen, P3 will return to the startup screen.

MAX PSI and 80% PSI control compaction. 80% is an early warning. It is adjustable from 400 to 1000 psi. Max determines when the container is full and stops compaction. It is adjustable from 900 to 1600 PSI. The factory defaults are 800 and 1200

FOR MOVE is the time in 1/100 of a second that the ram travels forward at the start of the compaction cycle. If the time is set too short, the compaction will not be maximized. If the time is set too long; the compactor will reach a mechanical stop and a high pressure CONTAINER FULL

alarm will occur. An ideal setting will allow the ram to travel 1 ½ inches beyond the front of the compactor. The factory default is 16 seconds.



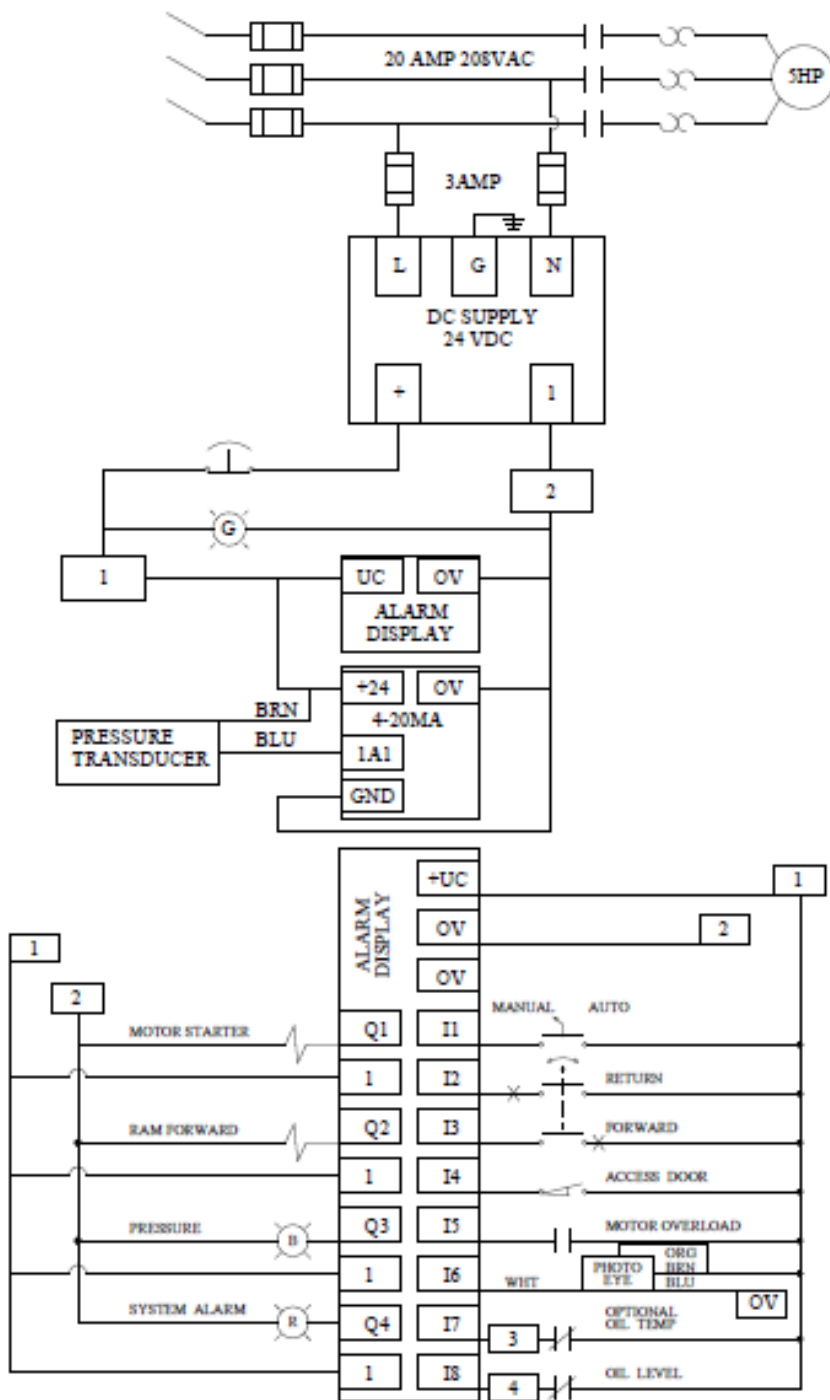
### TO CHANGE A SETPOINT

Press t

he ALT key to highlight the first digit of 80% PSI. Press again to move to the first digit of MAX PSI. (ALT moves from setpoint to setpoint). Press the left or right arrow key to move between digits. Press the up and down arrow key to increase or decrease the value. Press OK to accept the new value. P3 will return the operator to the START UP screen.

**WARNING** Do not park the ram in the extended position with power removed from the controls. This will potentially result in damage to the slide plate and will void the machine warranty.

DISCONNECT BY OTHERS

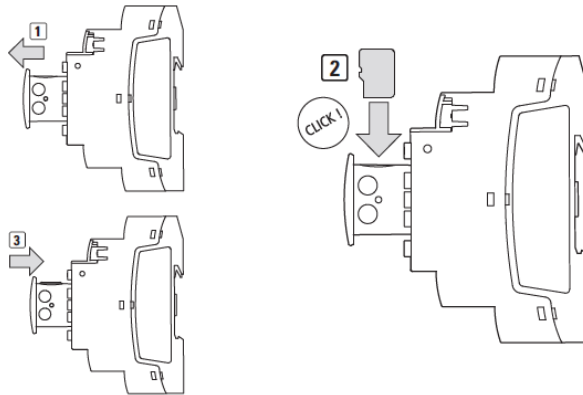


# Appendix 1

## Software updates

Memory cards cannot be inserted the wrong way. Do not force when inserting the card.

- 1) Turn power off
- 2) Pull out the slot
- 3) Push the microSD card into the slot until you feel it lock into place
- 4) Close the slot
- 5) Turn power on



Stop the Alarm relay

Press OK to get to the MAIN MENU (Stop Run flashing)  
Press OK to get to stop program  
Use the up/down arrow keys to toggle between YES and NO  
Select Yes and press OK to stop program.

```
STOP ✓ RUN  
PARAMETERS  
SET CLOCK  
CARD  
INFORMATION  
SYSTEM OPTIONS
```

Scroll down to CARD and press OK

```
PROGRAM  
LOG RECORDING  
MANAGE SD CARD  
INFORMATION
```

Select PROGRAM – OK

---

SET BOOT PROG.  
DELETE PROGRAM  
CARD -> DEVICE  
DEVICE -> CARD

---

Select CARD > DEVICE – OK

Verify the project name – OK

---

EZ COMPACTOR ✓

Confirm the loading of the EZ COMPACTOR program by selecting YES and pressing OK

---

LOAD PROGRAM  
EZ COMPACTOR  
YES  
NO

---

If successful, the relay will return to the PROGRAM screen

---

PROGRAM  
LOG RECORDING  
MANAGE SD CARD  
INFORMATION

---

ESC to return to the main menu

---

STOP ✓ RUN  
PARAMETERS  
SET CLOCK  
CARD  
INFORMATION  
SYSTEM OPTIONS

---

Turn power OFF  
Remove the SD card  
Turn power ON



## SAFETY CONCERNS

The compactor is an efficient machine, well designed for the purpose intended.

### HOWEVER - - -

As with any device of this nature, improper practices in its use or inadequate maintenance once in operation can result in injury to personnel and/or damage to the equipment. Both the potential injuries and the damage can be severe.

### ACCORDINGLY - - -

- 1) **Never try to service the compactor unless you have depressed the emergency stop pushbutton and opened the wall mounted disconnect.**
- 2) Never remove or modify any safety device.
- 3) Always disconnect and padlock power at the 30 amp wall disconnect. Do not rely strictly on the Emergency Stop pushbutton. This is a secondary safety device. It will stop the compactor from operating but there will still be 208 – 440 volt power in the control cabinet.
- 4) Never climb into or on to the compactor
- 5) Never over fuse. A 220/208 volt unit should be fused at 20 amps. A 440 volt unit should be fused at 10 amps.
- 6) Wear protective clothing including safety glasses, helmet and steel toe shoes when changing a dumpster or servicing the compactor. If the system is not protected by “Electrical Interlocked Doors” interfaced to the control system, glass and other materials can still be dropped down the collection chute.

**Compactor safety is addressed by two agencies. Below is a summary of their requirements.**

### **Occupational Health and Safety Act (OSHA) Appendix A**

OSHS (Occupational Health and Safety Act) has a stringent and specific set of requirements that affect practically every workplace in the United States. Specifically, Section 5 of the Act requires the following:

“Each employer -

(1) shall furnish, to each of his employees, a place of employment which is free from recognized hazards that are causing or are likely to cause death or serious physical harm to these employees.

(2) shall comply with occupational safety and health standards promulgated under this Act.

This obligation must be emphasized! It has been ruled that a violation of OSHA standards has been held to be evidence of negligence in a state court ruling against an employer for injury **even to a non-employee third person.**

### **ANSI Requirements (Z245.1 1984 and A12.1-1973)**

ANSI Standards (American National Standard Institute) clearly identify the standards of care and performance that the employer must follow, and that the employee should follow. The “stationary compactor” referenced in the following excerpts is typically the “apartment house” compactor - the CP1/CP2 compactors fall into this category.

## **Stationary Compaction Equipment**

### *The employer shall be responsible for:*

1. Ensuring that the installation of stationary compactors is in conformance with local codes, ordinances and manufacturer's recommendation.
2. Providing for instruction and training in safe methods of work to employees before assigning them to operate, clean, service, maintain or repair the equipment.
3. Monitoring the employee's operation of stationary compactors and taking appropriate action to ensure proper use of equipment, including adherence to safe practices.
4. Repairing any mechanical malfunction or breakdown that effects the safe operation of the equipment.
5. Establish and follow a program of periodic and regular inspections and maintenance. This shall include keeping malfunction reports and records of inspections and maintenance work performed.
6. Protecting the operator at the point of operation, in the case of stationary compactors having a loading height of less than 42".
7. Ensuring that stationary compactors equipped with automatic cycling controls are used only in locations where the charging chamber is not generally accessible while the compactor is cycling automatically.
8. Providing guard railings for dock rams in accordance with ANSI A12.1-1973. These shall be located around the charging chamber opening if walk-on ramps are used to deposit refuse into the charging chamber. Guard railings and toe boards shall be provided on the sides of walk-on ramps.
9. Make certain that the person or company engaged in servicing the compactor system is qualified to perform the work specified and understands and will adhere to all prevailing and related codes.

### *The employee shall be responsible for:*

1. Using all applicable safety features provided on the stationary compactor.
2. Using stationary compactors only after being properly instructed and trained
3. Reporting any damage to or malfunction of the compactor by submitting a report.
4. Ensuring that access doors, are closed and latched before operation may begin.
5. Ensuring that the area of operation around the container is clean and clear of persons.
6. The compaction Ram produces very large forces that may cause serious bodily injury or damage to property. Keep the compactor room locked. Be sure that no unauthorized person has access to the room and the equipment in it. Equip the door with a sign that warns unauthorized people to stay out.
7. Establish a formal record retention policy related to such things as products specifications, designs, drawings, inspection reports, service documents, suggestions, sales records, test reports, etc.
8. The compactor room should be used only for those purposes directly related to compaction operations and not to other activities such as service and other work performed for individual tenants on non-compaction system related activities. The compaction system should not be used in any manner or for any purpose not envisioned by the manufacturer.

**9.** Warn anyone authorized for compaction system access that they are not to put any part of their bodies (hands, arms, feet, etc.) into the compactor or hopper while power is on. When servicing the unit make sure that the wall 30 amp switch is in the “Off” position and has a safety padlock.

The Emergency Stop pushbutton will also kill control power to the compactor. Use this as a secondary safety when servicing the machine. The Emergency Stop will stop compactor motion, but it does not shut off the 208/440 volt power in the control cabinet. For this reason, Emergency Stop should only be used as a secondary safety.

**10.** If the system includes electrical door interlocks that are interlocked with the compactor panel, removing power from the compactor will lock the floor panels. Otherwise tenants can drop trash down the chute while the trash bins are being serviced.

Because of the danger from falling glass, always wear safety glasses, gloves, and a hard hat when servicing the compactor.

**11.** If an electrical circuit is fused with a fuse of higher rating than the circuit initially incorporated, a serious hazard to life and property may develop.

**12.** Do not permit modifications to the compactor system without first advising the compactor manufacturer and service organizations, in writing, as to reasons for the modification.

**13.** Check for wear of components once a week. Inspect for frayed and worn hoses and replace questionable hoses if wear is noted or suspected.

**14.** The Work Area must always be kept clean and be maintained in a safe condition.