



# ***WILKINSON HI-RISE***

***A WHR HOLDINGS, LLC COMPANY***

***Operation and Maintenance Instructions***

***for***

***TRASH & RECYCLING CHUTE SYSTEMS***

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## **Chapter 1: SAFETY – RULE #1**

### **MOUNT THE COPY OF THIS PAGE THE TRASH ROOM**

- 1. WHENEVER ANY MAINTENANCE OR SERVICE IS TO BE PERFORMED ON THE TRASH CHUTE SYSTEM, THE ENTIRE SYSTEM SHOULD BE TAKEN OUT OF SERVICE BY LOCKING ALL OF THE INTAKE DOORS ON THE CHUTE.**
- 2. NEVER PLACE ANY PORTION OF THE BODY INSIDE THE AREA OF THE DISCHARGE OF THE TRASH CHUTE. DEBRIS OR GARBAGE EXITING THE TRASH CHUTE MAY CAUSE SERIOUS BODILY INJURY OR DEATH.**
- 3. ALWAYS WEAR SAFETY GLASSES, GLOVES, STEEL-TIPPED SHOES AND A HARD HAT WHEN MAINTAINING THE TRASH CHUTE SYSTEM.**
- 4. NEVER CLIMB OR REACH INTO THE TRASH CHUTE TO RETRIEVE OBJECTS OR ARTICLES.**
- 5. COMPLY WITH ALL APPLICABLE REQUIREMENTS OF THE FOLLOWING DOCUMENTS:**
  - A. ANSI Z245.1-1984 - SAFETY REQUIREMENTS FOR REFUSE COLLECTION AND COMPACTION EQUIPMENT.**
  - B. ANSI A12.1-1973 - SAFETY REQUIREMENTS FOR FLOOR AND WALL OPENINGS, RAILINGS AND TOE BOARDS.**
  - C. OCCUPATIONAL HEALTH AND SAFETY ACT- (OSHA)**
- 6. ELECTRICALLY INTERLOCK (EI) DOORS CONTAIN HIGH VOLTAGE. MISUSE OF THESE DOORS COULD RESULT IN SERIOUS INJURY OR DEATH. ONLY QUALIFIED PERSONNEL SHOULD PERFORM MAINTENANCE ON THIS EQUIPMENT.**

## Chapter 2: Installation

### **WARNING:**

*Only experienced personnel should attempt to install, service, or operate this equipment. Installing this equipment requires the installer to work within confined spaces and in areas where fall protection may be required. Working in both of these areas can cause serious injury or death if the proper procedures and equipment are not utilized.*

### **2.1 Introduction**

This instruction manual includes information detailing the installation, operation and maintenance of **Wilkinson Hi-Rise** trash chute system.

Sufficient information is included in this manual to aid qualified personnel in correctly installing, operating and maintaining this equipment. Added technical help is available through your local manufacturer's representative or directly from the manufacturer. Refer to the appropriate sources as required. It is assumed that a specific location for the trash chute system has already been established with the assistance of the manufacturer's representative and qualified personnel will be utilized to install this equipment.

### **2.2 Trash Chute Installation Instructions**

It is preferred that the walls surrounding the chute assembly are not in place at time of installation. The walls surrounding the trash chute are to be erected by the contractor only after the chute has been completely installed. When job sight conditions warrant a more expedient method of assembly, at a minimum, the face wall (the wall the intake door mounts into), should be left open until the chute is completed in all respects of the installation including but not limited to fire sprinkler connections, electrical connections, and any other options as specified in the contract documents.

1. First, locate and identify all intake sections. Place sections on appropriate floors. Each section will be marked numerically to correspond to shop drawings
2. When starting installation, start at the floor above discharge area.
3. Openings in the floor should already be present. Place the floor frame over the opening (DO NOT FASTEN FLOOR FRAME AT THIS TIME.)
4. Place intake section over the floor frame ("S" clips or angled clips should slip over the floor frame.) Go to the discharge area and connect discharge and any other appropriate sections to the intake above the discharge area. (Whether "A" discharge or type "H" discharge section should be clipped together, however type "H" discharge will require a pipe pedestal for support.)
5. Return to floor above discharge area and place the "B" section onto the intake.
6. Go to next floor and repeat steps 3, 4, and 6 until you've reached the vent area.
7. Place vent piece (section of chute that passes through roof.)
8. Go to roof and place flashing collar over the vent piece then connect the vent body with wind band.
9. After all floors have been installed fasten floor frames to floor.
10. Connect intermediate 1 ½ inch IPS-165 degree fusible link automatic sprinkler-to-sprinkler line.
11. Connect Disinfecting and Sanitizing unit (D&S Unit) with separate hot water line if present. If hot water line is not present, utilize cold water line.
12. Return to discharge area and connect fusible link on the discharge so that the door is in an open position.

## Chapter 3: Operation

### 3.1 Description of Operation

1. The Wilkinson trash chute is designed to handle a normal size (13 gallon) trash bag – one per transaction.
2. The trash chute is NOT designed to handle commercial type trash such as concrete, wood, and other types of building material. Material such as this could cause CLOGGING<sup>1</sup> or damage to the trash chute system.
3. The trash chute is NOT designed for residential garbage such as rugs, pizza boxes, large cardboard boxes that would not fit into a normal size trash bag, pillows, furniture, ironing boards or other types of residential waste that would not fit in a normal sized trash bag. Material such as this described could cause CLOGGING\* of the trash chute system.

<sup>1</sup> **Please note: If clogging does occur, contact your local Wilkinson representative to assist in correcting the clogging problem. If not done correctly, the chute may be damaged.**

**Also, clogging of the chute due to improper use of trash chute IS NOT covered under the manufacturer's warranty for this system. You will be charged an applicable service fee if a Wilkinson representative is called to the site and the clogging is due to the improper use of the trash chute system.**

### 3.2 Operation of Trash Chute Doors

The operation of the trash chute doors is as follows:

**The trash chute is equipped with Electrical Interlock (EI) doors, the system is designed to allow only one (1) user access to the trash chute at a time. Once a trash chute door is opened, the remaining trash doors “lock-out” and will not “unlock” until the trash door that is open is returned to the closed position.**

1. Grab on to handle and activate release latch with thumb (<sup>2</sup> See below if trash chute door is equipped with T-Handles)
2. Push the RED button on the top of the door to activate the locking solenoid
3. Pull door toward you until fully opened
4. Deposit trash in open area of trash chute door
5. Release handle and door will automatically shut

<sup>2</sup> If the trash chute doors are equipped with T-handles, to open, grab the T-handle and turn clockwise. Follow steps 2-4 listed above.

### 3.3 Locking of Trash Chute Doors

Most of Wilkinson's trash chutes are furnished with a lock on each intake door. To lock the intake door to prevent the use of the trash chute, insert key that was furnished with trash chute into the key slot on the front of the door and turn until door remains locked.

If locks were not furnished with the trash chute door, it is imperative to provide users with the proper signage informing them that the chute is shut down if required maintenance is being performed. Failure to shut down the trash chute while maintenance is occurring may result in serious injury or even death.

### **3.4 EI Door MASTER SWITCH**

The trash chute system is equipped with an EI door system and equipped with a MASTER SWITCH which will be installed in the trash room. The MASTER SWITCH switch allows the operator to manually lock down the trash chute intake doors by energizing or deactivating the locking solenoid installed in each door. The MASTER SWITCH also allows the chute to be cleaned using the disinfecting and sanitizer unit installed on the top of the chute. Instructions for using this switch are included below.

The MASTER SWITCH switch has a RED and GREEN light installed on the front of the panel. When the system is in NORMAL operation and the system there is power to the system, the GREEN LIGHT is illuminated.

The RED light will illuminate when one of the intake doors are opened. The RED light will go ON and OFF as user are accessing the trash chute.

**SERVICE SWITCH** – allows the MASTER SWITCH to LOCK all of the chute intake doors by deactivating the push buttons on each door thus not allowing the intake door to be opened. Locking of the doors allow periodic maintenance to be completed such a bin change out.

**FIRE SWITCH** – ONLY WORKS IN SERVICE MODE and allows the MASTER SWITCH to deactivate the MAG hold open on the the discharge door allowing it to close. This should be used when performing maintenance on the system BUT CLOSING THE DISCHARGE DOOR SHOULD NOT BE USE AS A SHUT OFF DOOR. Using the discharge door as a shut off door to hold back trash may cause damage to the door and void the warranty.

When the system is LOCKED DOWN, the RED light will be illuminated. The system is LOCKED DOWN by activating the switch installed in the panel. The LOCK OUT switch is factory calibrated to LOCK OUT the intake doors for a period of approximately 45 minutes.

After this time frame, the LOCK OUT switch will TIME OUT and the locking solenoids will be de-energized and the chute will be accessible again. The GREEN light will then illuminate on the LOCK OUT switch that indicates the system needs to be RESET. Activating the switch DOWN until NO lights are illuminated on the LOCK OUT switch RESETS the system.

***Please note: The lock-out switch is factory calibrated to LOCK OUT the trash chute doors for approximately 20 minutes. It is NOT recommended that the locking solenoids stay activated for longer than 20 minutes in that this may damage the solenoids.***

***Once the system is locked down for 20 minutes, it should NOT be LOCKED OUT again for at least 40 minutes to allow the heat that has built up in the locking solenoids to dissipate. LOCKING OUT the system before 40 minutes may damage the locking solenoids and will not allow system to operate as designed.***

***Damaged locking solenoids due to the system being locked out incorrectly will VOID THE WARRANTY on the system and the components.***

## **Chapter 4: Periodic & Preventive Maintenance**

### **4.1 Introduction**

As with any mechanical devices, this system must be regularly maintained to ensure the system will operate long-term and trouble-free.

The periodic maintenance is regular cleaning and inspection of the entire systems and its attachments. Like most mechanical devices, you need to keep free of build-up of dust, lint or other foreign objects. It is recommended the following procedures be followed at a minimum:

#### **4.2 WEEKLY Maintenance**

1. DEODORIZE AND SANITIZE the entire chute system utilizing the D&S unit installed at the top of the chute. The D&S unit should be operated for 5 MINUTES per 20 FLOORS of chute. For trash chutes with fewer than 20 floors, the D&S unit should be operated for a minimum of 5 minutes per week.
  - a. Utilize standard industrial cleaner in the reservoir of the D&S unit. However, it is recommended that an "Organic" type cleaner be used because the majority of the wash down fluid will be directed to the floor drain installed in the trash room. SIMPLE GREEN or equivalent.
2. Clean TRASH chute doors to remove any build up inside the door that may prevent them from closing properly
3. Clean the areas adjacent to trash doors
4. Clean the areas adjacent to the discharge of the of the trash chute to prevent build up of trash that may attract rodents or insects

#### **4.3 Periodic Maintenance**

1. Follow LUBRICATION schedule for trash chutes doors detailed in ATTACHMENT 1 of this document. Lubricate utilizing WD-40 or other type industrial lubrication agents
2. Follow CLEANING schedule for trash chutes doors detailed in ATTACHMENT 1 of this document

## **Chapter 5: Troubleshooting and Maintenance**

**5.0 Introduction** - Following are some common troubleshooting tips for the Wilkinson Hi-Rise Trash Chute Systems

#### **Trash Chute door will not open**

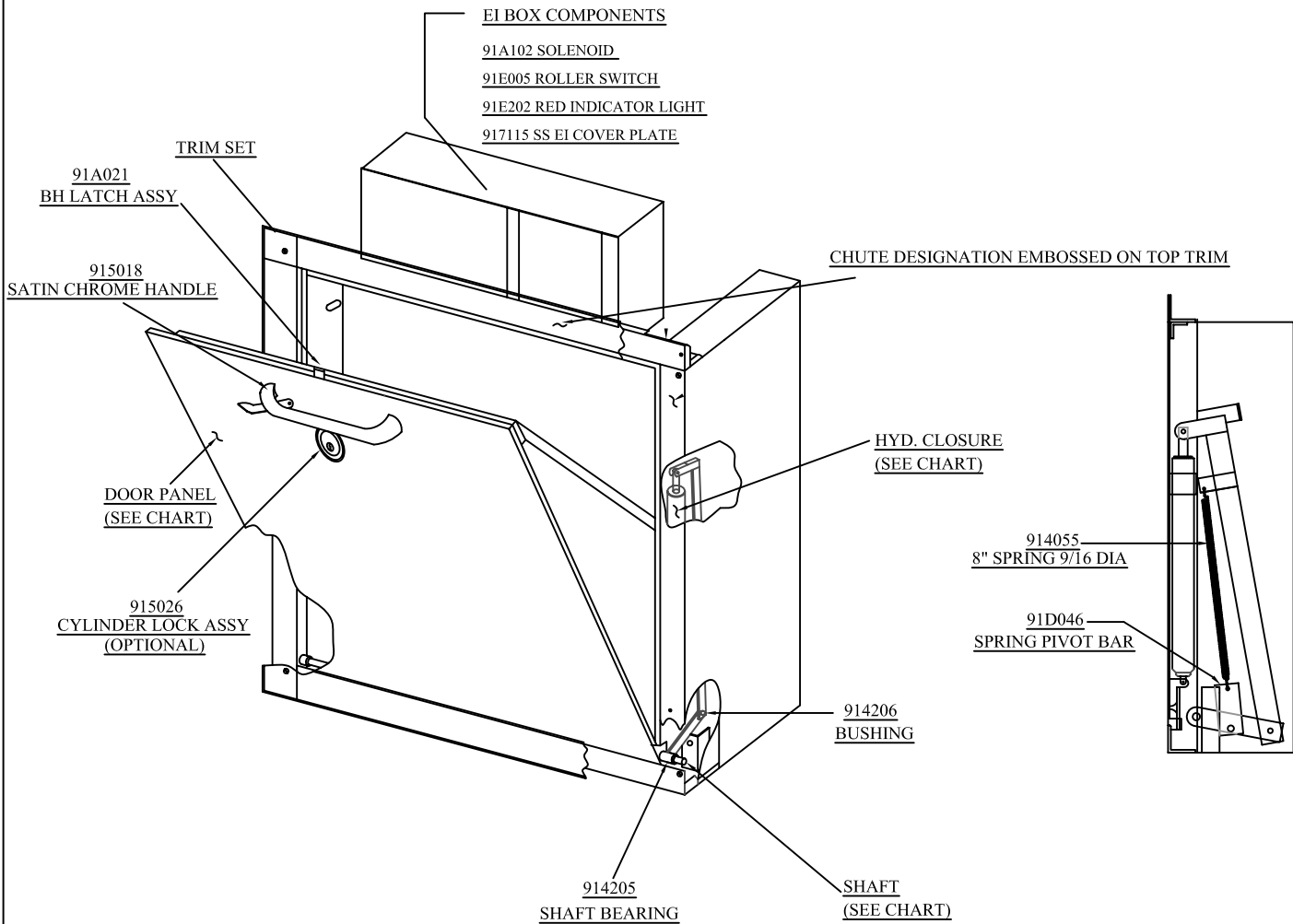
1. Check the door is not locked; if so, unlock
2. Check that thumb latch or T-handle is releasing catch on top of door. If not, call local Wilkinson representative for replacement
3. Check to see if a door is open in the system that is engaging EI door lock-down system. If found, close door and system should go back into normal operation.
4. The LOCK-OUT switch is activated. De-Activate LOCK OUT switch when applicable.
5. The trash chute doors are very simple to operate so if you are not successful in opening the door with either 1 or 2, 3 or 4 - call your local Wilkinson representative for service

#### **No trash is exiting the trash chute**

1. Check trash chute for clogging
2. Be sure system is in operation

**ATTACHMENT 1: Trash Chute Door Drawings with Maintenance Instructions**





OUR STANDARD BOTTOM HINGED DOOR UNIT IS FABRICATED OF AISI TYPE 302 / 304 STAINLESS STEEL WITH A STANDARD SATIN FINISH #3 DIRECTIONAL POLISH.

ALL DOORS HAVE A NOISELESS SELF-CLOSING MECHANISM THAT IS SPRING ACTUATED WITH A HYDRAULIC CHECK TO RESTRICT THE CLOSING SPEED.

OUR DOORS BEAR A 1 1/2 HRS. 250° UL "B" LABEL. IT CAN BE USED IN MASONRY AND DRYWALL APPLICATIONS.

**MAINTENANCE INSTRUCTIONS**

1. LUBRICATION- EACH SIX (6) MONTHS OIL SHAFT BEARING(914205),LATCH ASSY (91A021), BUSHING (914206), SOLENOID (91A102), ROLLER SWITCH (91E005) & GREASE INSIDE OF PART-MECHANISM COVER.

2. CLEANING- EACH SIX (6) MONTHS CLEAN DIRT FROM BACK OF LOWER ANGLE FRAME WHICH MAY ACCUMULATE AND PREVENT DOOR FROM CLOSING.

3. FOR ACCESS TO CLOSING MECHANISM:  
 a. REMOVE RIGHT HAND TRIM EXPOSING PART-MECHANISM COVER.  
 b. REMOVE SCREWS SECURING PART-MECHANISM COVER AND USE SCREW DRIVER AS LEVER AT TOP OF COVER TO REMOVE. COVER IS UNDER SPRING PRESSURE OF HYDRAULIC CYLINDER TO ASSURE POSITIVE CLOSING.

SIZE	DOOR PANEL	CONN. BAR	SHAFT	HYD. CLOSURE
12" X 15"	2254NP	91D033	91A141	91H001
15" X 18"	2584NP	91D105	91A089	91H002
18" X 18"	2884NP	91D105	91A091	91H002
21" X 18"	2184NP	91D105	91A096	91H002
24" X 24"	2444NP	91D086	91D087	91H002

DESCRIPTION	REV.	DATE	INIT.

THIS DRAWING IS THE PROPERTY OF WILKINSON HI-RISE. IT IS LOANED ON THE CONDITION THAT IT IS NOT TO BE REPRODUCED, COPIED OR OTHERWISE DISPOSED OF, AND IS NOT TO BE USED IN PART TO FURNISH INFORMATION FOR THE MAKING OF DRAWINGS, PRINTS, OR PARTS THEREOF. THE ACCEPTANCE OF THIS DRAWING IS AN ACCEPTANCE OF THE FOREGOING CONDITIONS AND THE RECOGNITION OF THE EXCLUSIVE OWNERSHIP IN AND TO THE DRAWINGS AS THE PROPERTY OF WILKINSON HI-RISE.



**WILKINSON-HI-RISE**

CUSTOMER:

DWG.

SCALE NTS

SHEET 1 OF 1

**BOTTOM HINGED HAND OPERATED ELECTRICAL INTERLOCK INTAKE DOOR**

JOB:

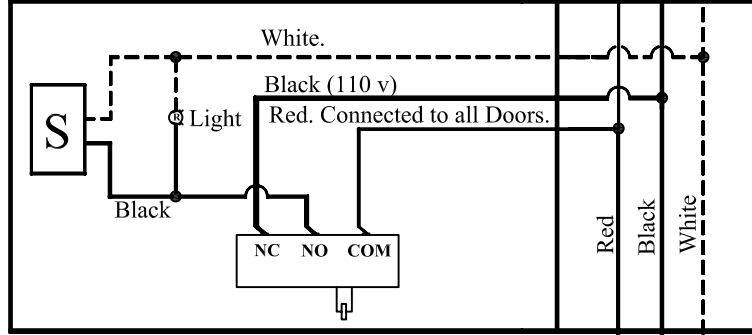
ADDRESS:

JOB #

To Next Floors

EI INTAKE BOX

Next Floors



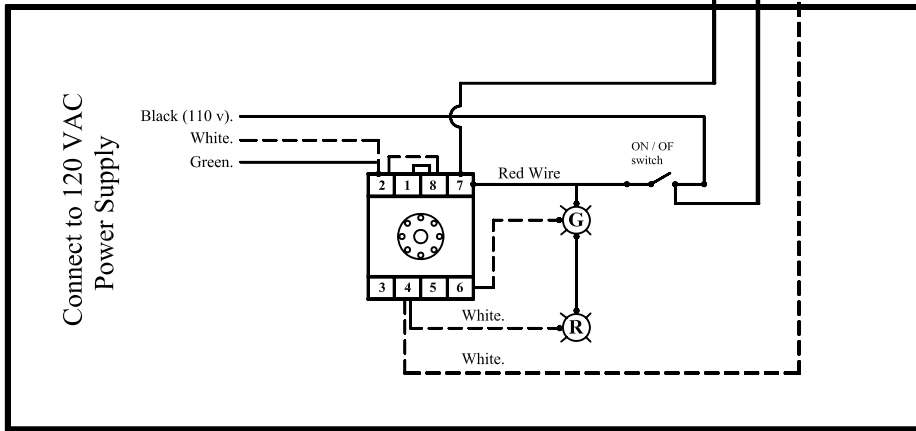
HEAT DETECTOR  
(IF REQUIRED).

(Installed above top  
Intake of Trash chute.)

SMOKE DETECTOR

(Installed in Trash Room.)

LOCKOUT SWITCH



LEGEND

SYMBOL	DESC.
	ON / OF Switch
	RED LIGHT
	GREEN LIGHT
	SOLENOID
	ROLLER SWITCH

DESCRIPTION	REV.	DATE	INIT.

E.I. DOOR SYSTEM.

DRAWING NAME: ELECTRICAL SCHEMATIC

DRAWING #: NON #

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**WILKINSON-HI-RISE**

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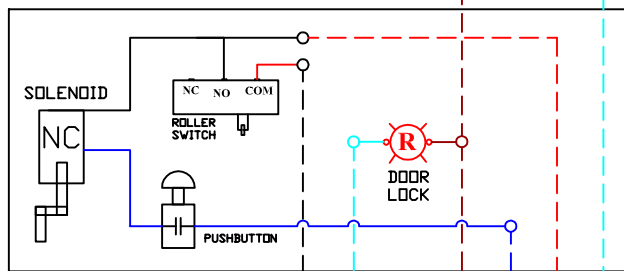
UNLESS OTHERWISE SPECIFIED:  
DIMENSIONS ARE IN INCHES  
FRACTIONAL DIMENSIONS ±1/32"  
DECIMAL DIMENSIONS ±0.10"  
ANGULARITY ±1°  
MACHINED SURFACES ✓

DWC

SCALE NTS

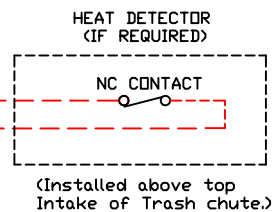
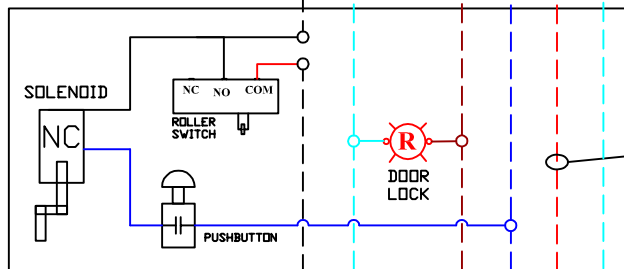
SHEET 1 OF 1

TOP FLOORS



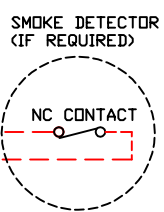
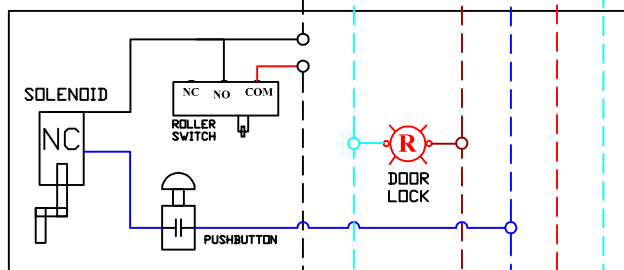
1 IN CONDUIT PIPE FOR PROTECTION  
DO NOT CONNECT ANY OTHER CIRCUIT TO THIS LINES

MIDDLE FLOORS

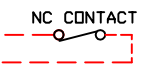


RETURN LINE PASSES THRU ALL FLOORS (NO CONNECTION REQUIRED)

FIRST FLOOR

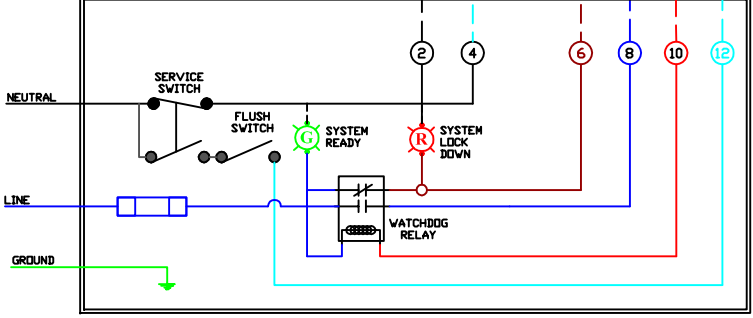


COMPACTOR INTERFACE OPEN THIS CONTACT TO LOCK DOORS (IF REQUIRED)



EI NEUTRAL (WHITE)  
NEUTRAL LIGHTS (BLUE)  
LINE LIGHTS (BROWN)  
EI LINE (BLACK)  
RETURN (RED)

NCEIHV DOOR PANEL



INCOMING POWER SUPPLY  
10A  
110VAC  
60HZ  
DISCONNECT

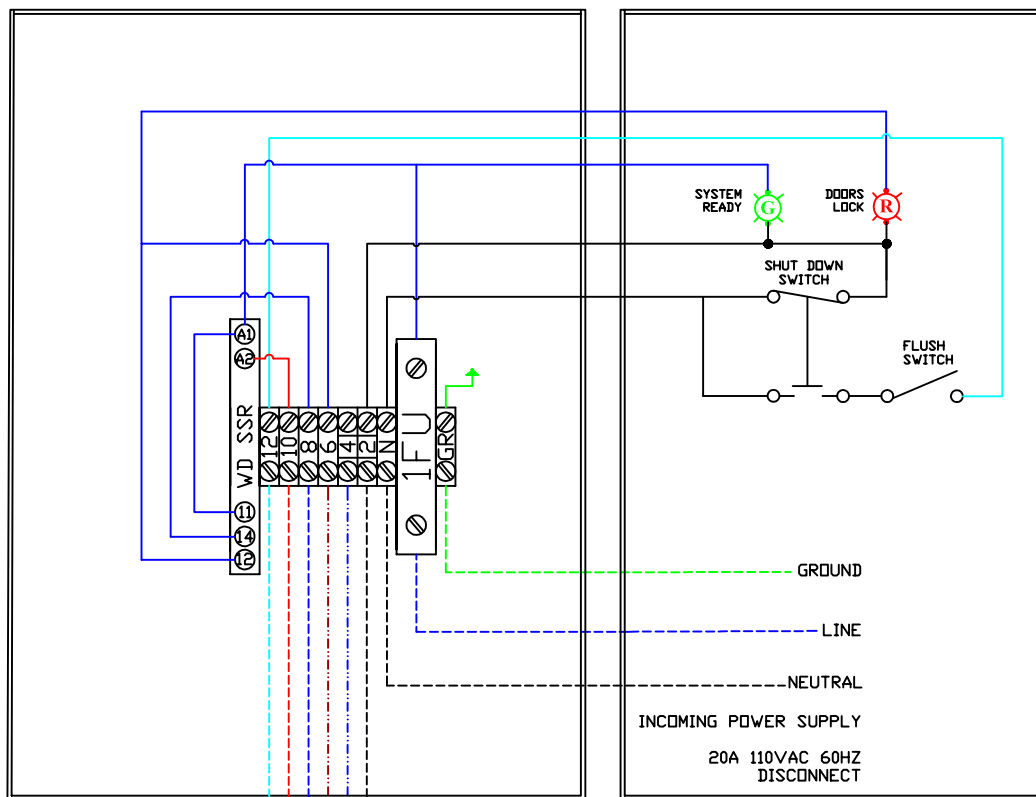
SYMBOL	DESC.
	ON / OF Switch
	RED LIGHT
	GREEN LIGHT
	SOLENOID
	ROLLER SWITCH
	FIELD WIRING (DOTTED)
	FACTORY WIRING (SOLID)

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**NC / EI / HV SYSTEM**

# MASTER SWITCH WIRING DIAGRAM



FLUSHING VALVE LINE  
 EI - RETURN FROM TOP FLOOR  
 EI - LINE  
 EI - LINE  
 LIGHTS - LINE  
 LIGHTS - NEUTRAL (BLUE)  
 EI - NEUTRAL (WHITE)

FIELD WIRING TO DOORS

\*\* DOORS CONDUIT FOR EI AND LIGTHS  
 16 GA THHN STRANDED WIRE  
 1 IN CONDUIT PIPE  
 FOR PROTECTION DO NOT CONNECT ANY  
 OTHER CIRCUIT TO THIS LINES

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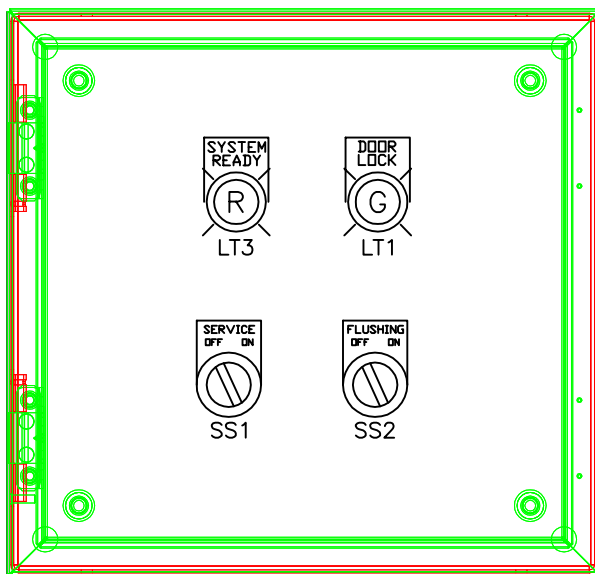
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DATE	DESCRIPTION	REV BY	REV LEV

**NC / EI / HV MASTER SWITCH**  
 DWG. 1731      SCALE **NTS**      SHEET **3 of 3**

# ENCLOSURE

THIS SIDE ONLY!!



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	<b>NC / EI / HV MASTER SWITCH</b>	
DWG. 1731	SCALE <b>NTS</b>	SHEET <b>3 of 3</b>