



**WILKINSON HI-RISE**

*A WHR HOLDINGS, LLC COMPANY*

***Operation and Maintenance Instructions***

*for*

***LINEN CHUTE SYSTEMS***

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## **Chapter 1: SAFETY – RULE #1**

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

- 1. WHENEVER ANY MAINTENANCE OR SERVICE IS TO BE PERFORMED ON THE LINEN 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 LINEN CHUTE. MATERIAL EXITING THE LINEN CHUTE MAY CAUSE SERIOUS BODILY INJURY OR DEATH.**
- 3. ALWAYS WEAR SAFETY GLASSES, GLOVES, STEEL-TIPPED SHOES AND A HARD HAT WHEN MAINTAINING THE LINEN CHUTE SYSTEM.**
- 4. NEVER CLIMB OR REACH INTO THE LINEN CHUTE TO RETRIEVE OBJECTS OR ARTICLES.**
- 5. COMPLY WITH ALL APPLICABLE REQUIREMENTS OF THE FOLLOWING DOCUMENTS:**
  - A. ANSI A12.1-1973 - SAFETY REQUIREMENTS FOR FLOOR AND WALL OPENINGS, RAILINGS AND TOE BOARDS.**
  - B. 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** linen 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 linen 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 Linen 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 linen 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. If applicable, 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 linen chute is designed to accept bulk linen and towels.
2. The linen chute is NOT designed to handle any type of garbage and refuse in that this material may stain or damage the chute causing stains or tears in linens.
3. For optimum performance, linens or towels should be wrapped in a ball and placed in the chute. By performing this step, it will minimize clogging in the chute.<sup>1</sup>

<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 linen 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 linen chute system.***

### 3.2 Operation of Linen Chute Doors

The operation of the linen chute doors is as follows:

***Please note: If the Linen chute is equipped with Electrical Interlock (EI) doors, the system is designed to allow only one (1) user access to the Linen chute at a time. Once a Linen chute door is opened, the remaining Linen doors "lock-out" and will not "unlock" until the Linen 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 linen chute door is equipped with T-Handles)
2. Pull door toward you until fully opened
3. Deposit linen in open area of linen chute door
4. Release handle and door will automatically shut

<sup>2</sup> If the linen 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 Linen Chute Doors

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

If locks were not furnished with the linen 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 linen chute while maintenance is occurring may result in serious injury or even death.

### 3.4 EI Door MASTER SWITCH – NORMALLY OPEN SYSTEMS

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 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 also only allow one door to be open at a time keeping all others locked to allow only

one person to access the chute at a time.

The MASTER 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, NO lights are illuminated on the switch.

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.

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 20 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.***

### **3.5 EI Door MASTER SWITCH – NORMALLY CLOSED SYSTEMS**

***The normally Close system works on EI Doors by providing a "Push to Open" interface to the end user.***

All doors are connected through 5 wires from the top floor to the master switch. These wires function as follows:

EI Neutral (White) - Provides the switching signal through all the roller switches  
Neutral (Blue) - Provides status signal to all the red lights indicating status of the doors  
Line Lights (Brown) - Provides status signal to all the red lights indicating status of the doors  
EI Line (Black) - Provides power to all the Pushbuttons that enables the door open  
Return (Red) - Provides the signal from floor above to the master switch

#### **Operation Intake doors**

The doors are normally CLOSED, in order to open, the user needs to have power to the intake which is supplied through the master switch. Without power, the door will remain closed.

To open intake door, push and hold Push button and pull door open. Once the door is opened, the remaining doors on the system will lock out and the RED light on the doors should illuminate.

**NOTE:** that the door interlock is enabled once that the door is opened, not when the push button is activated.

The RED light will stay solid when an intake door is open. When the RED light is off, the intake doors can be opened.

### **Electrical Interlock (EI)**

The function of the system is to only allow one door to be open at a time keeping all others to allow only one person to access the chute at a time.

### **MASTER SWITCH**

The Normally Closed EI system will not work without a MASTER SWITCH, its function is to provide the power for the doors, manage the interlock and to monitor the status of the incoming power.

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

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

To place the system in SERVICE mode, turn the SERVICE selector switch to ON and all doors will be LOCKED DOWN and the RED light will be illuminated. When the system is in SERVICE, the RED light will be illuminated.

To place the chute back into operation, use the SERVICE selector switch to OFF.

### **Flushing Switch**

An OPTIONAL FLUSHING switch may be included in the master switch, which is supplied in conjunction with a solenoid valve installed at the D&S unit. This switch allows the chute be washed remotely by activating the flow of water at the D&S flushing unit installed at the top of the chute. The flushing system will remain activated as long as this switch is placed in the ON position.

***Please note: Running the flushing system for extended periods of time will generate large amount of water in the trash room. Please take care when operating flushing system that the switch is not left on for extended periods of time.***

## **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. The chute will need to be kept 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. Clean LINEN chute doors to remove any build up inside the door that may prevent them from closing properly
2. Clean the areas adjacent to linen doors
3. If applicable, 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 linen 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 linen room. SIMPLE GREEN or equivalent.

#### **4.3 Periodic Maintenance**

1. Follow LUBRICATION schedule for linen chute doors detailed in ATTACHMENT 1 of this document. Lubricate utilizing WD-40 or other type industrial lubrication agents
2. Follow CLEANING schedule for linen chute 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 Linen Chute Systems

#### **Linen Chute door will not open**

1. Ensure the door is not locked; if so, unlock
2. Ensure that thumb latch or T-handle is releasing catch on top of door. If not, call local Wilkinson representative for replacement
3. The linen chute doors are very simple to operate so if you are not successful in opening the door with either 1 or 2, call your local Wilkinson representative for service

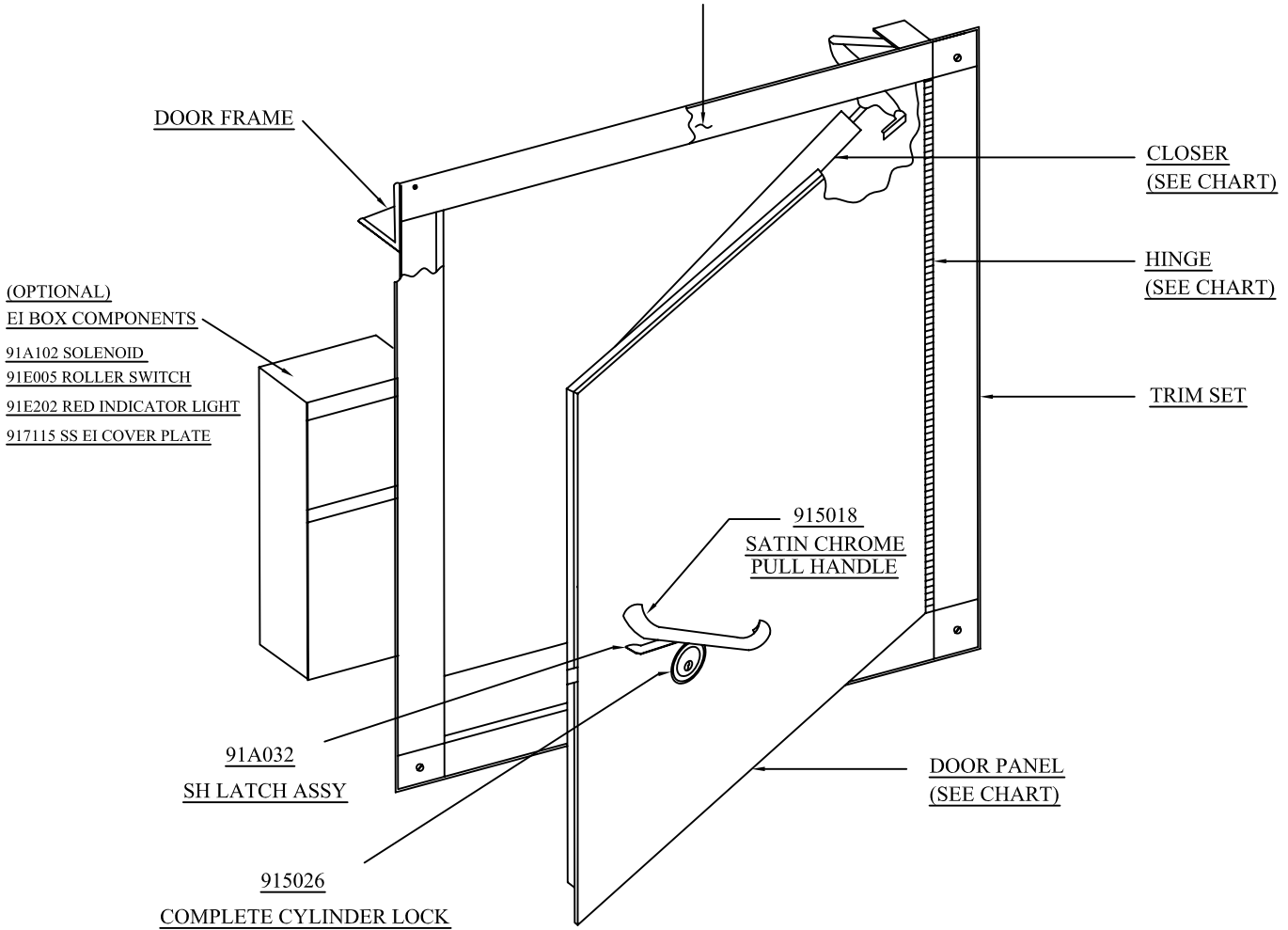
#### **No linen is exiting the linen chute**

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



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

CHUTE DESIGNATION EMBOSSED ON TOP TRIM



MAINTENANCE INSTRUCTIONS

1. LUBRICATION- EACH SIX (6) MONTHS OIL PARTS:  
91A032 LATCH SYS, 91A102 SOLENOID, 91E005 ROLLER SWITCH

OUR STANDARD SIDE 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. THE DOOR CAN BE HINGED LEFT OR RIGHT DEPENDING ON THE CUSTOMERS NEEDS.

SIZE	DOOR PANEL	HINGE	HYD. CLOSURE
15" X 15"	2554NP	917302	91HA08
18" X 18"	2884NP	917301	91HA08
21" X 21"	2114NP	917300	91HA08
24" X 24"	2444NP	917313	91HA08

DESCRIPTION	REV.	DATE	INIT.
		SEPT 07	
		JUNE 08	SG
		JAN - 10	JM

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WILKINSON-HI-RISE

CUSTOMER:

DWG.

SCALE NTS

SHEET 1 OF 1

SIDE HINGED HAND OPERATED INTAKE DOOR

JOB:

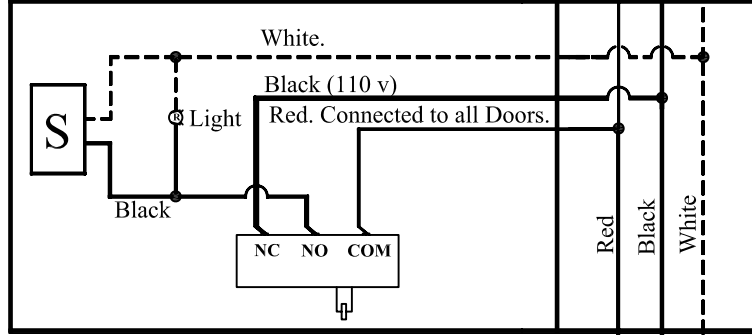
ADDRESS:

JOB #

To Next Floors

EI INTAKE BOX

Next Floors



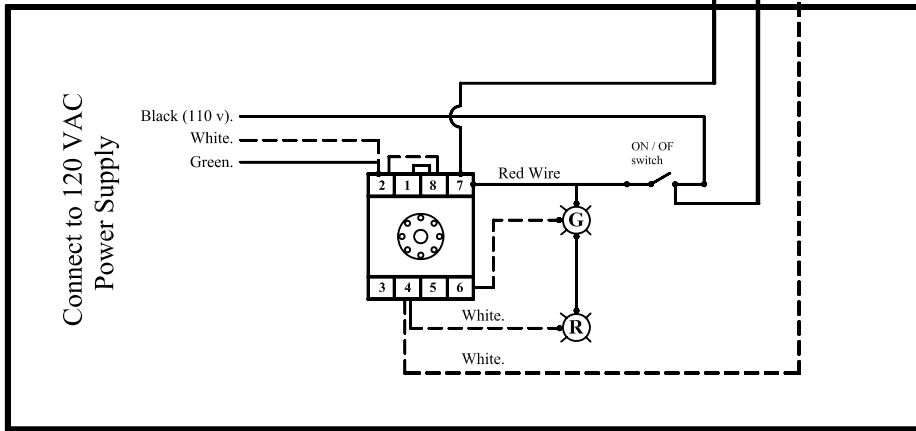
HEAT DETECTOR  
(IF REQUIRED).

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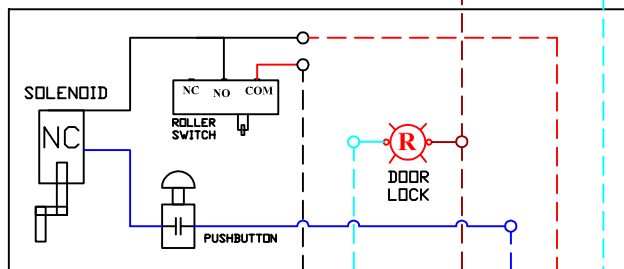
UNLESS OTHERWISE SPECIFIED:  
DIMENSIONS ARE IN INCHES  
FRACTIONAL DIMENSIONS ±1/32"  
DECIMAL DIMENSIONS ±0.10"  
ANGULARITY ±1°  
MACHINED SURFACES ✓

DWC

SCALE NTS

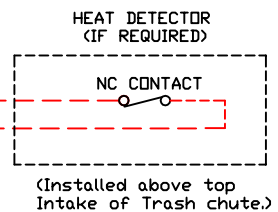
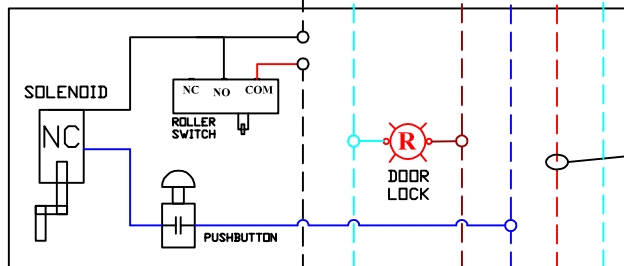
SHEET 1 OF 1

TOP FLOORS



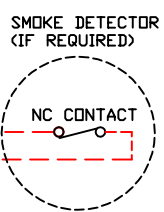
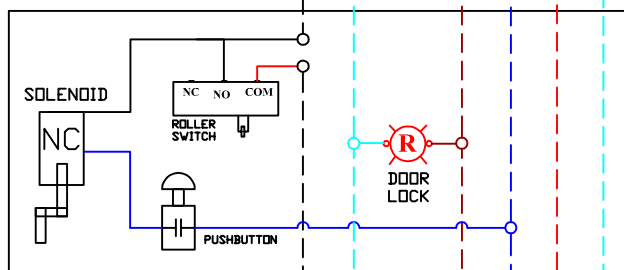
1 IN CONDUIT PIPE FOR PROTECTION  
DO NOT CONNECT ANY OTHER CIRCUIT TO THIS LINES

MIDDLE FLOORS

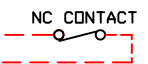


RETURN LINE PASSES THRU ALL FLOORS (NO CONNECTION REQUIRED)

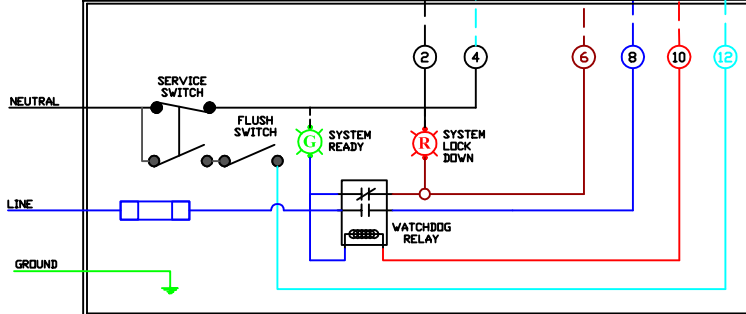
FIRST FLOOR



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



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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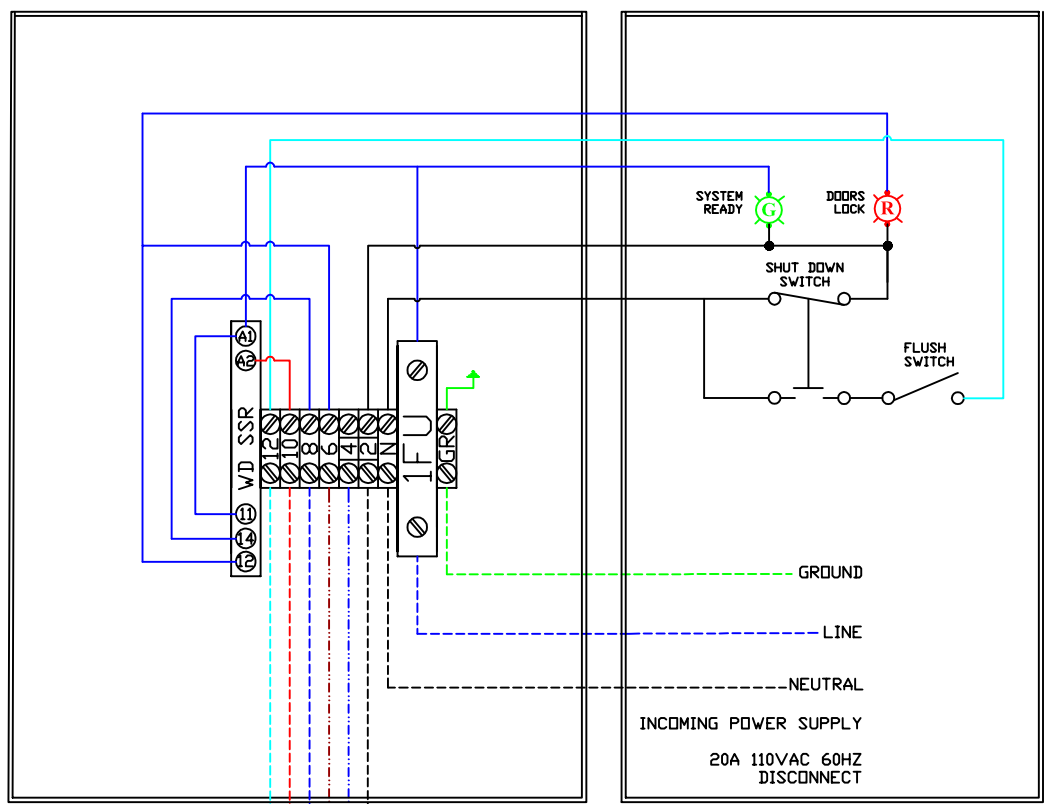


**WILKINSON-HI-RISE**

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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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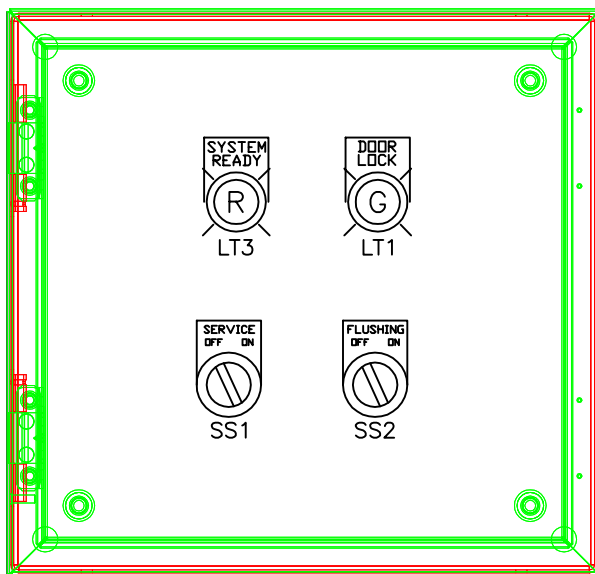
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**NC / EI / HV MASTER SWITCH**

DWG. 1731	SCALE <b>NTS</b>	SHEET <b>3 of 3</b>
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# 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>