

Log HouseFoods Bag Slitter System

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1 Statutory Information

Disclaimer

The information contained in this document is confidential and only for informing intended recipient. This information may not be used, published or redistributed without the prior written consent of Cybernetik Technologies Pvt. Ltd. Legal action will be taken against the violator.

Warranty

The warranty period will be 12 months from the date of successful testing at Cybernetik. The warranty work against any manufacturing defects in the equipment or parts of the equipment designed and manufactured by us. Warranty on bought-out items by Cybernetik is restricted by the warranty period specified by the specific vendors. Any extended warranty for the bought-out items, unless stated otherwise in the above document, will be charged extra. Under all circumstances our liability arising out of any manufacturing defects/workmanship if any, will be restricted to the ex-works price of the offered system and not extended to any consequential damage. Our warranty extends to the system provided by us and is not related to any other machinery or related equipment which may be linked to the system. Warranty above said will not be applicable if usage and maintenance instruction are not properly adhered to as per our guidelines and instructions. The warranty does not apply to normal wear, improper storage and maintenance, failure to observe operating instructions, manhandling and use of system beyond defined use as per agreement. Replacement of defective components, described above, does not include international freight, customs and duties, as applicable. It also doesn't include manpower cost required for reinstallation of the said item.

In the event of replacement of any individual element (subject to conditions mentioned above), the said element needs to be sent back to Cybernetik and the replacement/repair will be done by individual equipment manufacturer and this will be facilitated by Cybernetik.



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2 Purpose of this Manual

This manual contains instructions for:

- Installation Instruction
- Power up and Operation Sequence
- Alarm troubleshooting
- Preventive Maintenance

The manual is organized as below,

Table 1: Outline of the manual

Chapter	Description
Purpose of this Manual	This chapter
General Safety Instruction	Safety instructions to be followed.
System Description	Information on working and product description
Operation	Power up sequence and Operating Procedure.
Alarm Diagnostic and Troubleshooting	How to diagnose and troubleshoot the alarms in the system.
Preventive Maintenance	Information about maintenance schedule.
Spare Parts List	Contains the mechanical/electrical spare list.

3 General Safety

3.1 Identify the Safety



When you see the above symbol on your machine or in this manual, be alert to the potential for personal injury. Follow recommended precautions and safe operating practices.

3.2 Understand Signal Words



DANGER: Danger refers to the state of being exposed to harm, risk, or the potential for adverse consequences that may threaten one's well-being, safety, or life.

WARNING: A warning is a communication or signal that alerts individuals to the presence of a potential danger, threat, or problem, urging them to take precautionary measures or actions to avoid harm or adverse outcomes.

CAUTION: Caution is a state of alertness and careful consideration, typically exercised in response to potential risks or dangers.

3.3 Safety Instruction

- Always keep work area clean.
- Avoid all electrical dangers. Pay attention to the risks of electric shock or arc flash hazards.
- Always bear in mind the risk of drowning, electrical accidents, and burn injuries.
- Keep safety signs in good condition. Replace missing or damaged safety signs. Be sure new equipment components and repair parts include the current safety signs.
- Additional safety information contained on parts and components sourced from suppliers that is not reproduced in this manual.
- Learn how to operate the system. Do not let anyone operate the system without instruction.

3.4 Safety Equipment

Use the following safety equipment within the work area:

- Safety Helmet, Safety goggles, preferably with side shields, Protective shoes and gloves, First-aid kit, Fire extinguisher



3.5 Transport the System Safely

A disassembled system is best transported on a flatbed carrier. Use crane to lift the system assemblies and load it on a heavy hauler for transportation.

Before transporting the system, make sure that the sub-assemblies are having suitable attachment points. Use chains to secure the system assemblies to the carrier.



4 Introduction

4.1 About

The **Log House Foods Bag Slitter System**, developed by **Cybernetik Technologies**, is a high-performance, custom-engineered solution designed to automate and optimize the complete cocoa bag processing workflow. This advanced system seamlessly manages every critical stage—from bag infeed and dust removal to slitting, powder discharge, screening, and pneumatic transfer—ensuring efficient material handling and consistent product quality.

Engineered to meet specific plant capacity and hygiene requirements, the system integrates precision conveyors, high-efficiency cleaning blowers, controlled cutting mechanisms, and intelligent powder separation technology. Its well-coordinated design enables smooth transfer of cocoa powder through screening and pneumatic conveying to multiple PCS lines and onward to the storage hopper.

With minimal manual intervention and enhanced process reliability, the solution significantly improves operational efficiency, reduces material loss, and ensures uninterrupted production flow. Cybernetik Technologies' innovative and application-focused design approach delivers a robust, scalable, and high-performance system, setting new standards in automated cocoa powder handling and processing.

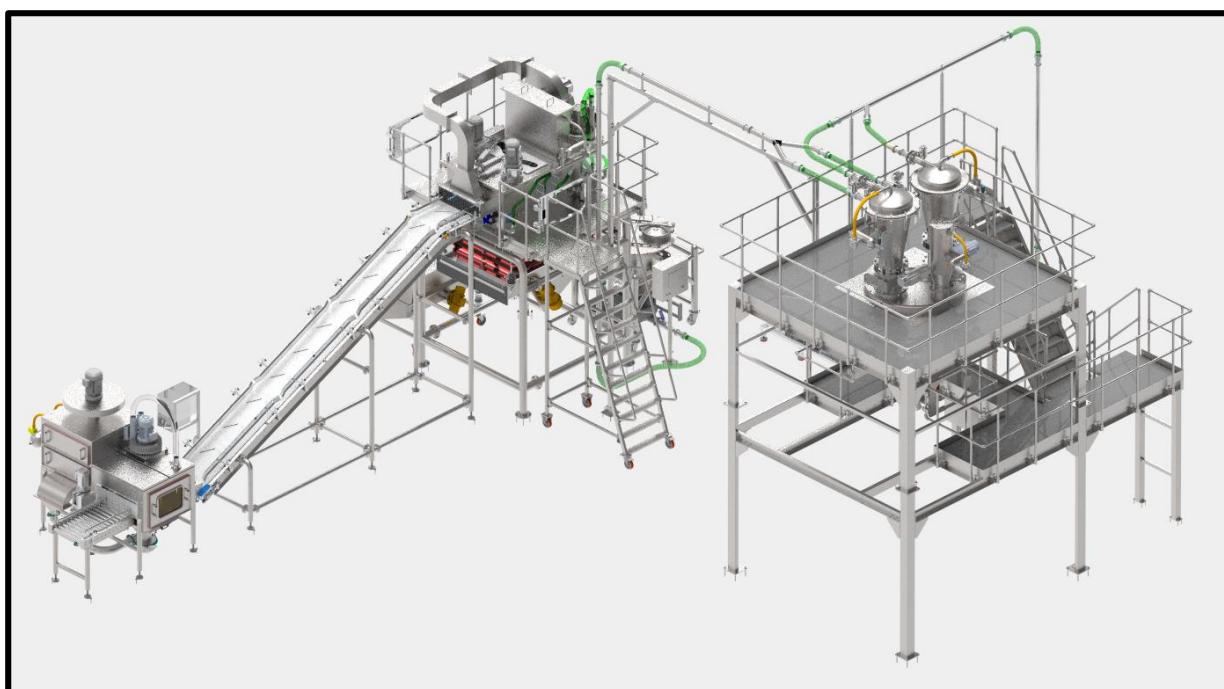


Figure 1: Isometric View



Figure 2: Front View (PCS01& PCS02)

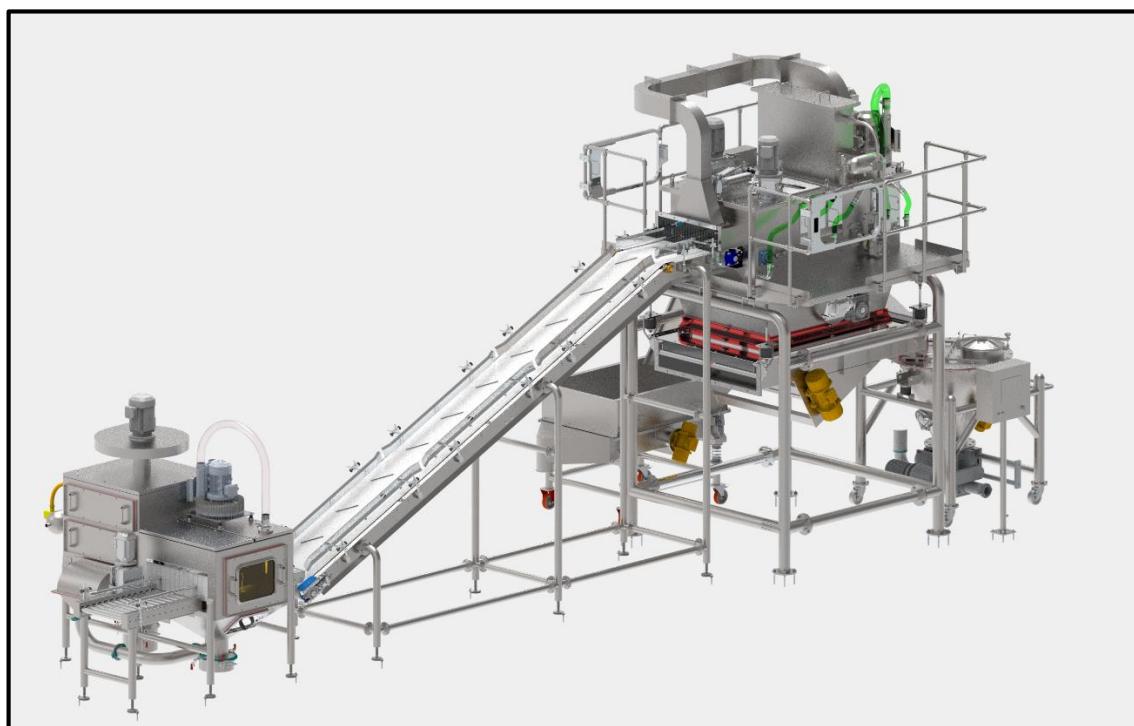


Figure 3: Front View

5 Technical Specifications

This chapter consists of both mechanical and electrical specifications. It has a set of information and requirements for the product in order for it to work as it was meant to.

Table 2: Technical Specification

Sr. No	Part Name
1	ZONE-1 BAG TRANSFER SYSTEM
2	BAG SLITTER
3	HOLDING HOPPER-1
4	MOVING PLATFORM
5	PRODUCT PIPING
6	ZONE-3 POWDER CONVEYING SYSTEM
7	VIBRO CONVEYOR

5.1 Electrical Specifications

Requirements:

1. Need separate earth pit for Instrumental Earthling (IE) and Power Earthling (PE).
2. Earth resistance should be below 5 Ohm.

Following are the electrical specifications of the system.

Table 3: Electrical Details

Control Panel	
Power Supply	480 VAC, 60Hz, 3 Phase
Connected Load	48.6 kW, 65.2 HP , 80.9 AMP
Design Load (*1.25)	60.8 kW, 81.5 HP , 91.5 AMP

Table 4: Start –Up Sequence

Sr. No	System Start Up Sequence
1	Turn On Main Panel Power Switch.
2	Turn On all MCB's & MPCB's.
3	Check PLC and IO module get started.
4	Check HMI get started.
5	Check Prestart Condition on HMI is Healthy.
6	Check Safety Condition is healthy on HMI.
7	Put System In auto mode,
8	Tower Lamp Indicates Green Blinking. (Auto Selected)
9	Press system start button for 3 seconds. (System gets started)
10	Tower Lamp Indicates Solid Green. (Auto Started)
11	System is started.

5.2 Tower Lamp Status



Figure 4: Dome Lamp

The following table describes the light color status shown by dome lamp.

Table 5: Light Color Status

Lamp Color	Status
Fault (Steady Red)	System is at Fault and requires RESET
Manual (Amber)	Manual Operation is done
Auto (Green)	System is set at Auto Mode

6 Operation

6.1 Startup sequence

Follow below Power up sequence.

1. Switch on the main Isolator switch on the control panel.



Figure 5: Isolator Switch

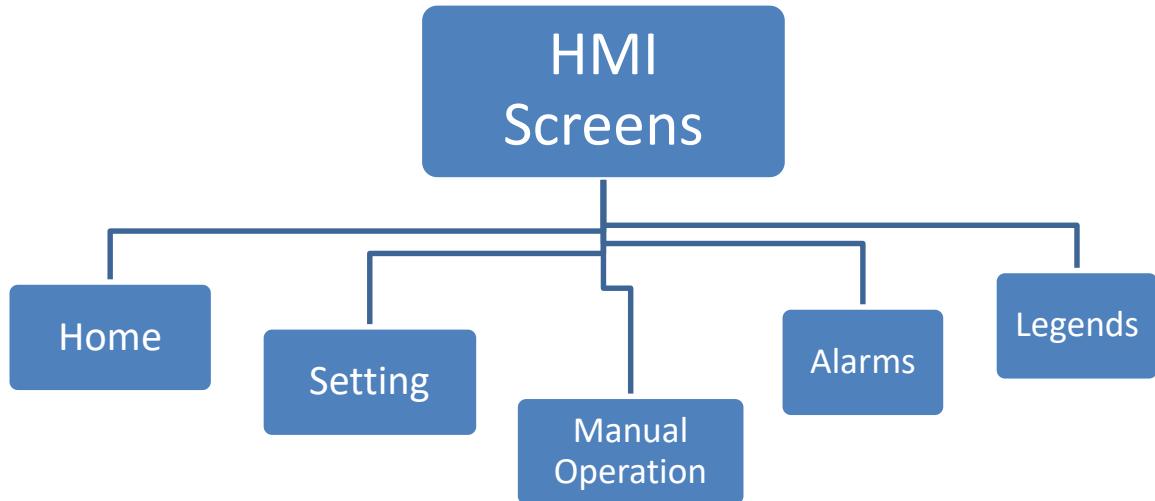
2. Switch on all the MCBs, MPCBs, inside the panel.



Figure 6: MCBs, MPCBs, RCCBs

3. Check the incoming power supply parameters from the VFD meter.

The below figure shows the overall layout of the HMI



7.1 Process flow

1) Bag Infeed & Initial Cleaning:

- Cocoa bags (---kg) arrive onto the Infeed Roller Conveyor.
- As the bags move forward, dust and loose particles are removed using:
 - ✓ Bag Cleaning Air Knife Blower
 - ✓ Bag Cleaning Dust Collector Blower
- The cleaned bag continues toward the next stage.

2) Bag Transfer & Inclined Conveying

- The bag is transferred from the infeed conveyor to the **Bag Inclined Conveyor**.
- The inclined conveyor elevates the bag to the slitting section.

3) Bag Slitting & Product Discharge

- The bag reaches the **Slitter Infeed Conveyor**.
- At this point, the bag is **cut through the center** by two cutting mechanisms:
 - **Bag Slitter Cutter-1**
 - **Bag Slitter Cutter-2**
- Once slit, the cocoa powder is discharged and directed into **PTV02**, followed by **PTV01**.

4) Powder Screening (Fine–Coarse Separation)

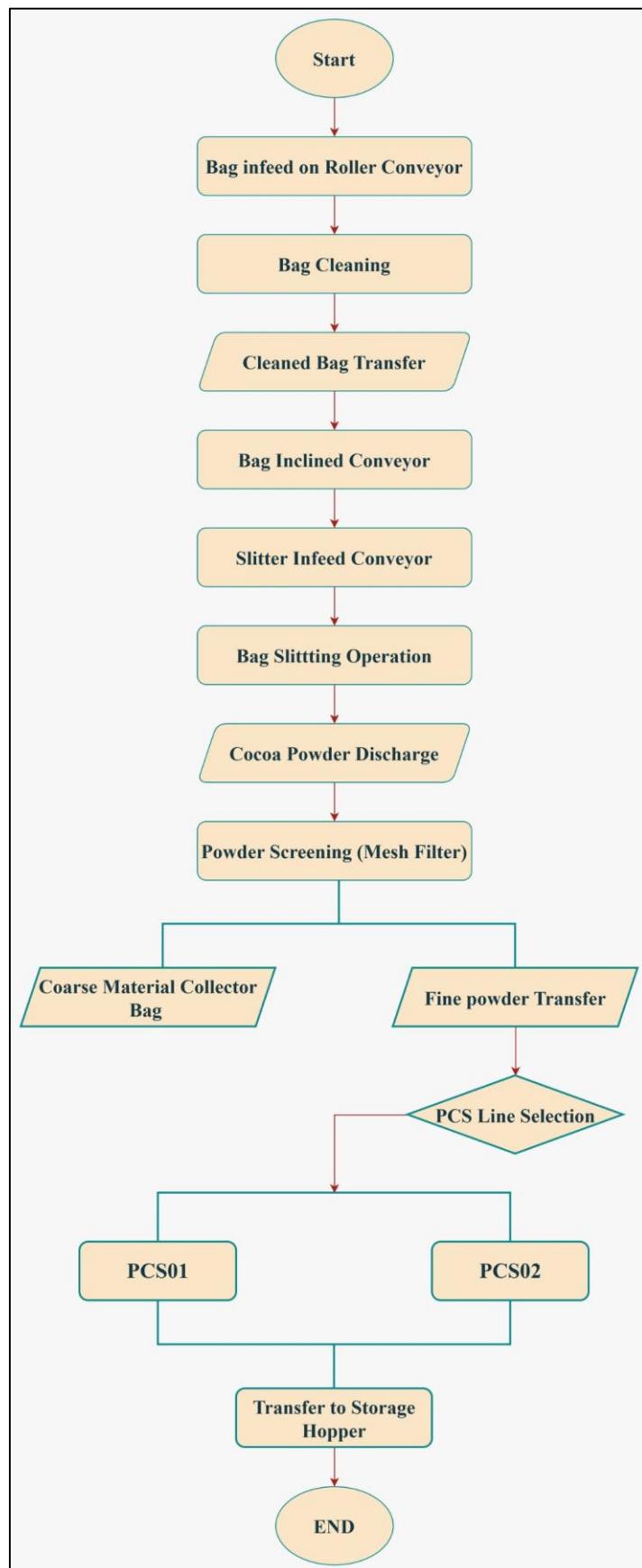
- The discharged cocoa material passes through a **mesh filter** where:
 - **Fine powder** is separated and moved for pneumatic transfer.
 - **Coarse material** is collected separately in a **collector bag** for further handling or disposal.

5) Pneumatic Transfer to PCS

- The fine powder is conveyed through pipelines and blown to **PCS01 or PCS02**, depending on which PCS line is selected.
- In some operations, **both PCS01 and PCS02 may run simultaneously** for material transfer.

6) Final Transfer to Storage Hopper

- From the PCS unit, the powder moves onward to the **Storage Hopper (RAV)**.
- Transfer into the hopper is assisted by the **Hopper-2 Vibro Motor**, ensuring consistent flow and preventing clogging.



Welcome Screen

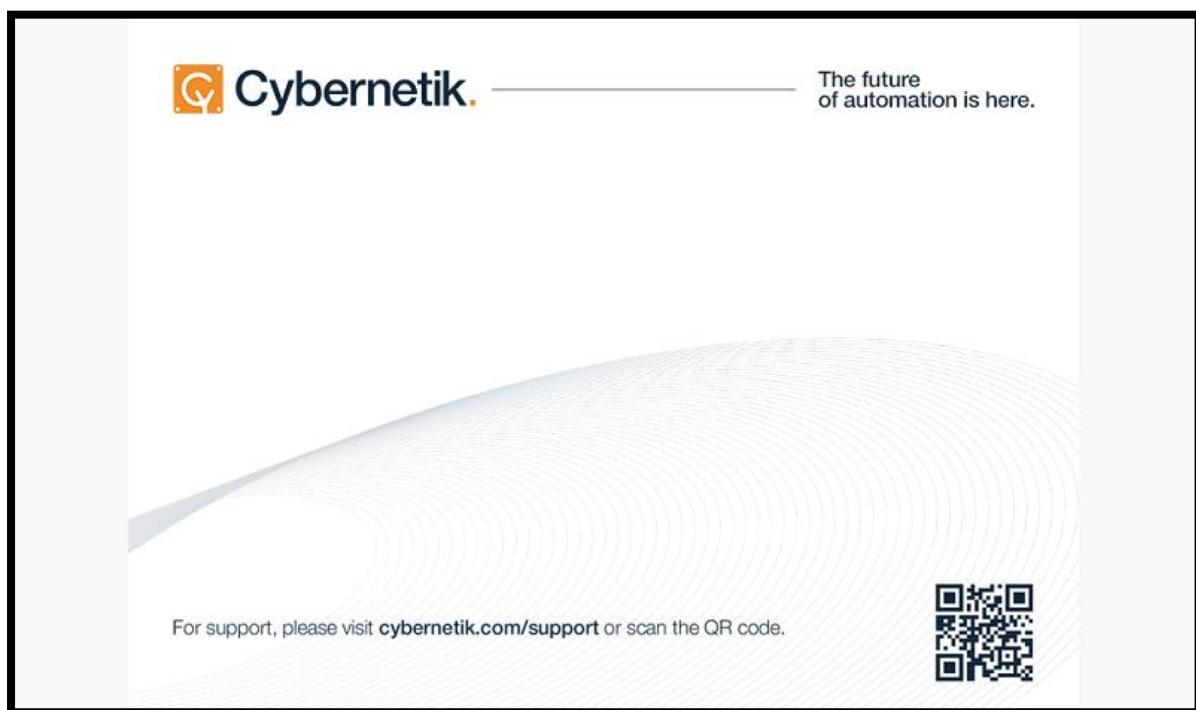


Figure 7: welcome screen

9 Overview

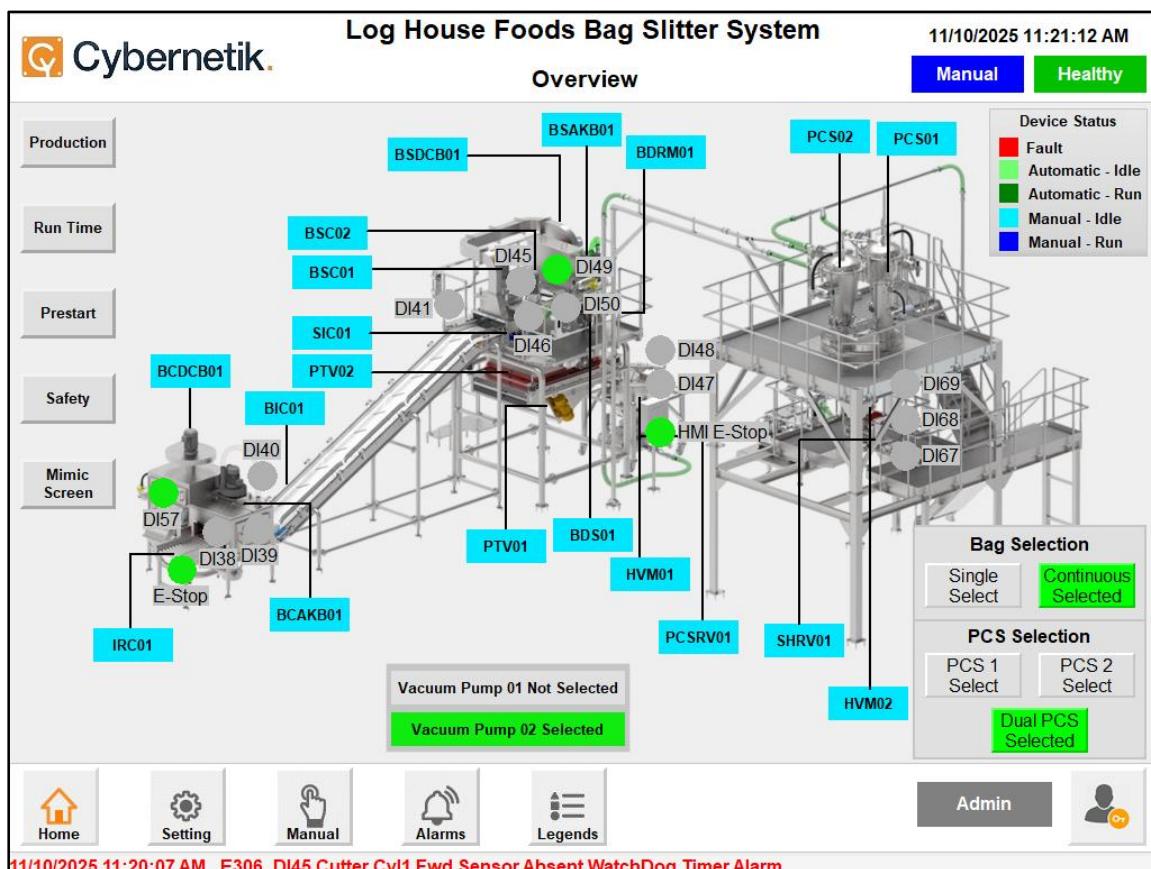


Figure 8: Overview

- This HMI screen provides a real-time graphical overview of the Log House Foods Bag Slitter System. It displays equipment status, operating parameters, fault messages, and allows navigation to system functions such as settings, manual Operation, alarms, and administrative tools.

Status Indicators (Left and Top Right):

- Manual (Blue):** The system is being controlled manually (each component can be started/stopped individually).
- Healthy (Green):** All safety and interlock conditions are OK (no E-Stop active, no major faults).
- Green Circles (Inputs ON):** Sensors or Feedbacks.
- Grey Circles (Inputs OFF):** Sensors not detecting signal.

Color	Meaning
Red	Fault condition
Green	Automatic – Run
Light Green	Automatic – Idle
Blue	Manual – Run
Light Blue	Manual – Idle

Operating Selections:

Control Section	Current Status
Bag Selection	Continuous Selected: System will process bags continuously.
PCS Selection	Dual PCS Selected (Green): both vacuum lines PCS-1 and PCS-2 will convey material simultaneously.
Vacuum Source	Vacuum Pump 02 Selected: material transfer using PCS-2 pump.

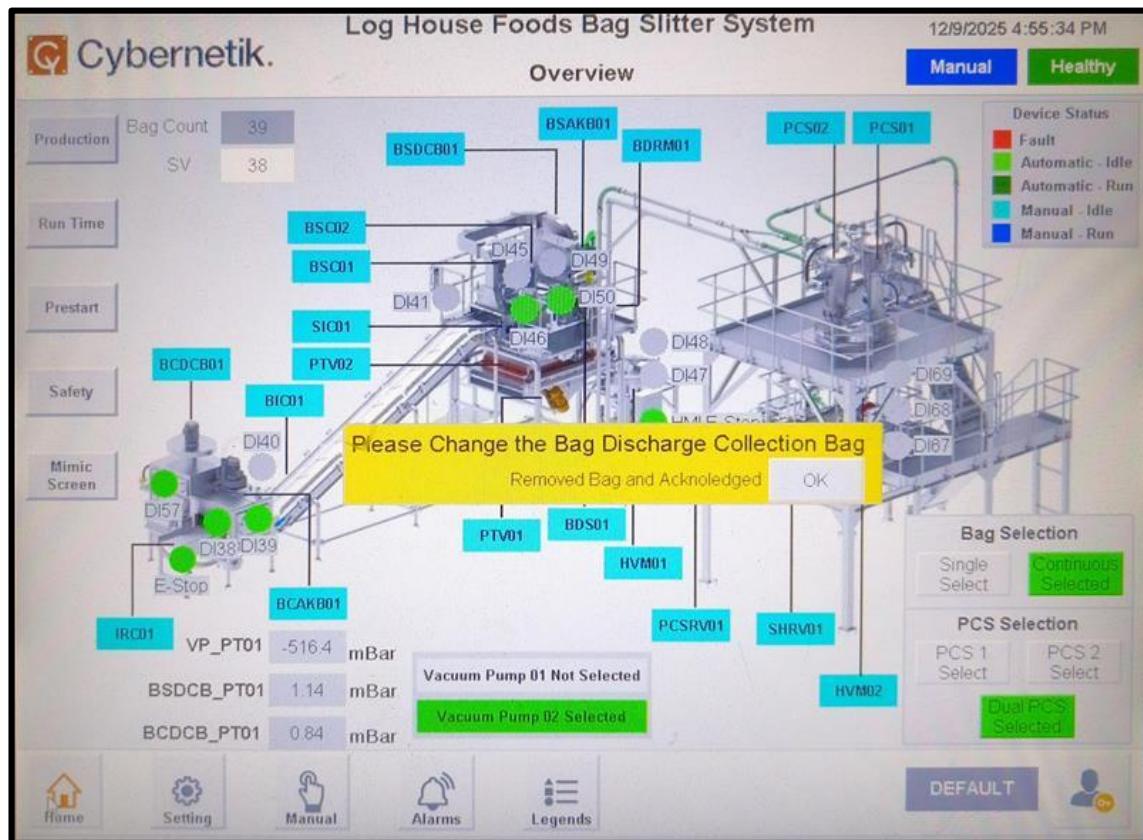


Figure 9: Overview

- If this pop-up appeared change the collection bag from Discharge screw outlet.

9.1 Production

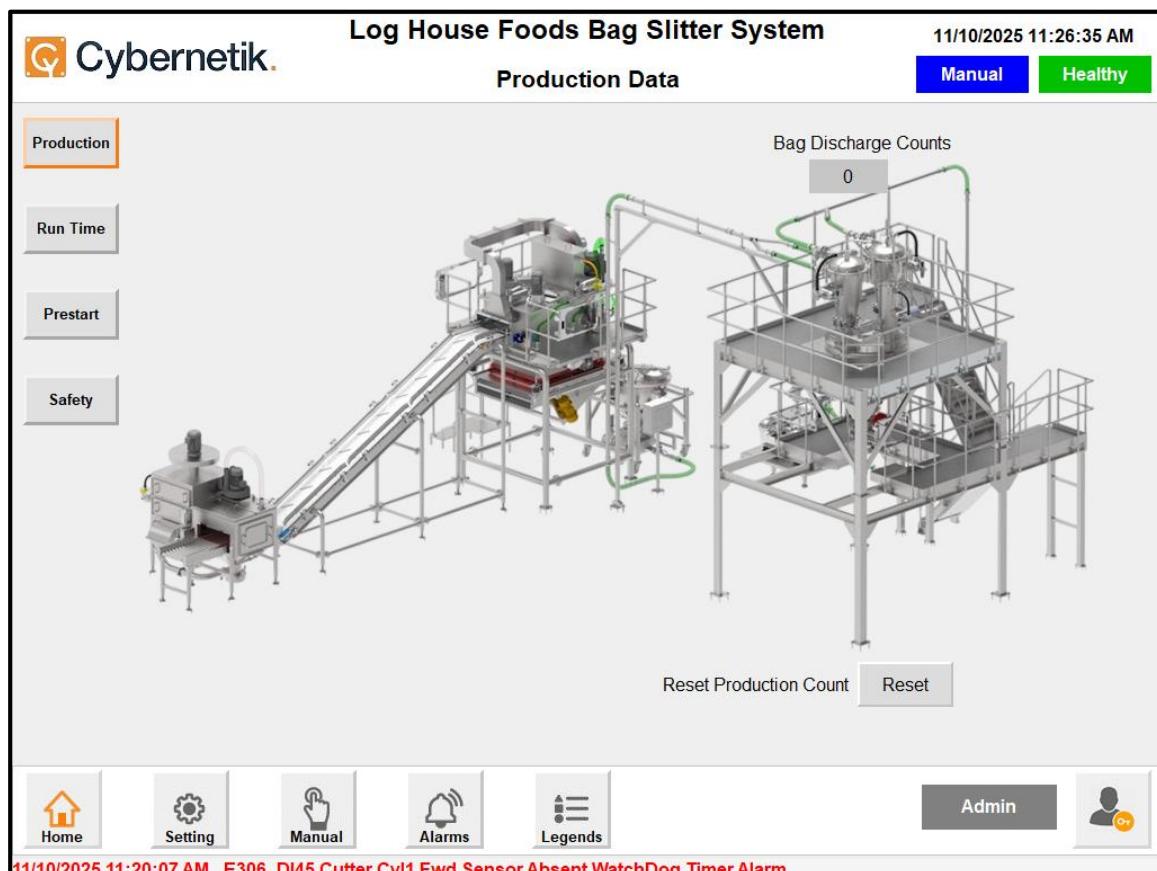


Figure 10: Production

- This screen gives the operator real-time production tracking of the entire Bag Slitter System, showing how many bags have been successfully processed (discharged) and allowing reset or monitoring of counts for reporting and maintenance purposes.
- Bag Discharge Count: It represents the total number of bags processed through the system.
- Reset Production Count: The production data for the shift or the entire day is reset back to zero.

9.2 Run Time

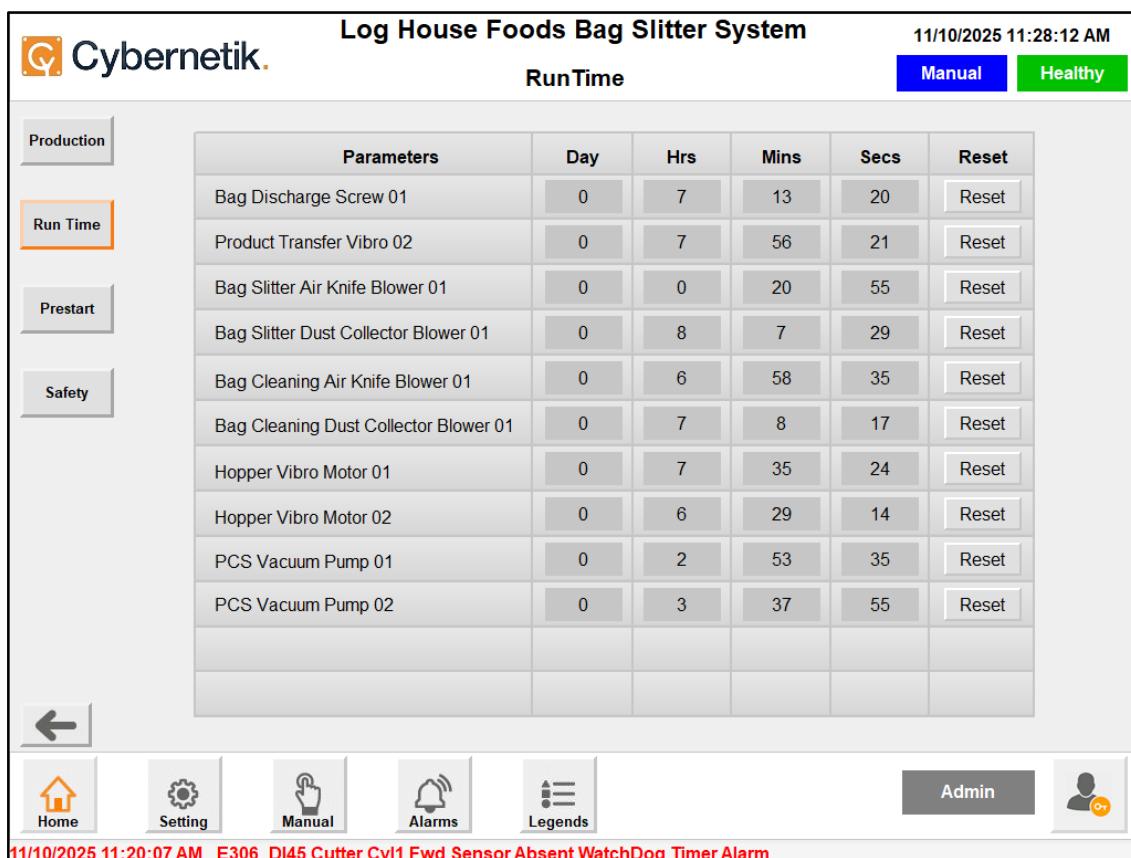


Figure 11: Run Time

- The Run Time screen provides a comprehensive overview of the total operating hours accumulated by each major component of the Log House Foods Bag Slitter System.
- This screen is typically used for maintenance planning, performance monitoring, and equipment diagnosis.
- Reset Button:** A dedicated Reset button per row allows maintenance engineers to zero-out the runtime counter, typically after servicing or scheduled maintenance.

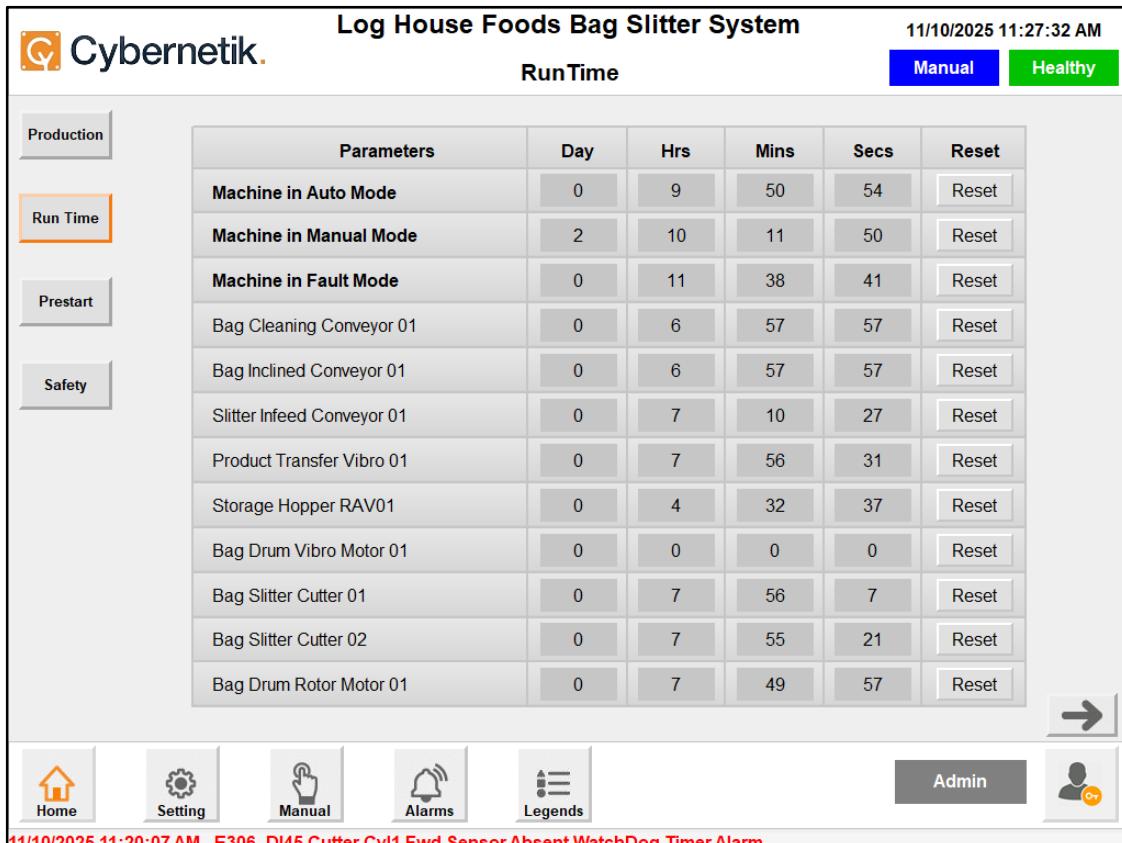


Figure 12: Run Time

- **Day / hrs / min / Secs:** These four columns jointly display the total elapsed running time for that equipment since last reset.

9.3 Prestart

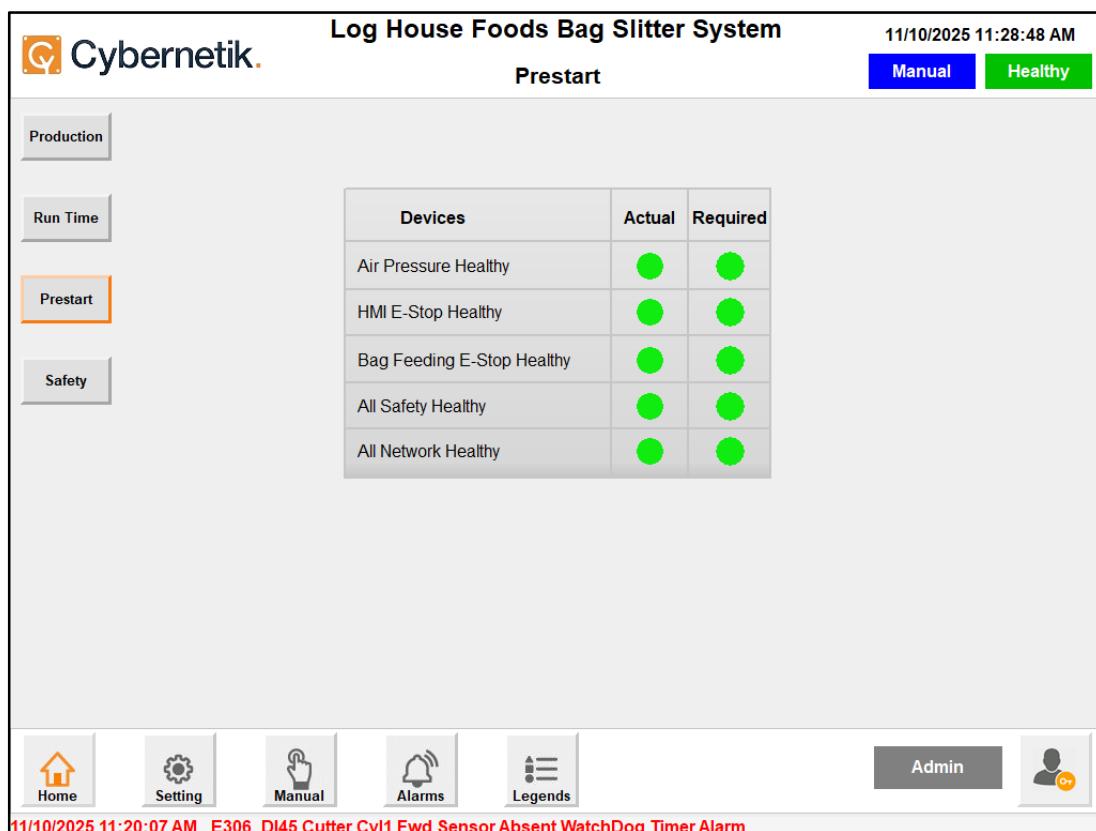


Figure 13: Prestart

- The Prestart screen is a critical system-readiness interface designed to ensure that all essential safety and operational conditions are met before the Bag Slitter System can begin operation.
- It functions as a pre-operation checklist, allowing operators and maintenance personnel to verify the health and status of key subsystems.
- Devices:** Lists each subsystem or safety requirement that must be verified.
- Actual:** Real-Time live status of the condition from field sensors, PLC inputs, or communication modules.
- Required:** Shows what the system expects for startup permission.
- Indicators:**
 - A green circular indicator means the condition is healthy.
 - A grey indicator would signify a fault preventing system startup.

9.4 Safety

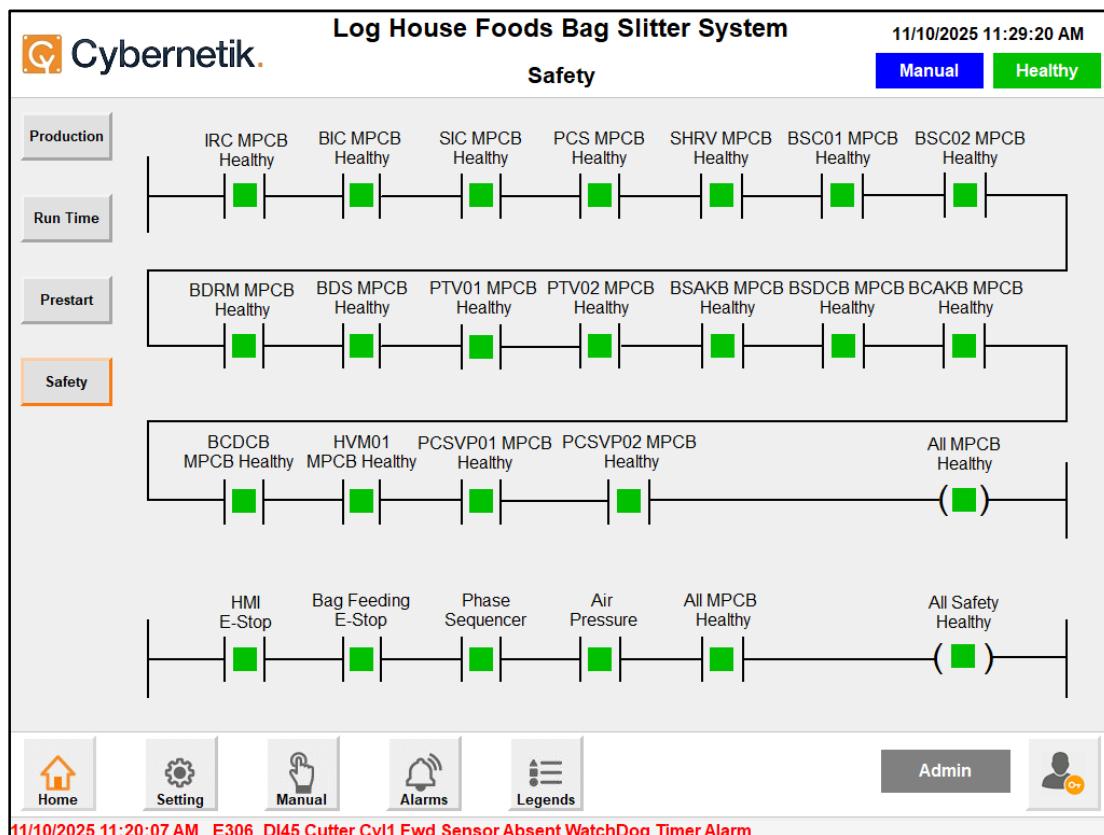


Figure 14: Safety

- The Safety Screen provides a comprehensive visualization of all safety-related conditions governing the Bag Slitter System.
- It works as a real-time electrical safety schematic, showing the health status of all MPCBs, E-Stops phase checks, air pressure, and safety circuits – represented in a ladder-logic style but user-friendly format.
- The core of this screen contains ladder-style rungs, each representing a group of safety elements. The layout resembles electrical ladder diagrams used in PLC programming, making it intuitively interpretable for technicians and engineers.
- Each block in the rung represents the “Health” of a specific MPCB or safety device.
- Green square - Healthy, Red Square – Fault or Trip.**

9.5 Mimic Screen

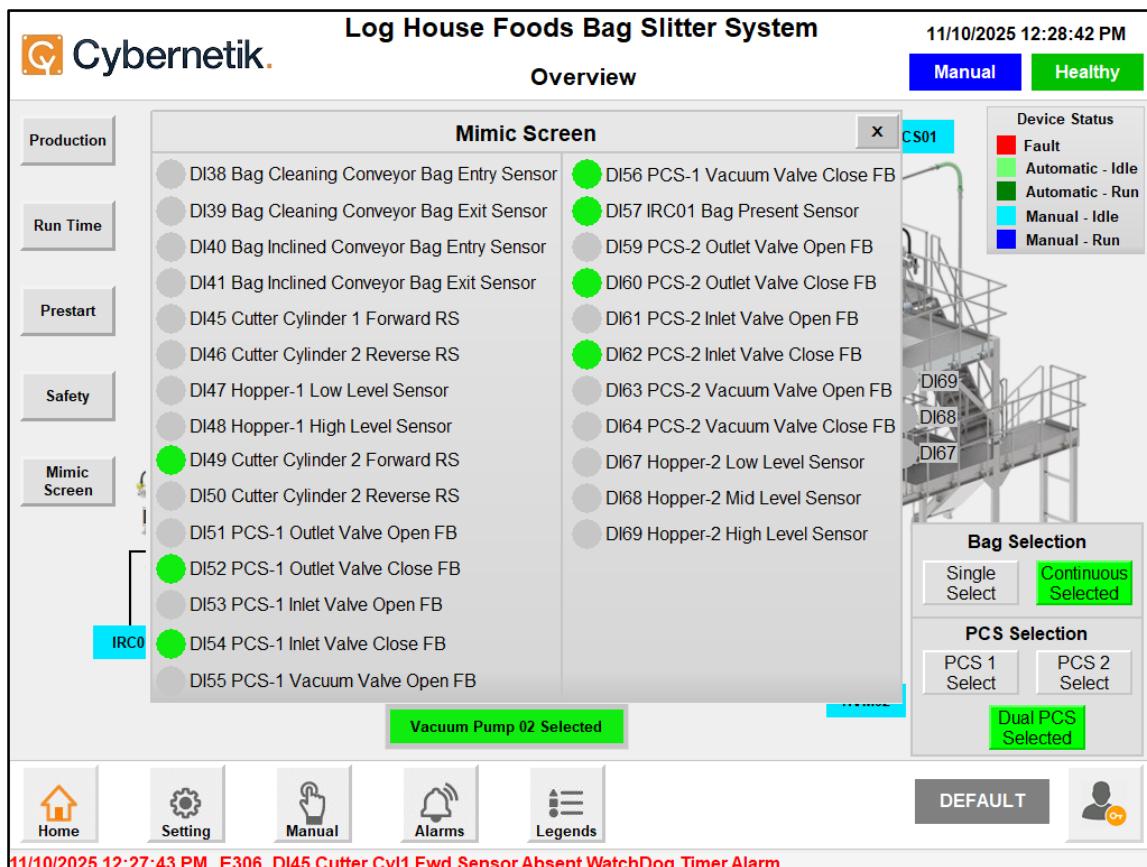


Figure 15: Mimic Screen

- This panel shows the real-time state of sensors and feedback on the **Bag Cleaning Conveyor**, **Bag Inclined Conveyor**, **Cutter Cylinders**, and **Hopper-1**.

10 Setting

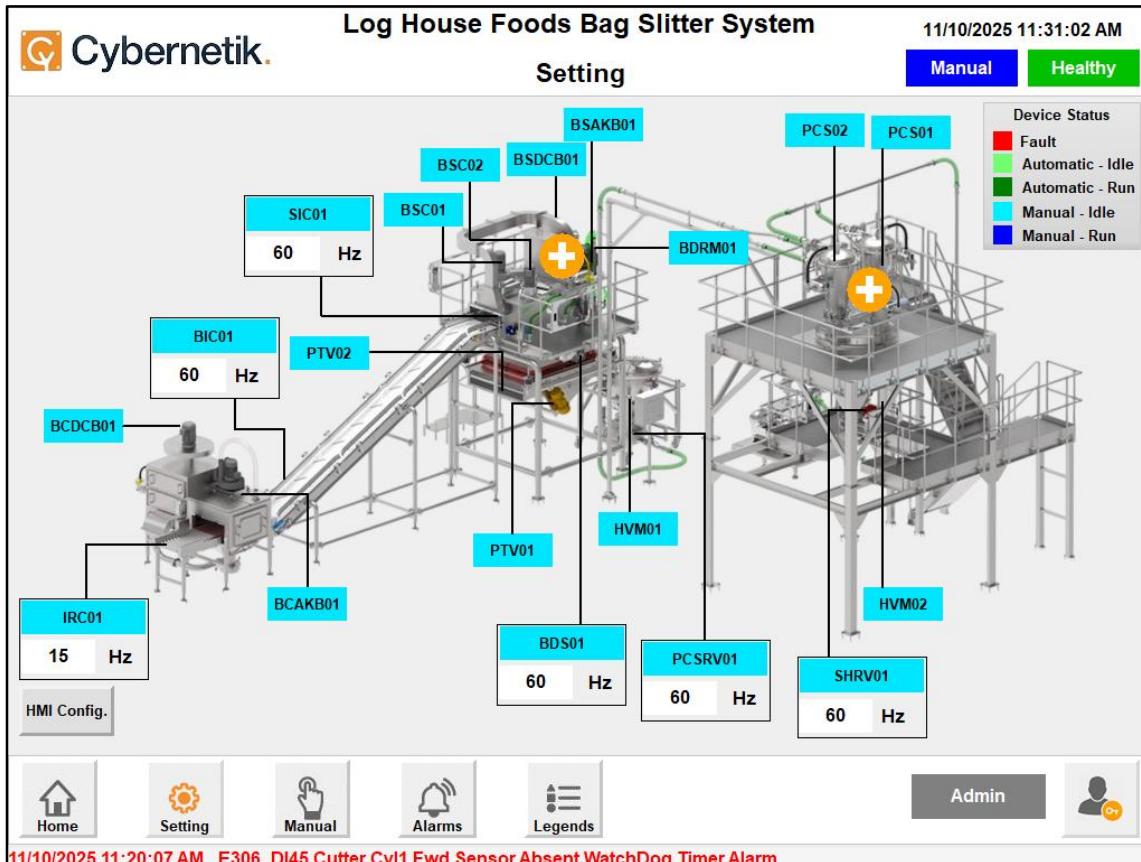


Figure 16: Setting

- The above screen represents the **Setting** page for the Log House Foods Bag Slitter System by **Cybernetik**.
- It displays a 3D model of the entire bag- slitting and material-transfer process, along with frequency settings and device statuses for each equipment.
- Each device is tagged with an ID label and its current frequency (Hz) where applicable.

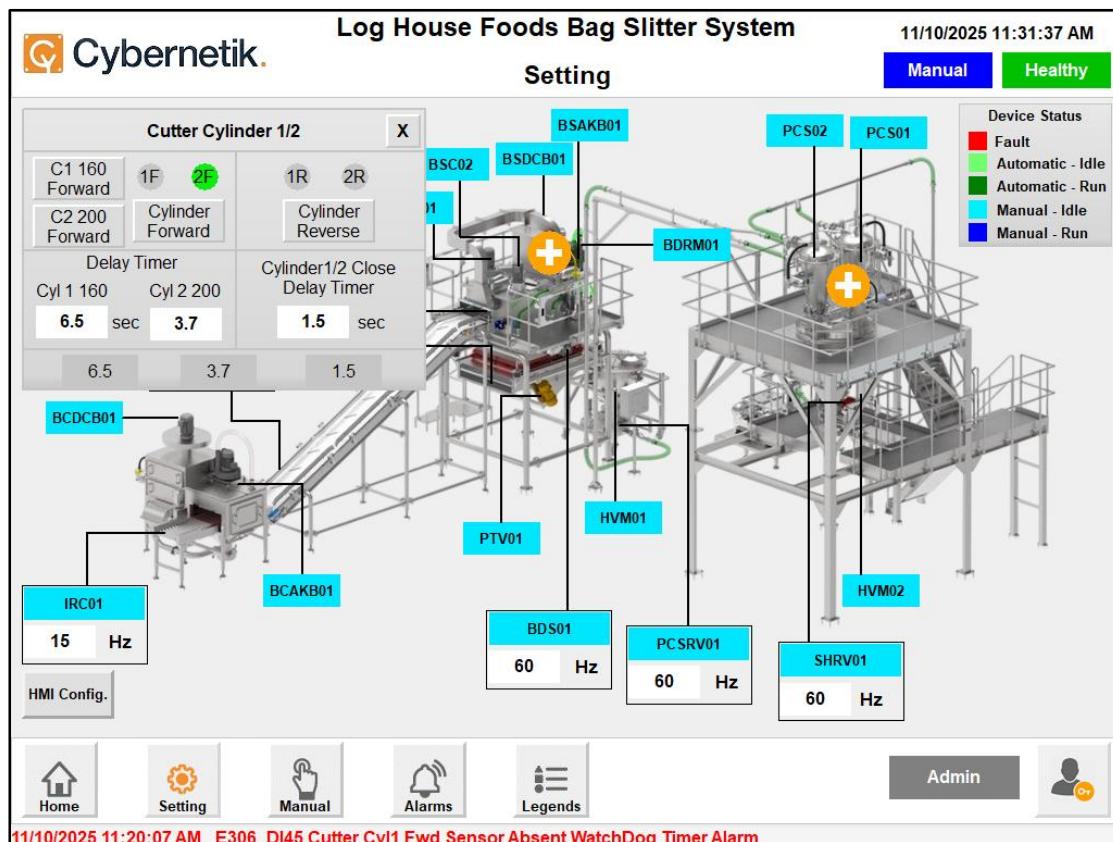


Figure 17: Settings

- This screen shows the parameter-adjustment pop-up for the Cutter Cylinder 1/2 in the Log House Foods Bag Slitter System. It appears inside the main **Setting** screen of the HMI.
- This contains control buttons & timing parameters.

Cylinder Motion Controls:

- **1F / 2F:** Forward commands for Cylinder 1 & Cylinder 2.
- **1R / 2R:** Reverse commands for Cylinder 1& Cylinder 2.
- **Cylinder Forward** and **Cylinder Reverse** status indicator show which direction the cylinder move.
- **Delay Timers:** Each cylinder has its own configurable delay. These timers allow fine-tuning of cutter engagement and retraction.

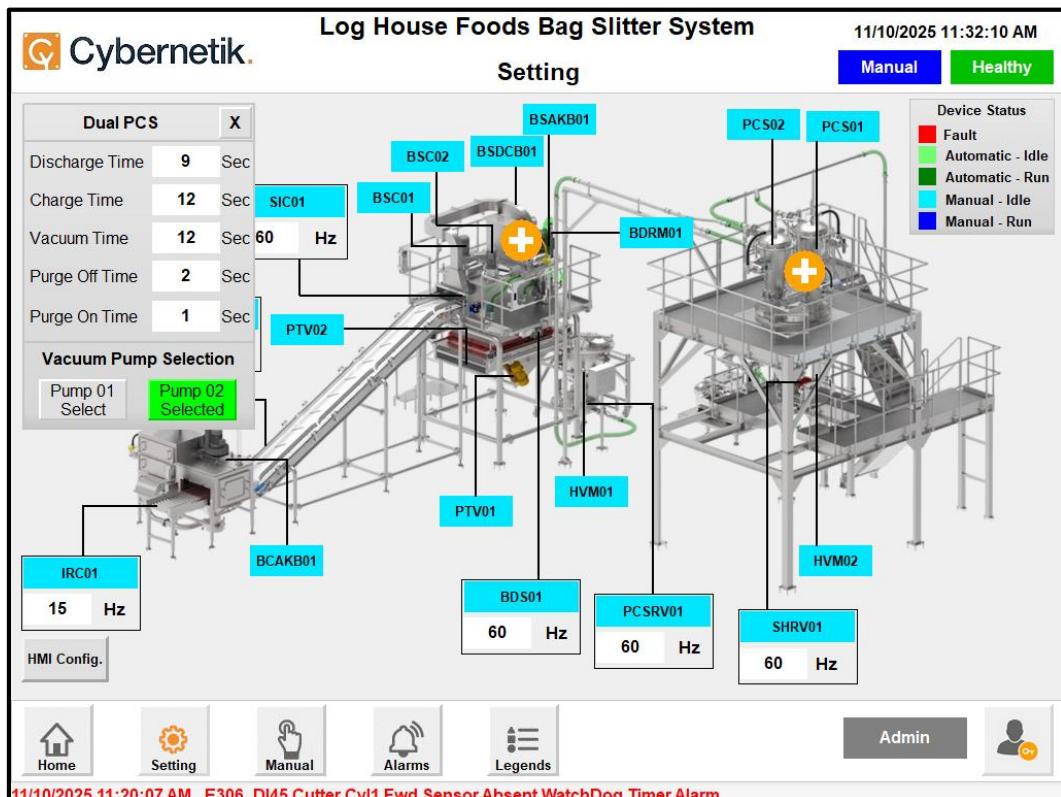


Figure 18: Settings

- This screen shows the Setting interface for the system, focused specifically on the Dual PCS (Pressure Control System) configuration. It allows operators to adjust time-based parameters that control the vacuum and purge cycles of the PCS.
- Vacuum Pump Selection: A manual selector lets the operator choose which pump supplies suction:
 - Pump 01
 - Pump 02 (Selected) – Highlighted in green.

This ensures redundancy and lets operators switch pumps if needed.

11 Manual Operation

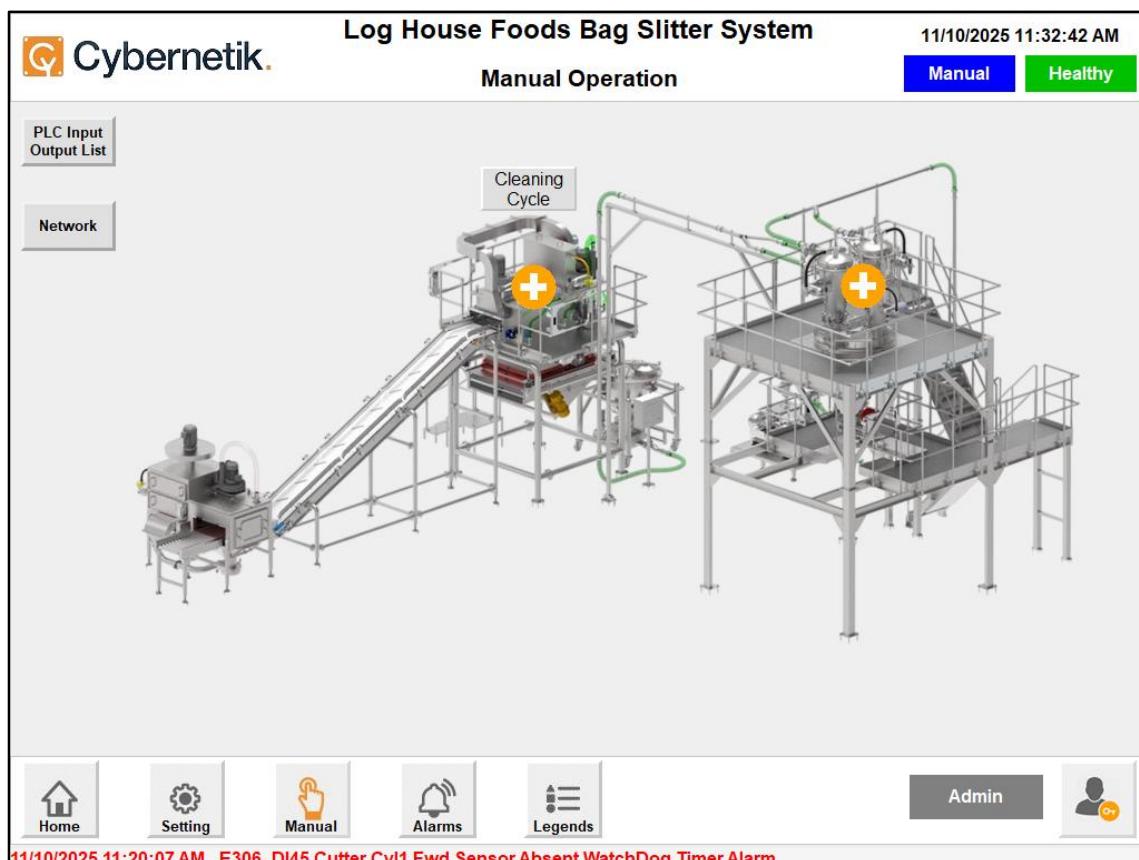


Figure 19: Manual Operation

- This screen displays the Manual Operation interface of the Log House Foods Bag Slitter System used for controlling and monitoring equipment manually.
- Two buttons on the left displayed:
 - **PLC Input Output List:** Opens detailed IO diagnostics.
 - **Network:** shows network communication status.

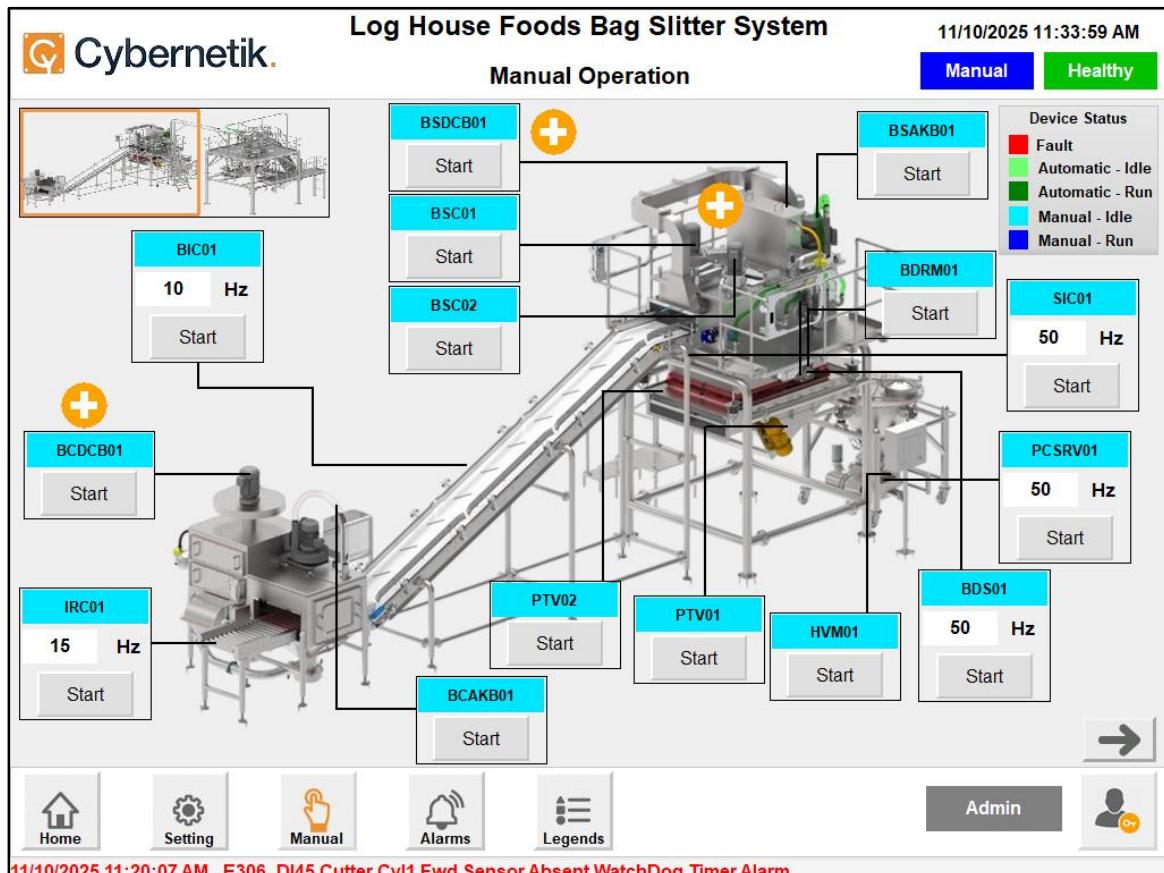


Figure 20: Manual Operation

- This screen shows the **Manual Operation Interface** of the **Log House Foods Bag Slitter System** by Cybernetik.
- This page allows an operator to manually start individual equipment across the entire bag-slitting and conveying system.
- Each equipment has a **Start button** and sometimes a frequency (Hz) display. Each button is used to manually activate the corresponding device

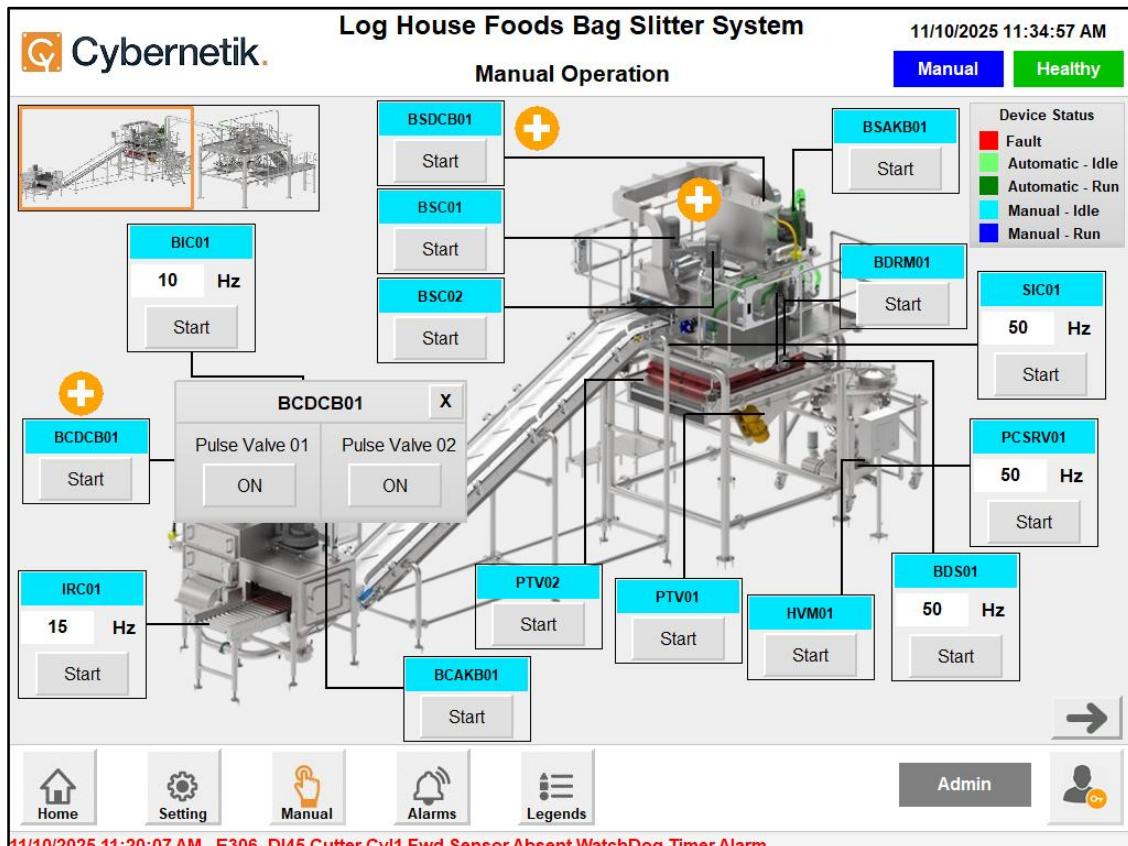


Figure 21: Manual Operation

- Devices that include additional manual components displays a yellow plus (+) icon:
- Selecting this icon opens a pop-up control window: as shown in the above image for BCDCB01- Bag Cleaning Dust Collector Blower.

Options shown inside popup:

- Pulse Valve 01- ON
- Pulse Valve 02 - ON
- These allow manual cycling of dust collector cleaning valves.
- Pop-Ups can be closed using the “X” button.

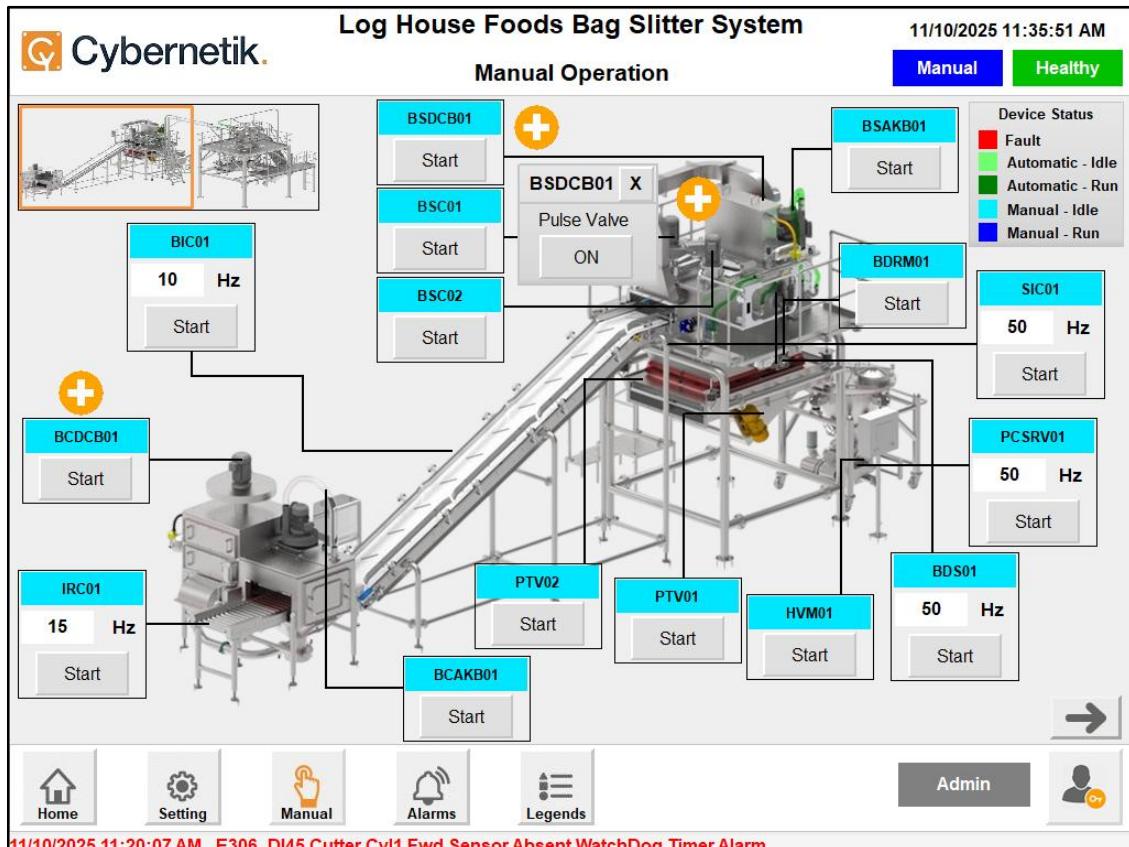


Figure 22: Manual Operation

- **BSDCB01 (Bag Slitter Dust Collector Blower)** - Extracts dust generated during the cutting process includes:
- **Pulse Valve ON/OFF** popup for filter cleaning cycles.

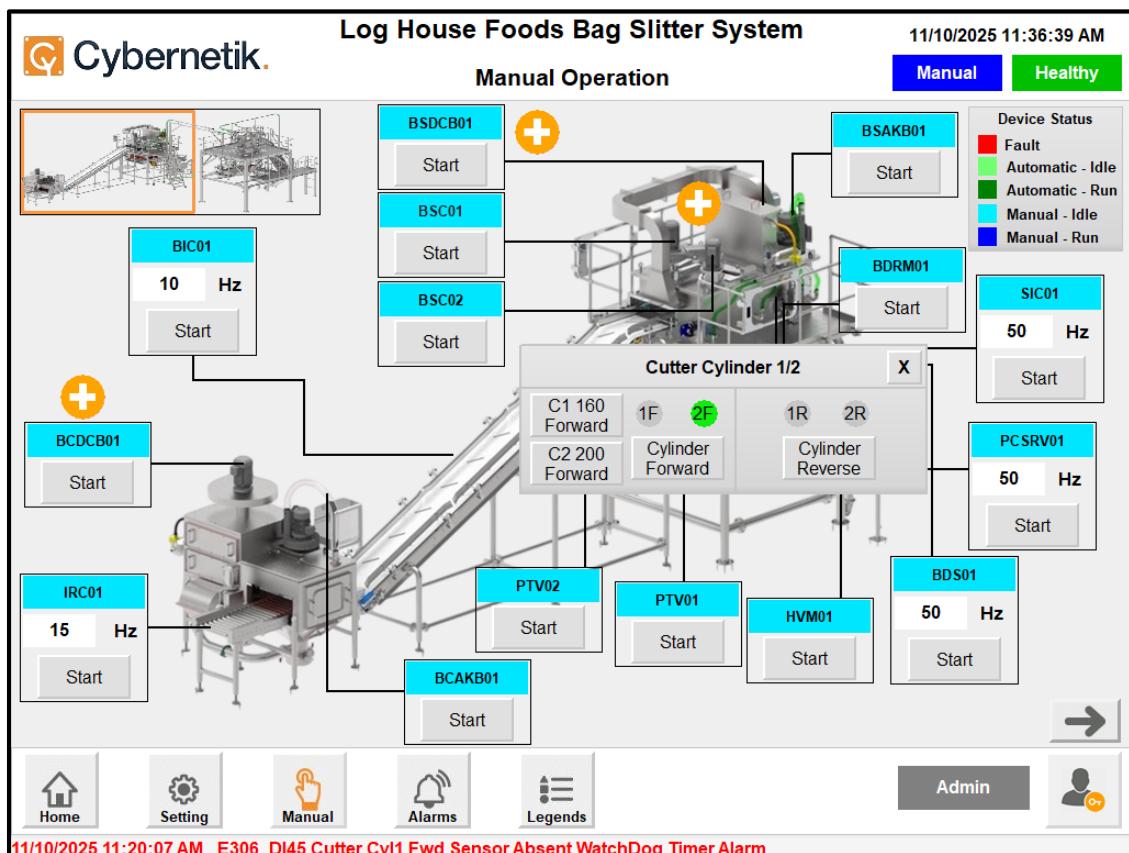


Figure 23: Manual Operation

- This screen shows the Bag Slitter System operating in **Manual Mode**, allowing individual control of all motors, blowers, screws, Vibro units, conveyors, and pneumatic cylinders. This version includes an additional pop-up window for the **Cutter Cylinders (1/2)**.
- This window is used for manual jogging of the pneumatic cylinders that operate the cutters.

Cylinder Forward Commands:

These run each cylinder in forward stroke

- C1 160 Forward:** Moves Cutter Cylinder -1 forward at its configured forward travel distance / pressure setting.
- C2 200 Forward:** Moves Cutter Cylinder- 2 at its configured forward travel distance/ pressure setting.
- 1F (Cylinder-1 Forward):** Manual jog button for Cylinder-1 Forward Movement.

- **2F (Cylinder-2 Forward):** Indicates it is currently selected or active. Moves Cylinder-2 forward manually.

Cylinder Reverse Commands:

- **1R (Cylinder-1 Reverse):** Manually retracts Cutter Cylinder-1.
- **2R (Cylinder-2 Reverse):** Manually retracts Cutter Cylinder-2.

These reverse commands are used to pull the cutting knife back to home position.

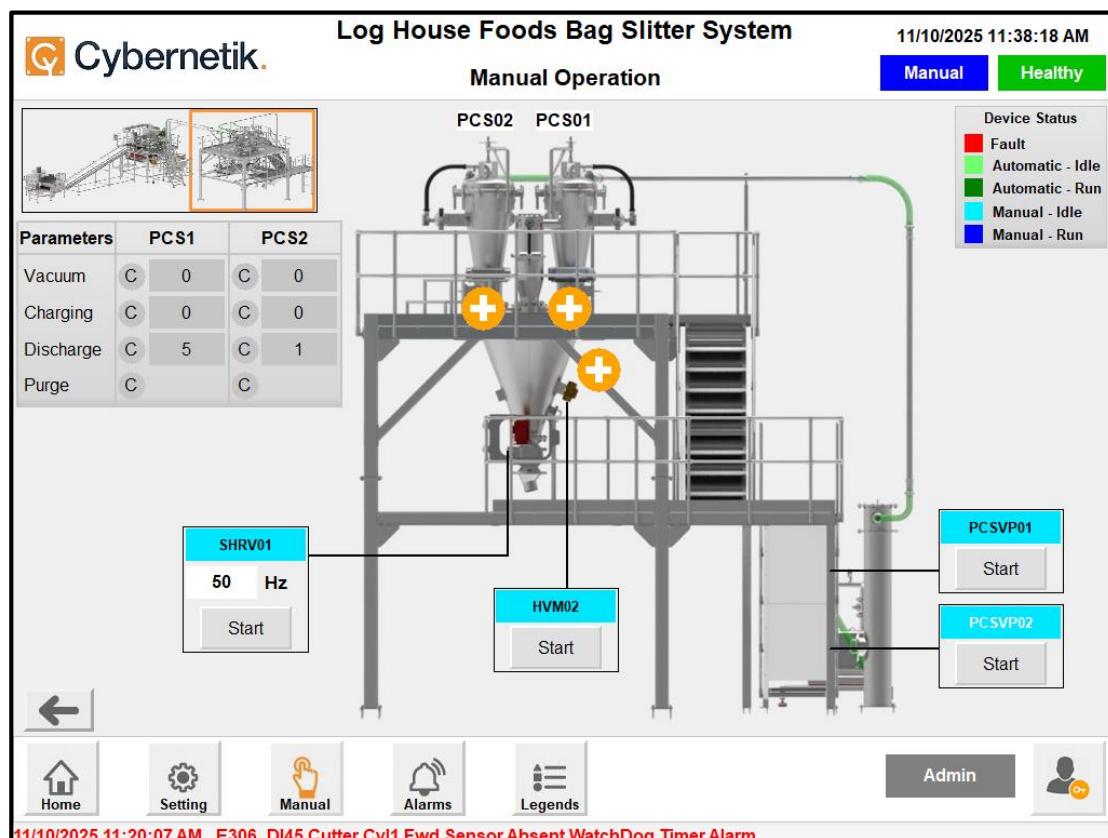


Figure 24: Manual Operation

- This screen displays the Manual Operation interface for the Dual Vacuum Receivers (PCS01 and PCS02) in the Log House Foods Bag Slitter System.
- This screen allows the operator to manually control and monitor the PCS01 and PCS02 receiver, Associated Vacuum Pumps, Discharge Valve, Supporting Equipments.
- The table shows **cycle stage counters** for PCS1 and PCS2. This shows **how many cycles** have occurred for each stage of the pneumatic conveying cycle.

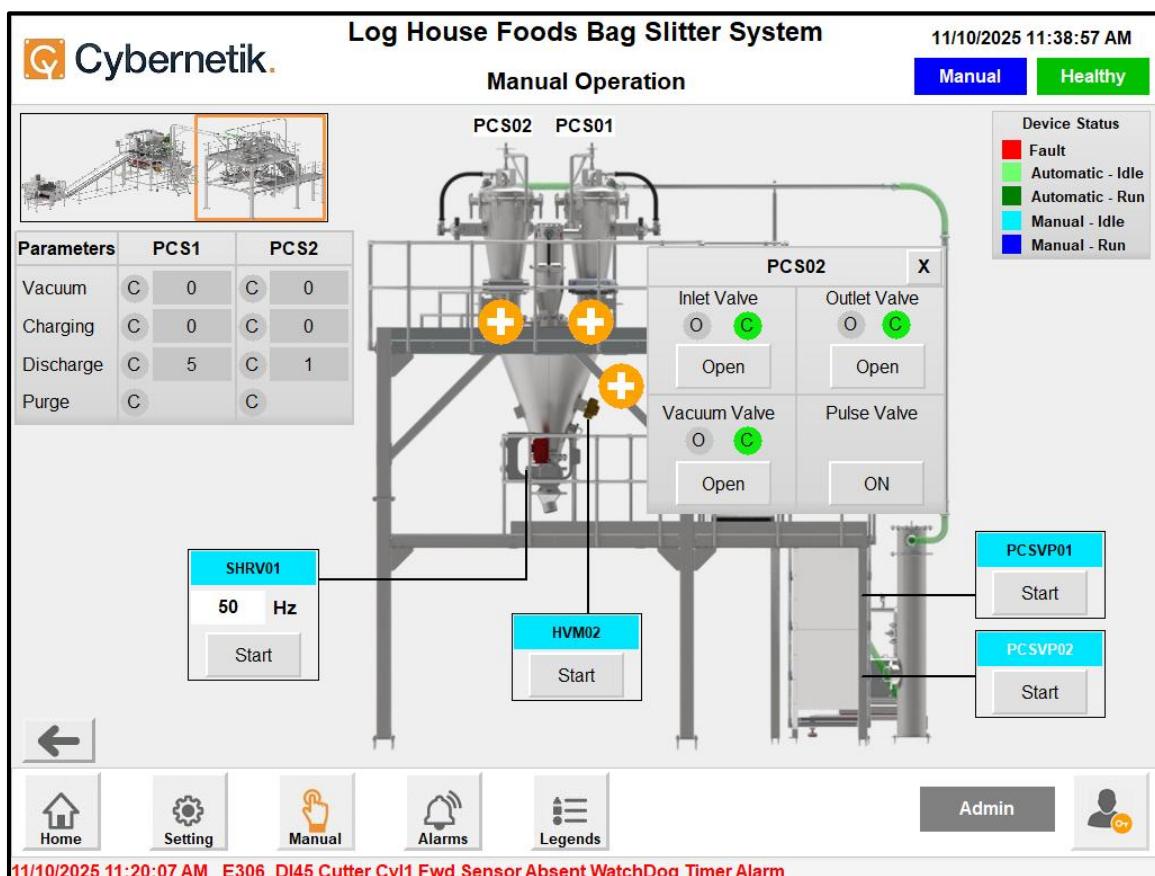


Figure 25: Manual Operation

- This interface shows the **Manual Operation mode** of the Pneumatic Conveying System (PCS), with a focus on **PCS02**.
- A pop-up window is open, giving direct manual control of individual valves inside the PCS01 vacuum receiver.

a) Inlet Valve:

- Allows material to enter the receiver from the Upstream Line.
- Status Indicator:
 - Green "C" = Closed
 - **Open** button = open the valve in Manual Mode.
- Used during **charging**.

b) Outlet Valve:

- Located at the bottom of the receiver.
- Allows material to discharge into the downstream system.

- **Status Indicator:**
 - Green “C” = Closed
 - **Open** button = Open for manual discharge
- Used during **discharge**.

c) Vacuum Valve:

- Connects the receiver to the vacuum line.
- Controls suction force.
- **Status Indicator:**
 - Green “C” = Closed
 - “Open” button = Enables vacuum
- Used during vacuuming and purging.

d) Pulse Valve:

- Fires short bursts of air to clean the filter bags.
- “ON” button triggers a pulse manually.
- Used during **filter cleaning**.

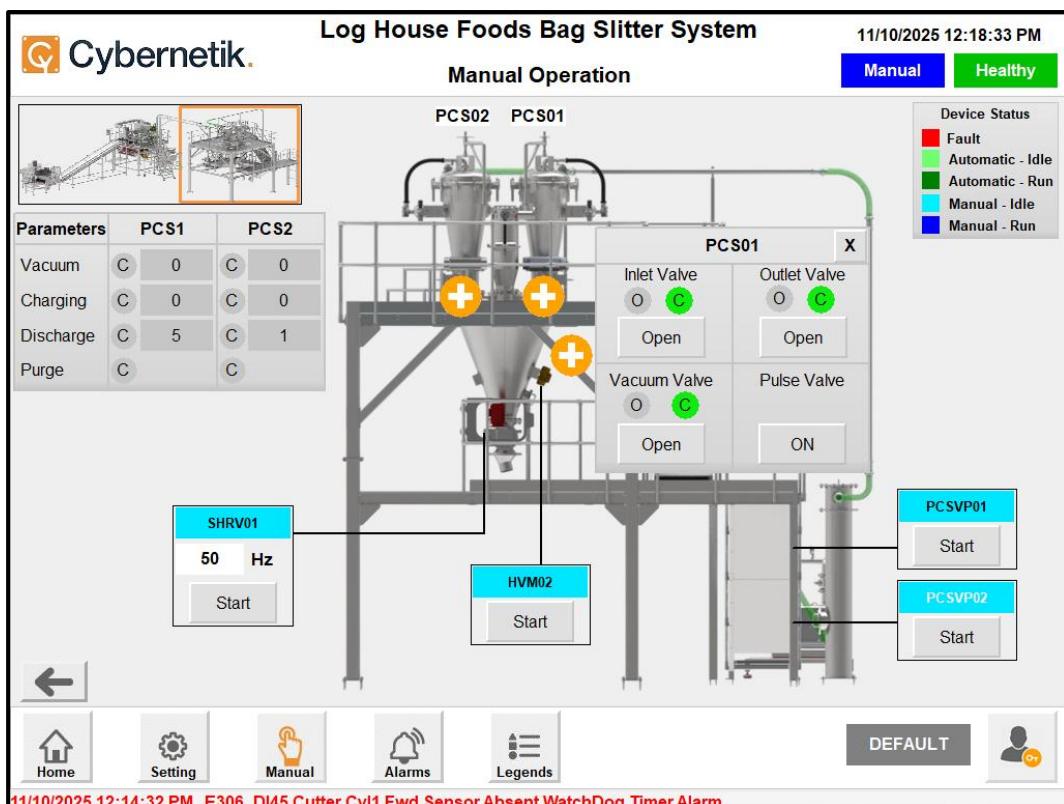


Figure 26: Manual Operation

- This interface shows the **Manual Operation mode** of the Pneumatic Conveying System (PCS), with a focus on **PCS01**.
- A pop-up window is open, giving direct manual control of individual valves inside the PCS01 vacuum receiver.

e) Inlet Valve:

- Allows material to enter the receiver from the Upstream Line.
- Status Indicator:
 - Green “C” = Closed
 - Open** button = open the valve in Manual Mode.
- Used during **charging**.

f) Outlet Valve:

- Located at the bottom of the receiver.
- Allows material to discharge into the downstream system.
- Status Indicator:**
 - Green “C” = Closed
 - Open** button = Open for manual discharge
- Used during **discharge**.

g) Vacuum Valve:

- Connects the receiver to the vacuum line.
- Controls suction force.
- **Status Indicator:**
 - Green "C" = Closed
 - "Open" button = Enables vacuum
- Used during vacuuming and purging.

h) Pulse Valve:

- Fires short bursts of air to clean the filter bags.
- "ON" button triggers a pulse manually.
- Used during **filter cleaning**.

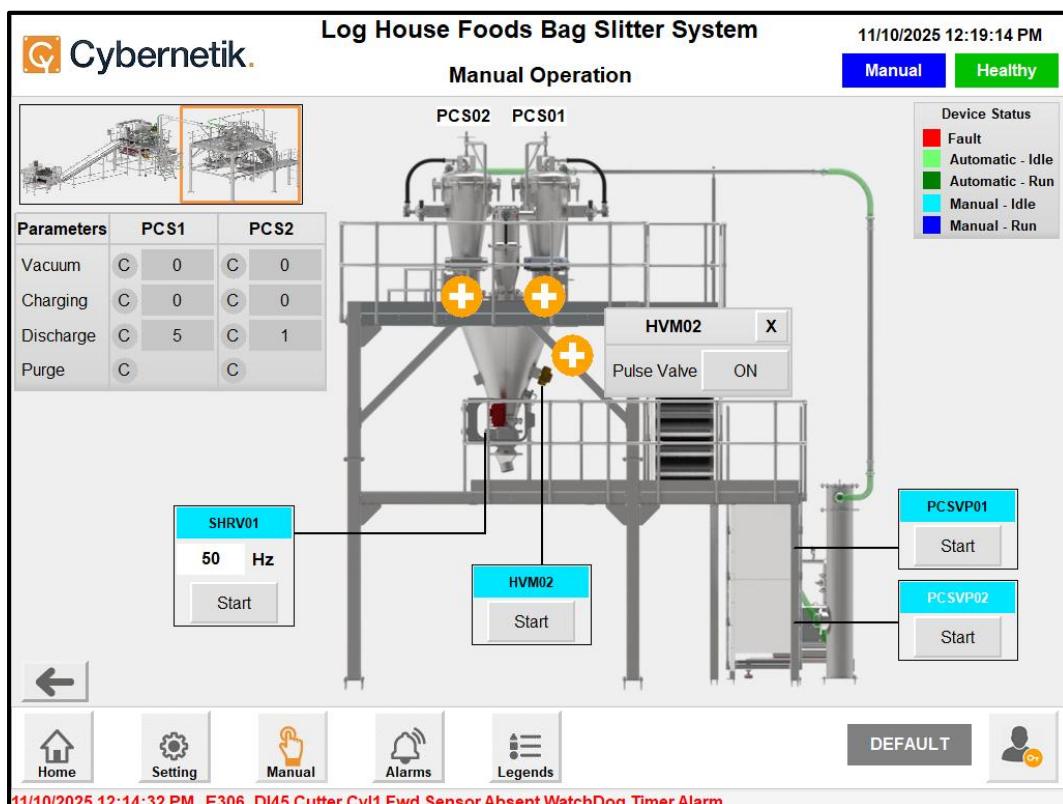


Figure 27: Manual Operation

On the screen, the operator has opened the **HVM02** pop-up.
It shows:

HVM02 – Pulse Valve

- The pop-up contains a single control: **Pulse Valve button ON**
- Used to clean the filters by sending a short burst of compressed air.

11.1 PLC Input Output

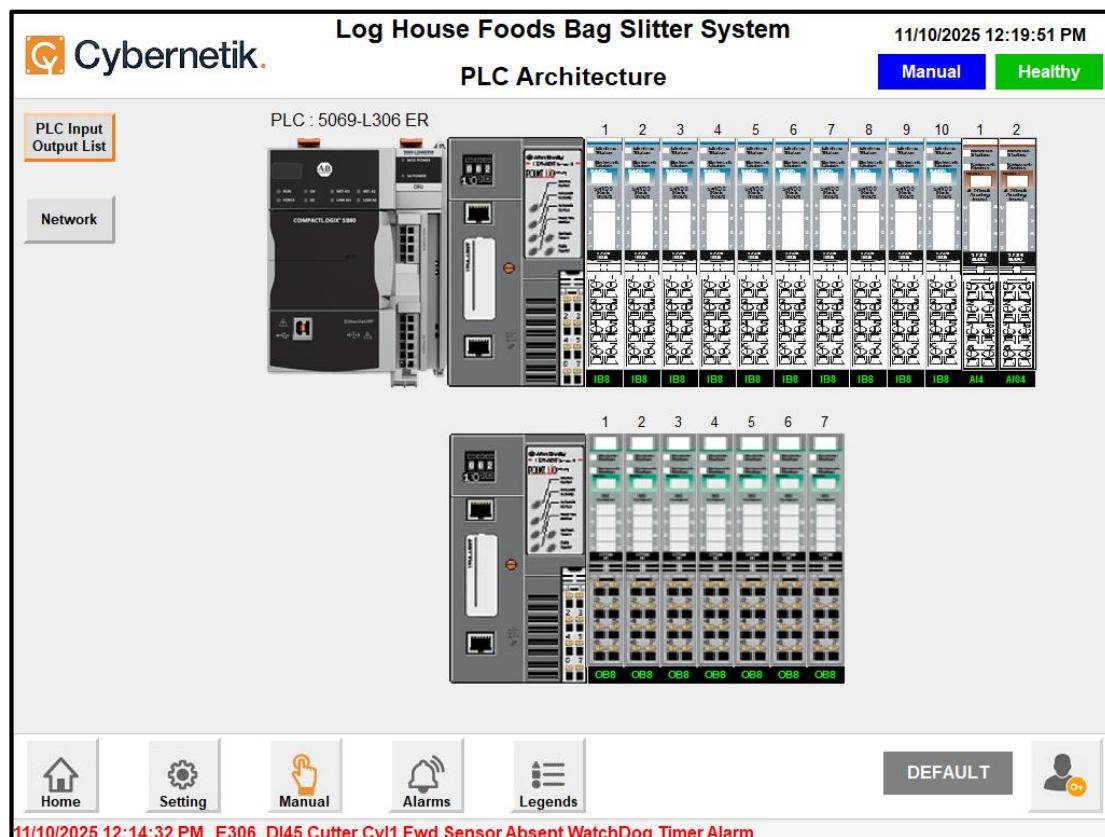


Figure 28: PLC I/O List

- From the I/O screen, one can check the list of PLC input and output. Healthy I/O's are indicated by green color whereas error is highlighted in red color.
- The list of PLC Input and Output (I/O), includes digital I/O.
- To view the I/O list one has to click on the required PLC I/O card.
- The list shows, the input name and its description.

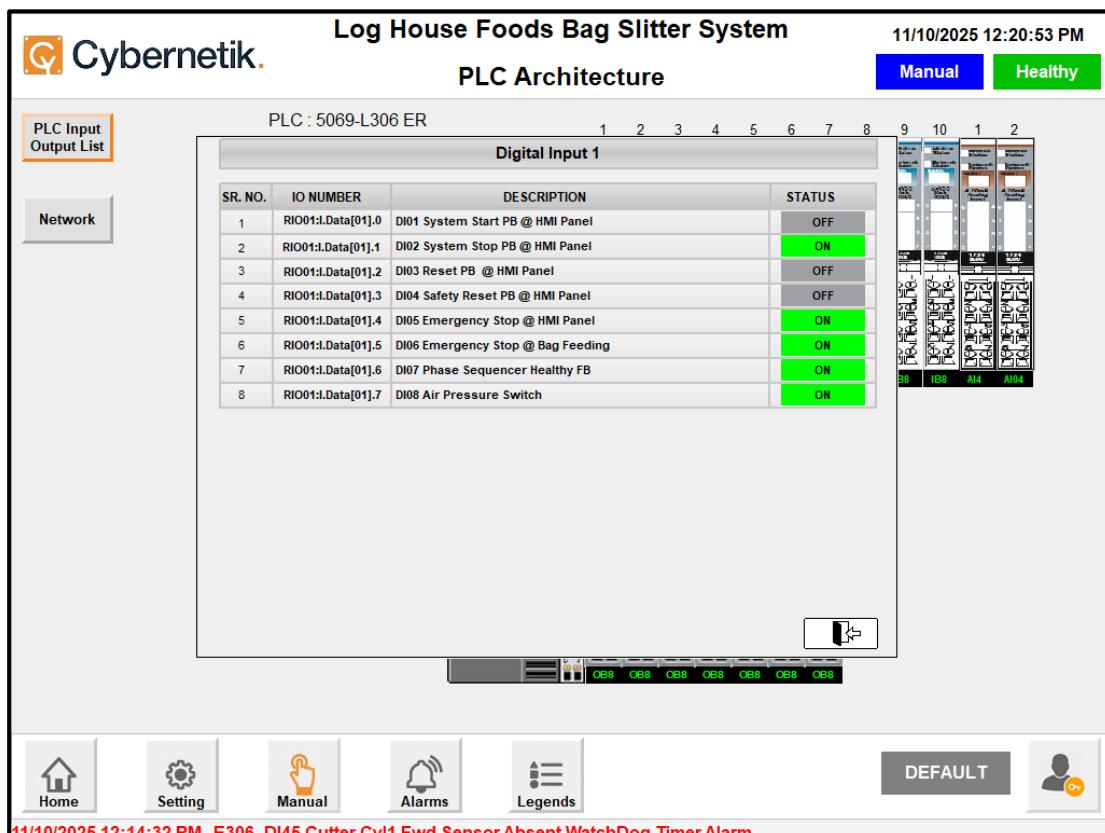


Figure 29: PLC I/O List

- **Input Devices:** This section lists all the devices or sensors that provide input to the SCADA system. These could include things like switches, buttons, sensors (such as temperature, pressure, or proximity sensors), and any other devices that send signals to the SCADA.
- **Output Devices:** This part of the list enumerates all the devices controlled by the SCADA. These could include motors, valves, actuators, alarms, indicators, and any other devices that the SCADA can send signals to in order to operate.

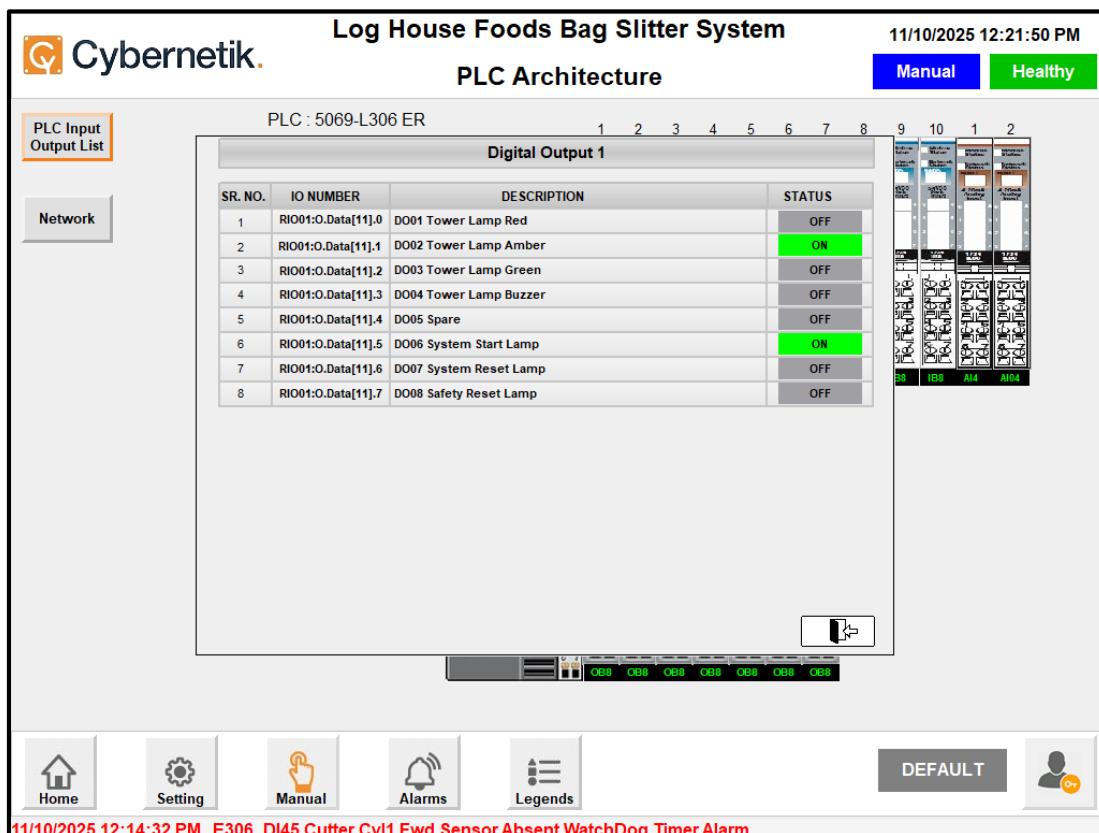


Figure 30: PLC I/O List

- Signal Types:** Each input and output point is usually described in terms of the signal type it accepts or generates. This could include analog signals (such as voltage or current), digital signals (binary on/off), or other specialized signal types depending on the specific requirements of the system.
- Descriptions and Labels:** Each input and output point is typically accompanied by a description or label that helps identify its function or location within the system. Clear labelling is crucial for proper system understanding and troubleshooting.

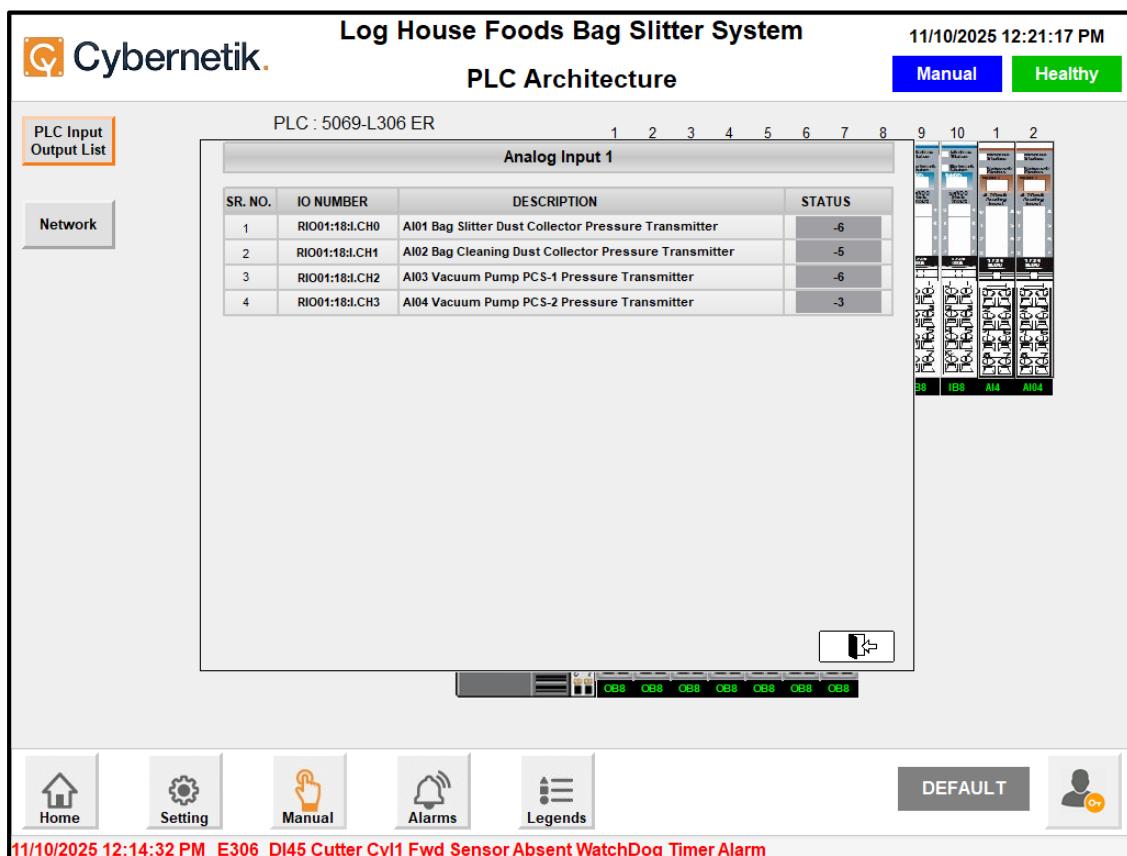


Figure 31: PLC I/O List

- **Control Logic:** In some cases, the I/O list may also include information about the control logic associated with each input and output point. This could include details about how inputs are processed, how outputs are triggered, and any interlocks or safety mechanisms in place.
- **Addressing Information:** In systems where devices are connected via a network or bus, the I/O list may include addressing information that specifies how each device is uniquely identified within the system architecture.

11.2 Network Architecture

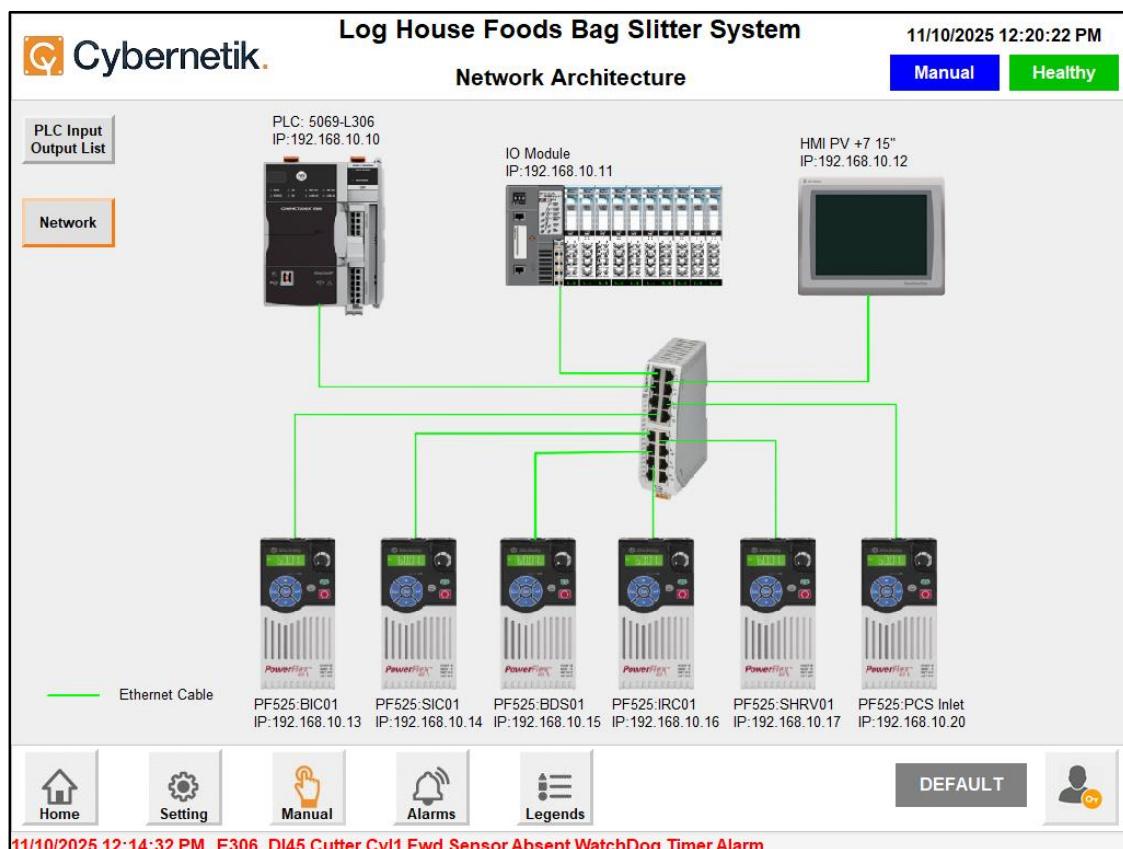


Figure 32: Network Architecture

- This screen gives a visual representation of the **PLC and network topology** for the robotic case packing system.
- It helps operators and maintenance engineers quickly locate devices, IP addresses, and communication paths.

12.1 Active Alarms

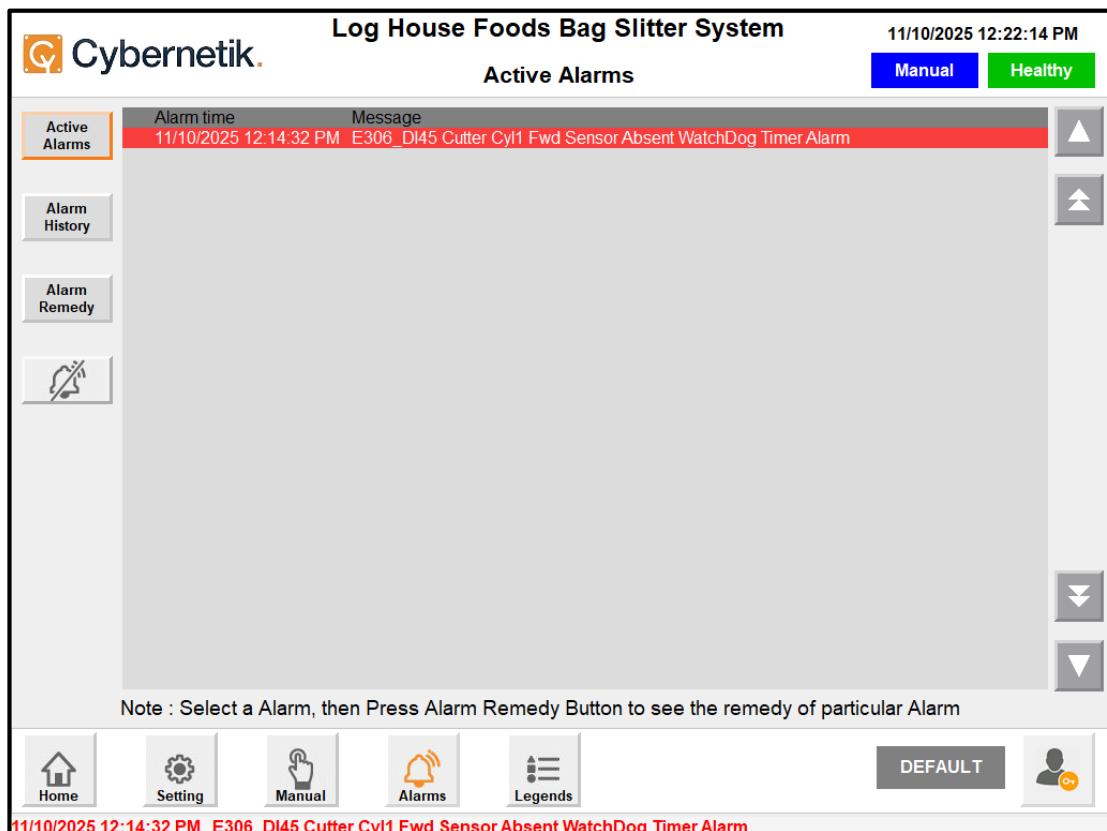


Figure 33: Active Alarms

- This screen lists all currently active alarms in the system.
- Each alarm includes:
 - **Time stamp**
 - **Error code (Exxx)**
 - **Device & fault description**
- Alarms remain listed until the fault is resolved and acknowledged.
- **Active Alarms** → Current alarms.
- **Alarm History** → Logs of past alarms (useful for recurring issues).
- **Alarm Remedy** → Step-by-step troubleshooting guidance for selected alarms.

12.2 Alarms History

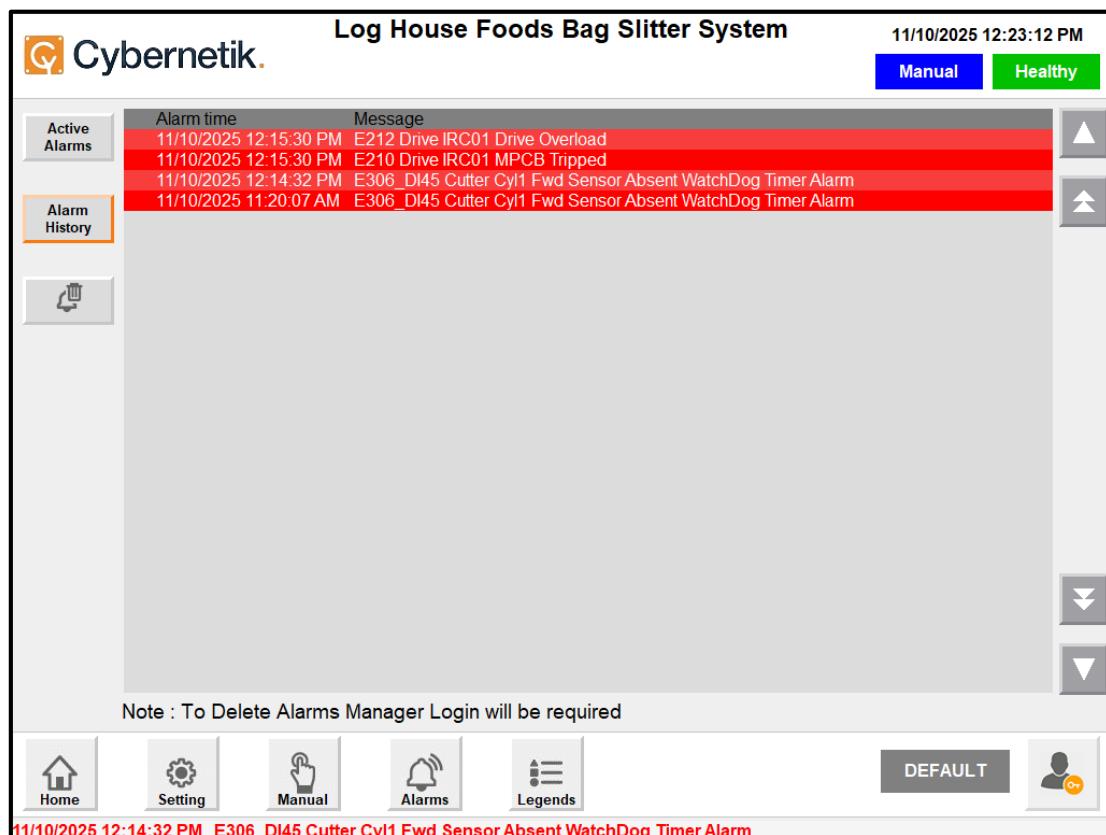


Figure 34: Alarms History

- The Alarm History screen is a logbook of all past alarms that occurred on the system.
- It records when, what, and where an alarm happened.
- Useful for maintenance analysis, troubleshooting, and downtime tracking.

12.3 Alarms Remedy

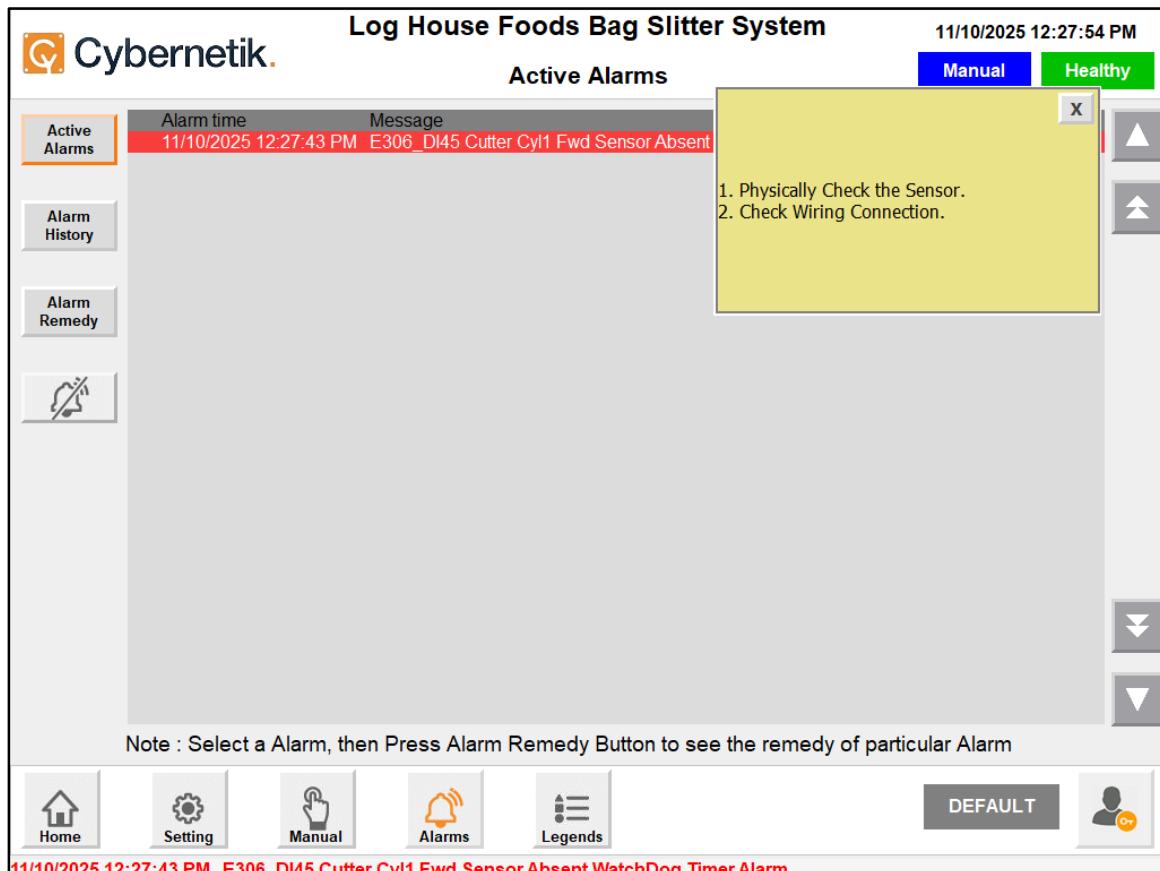


Figure 35: Alarms Remedy

- The Alarm Remedies screen is where the operator / maintenance team finds step-by-step troubleshooting instructions for each alarm.
- It helps the user move from problem identification (Active Alarms) → to problem resolution (Alarm Remedy).

13 Legends

Legends			
Abbreviations	Full Forms	Abbreviations	Full Forms
BIC01	Bag Inclined Conveyor	HVM01	Hopper-1 Vibro Motor
SIC01	Slitter Infeed Conveyor	IRC01	Infeed Roller Conveyor
BSC01	Bag Slitter Cutter-1	BCAKB01	Bag Cleaning Air Knife Blower
BSC02	Bag Slitter Cutter-2	BCDCB01	Bag Cleaning Dust Collector Blower
BDRM01	Bag Drum Rotor Motor	SHRV01	Storage Hopper RAV
BDS001	Bag Discharge Screw 01	HVM02	Hopper-2 Vibro Motor
PTV01	Product Transfer Vibro 01	PCSVP01	PCS-1 Vacuum Pump
PTV02	Product Transfer Vibro 02	PCSVP02	PCS-2 Vacuum Pump
BSAKB01	Bag Slitter Air Knife Blower		
BSDCB01	Bag Slitter Dust Collector Blower		

Figure 36: Legends

14 Alarm List

Sr. No.	Code	Description
1	E001	RIO01_Communication_Fault
2	E002	DriveBIC01_Drive_Communication_Fault
3	E003	DriveSIC01_Drive_Communication_Fault
4	E004	DriveBDS01_Drive_Communication_Fault
5	E005	DriveIRC01_Communication_Fault
6	E006	DriveSHRV01_Communication_Fault
7	E007	Spare
8	E008	PCS_RV01_Communication_Fault
9	E009	Spare_Communication_Fault
10	E010	Spare_Communication_Fault
11	E101	Air Pressure_Low
12	E102	E-Stop At HMI_Pressed
13	E103	E-Stop At Bag Feeding_Pressed
14	E104	Line Monitoring FB _Pressed
15	E105	PCS Air Pressure Low Alarm
16	E201	DriveBIC01_MPCB_Tripped
17	E202	DriveBIC01_Drive_Not_Ready
18	E203	DriveBIC01_Drive_Overload
19	E204	DriveSIC01_MPCB_Tripped
20	E205	DriveSIC01_Drive_Not_Ready
21	E206	DriveSIC01_Drive_Overload
22	E207	DriveBDS01_MPCB_Tripped
23	E208	DriveBDS01_Drive_Not_Ready

Sr. No.	Code	Description
24	E209	DriveBDS01_Drive_Overload
25	E210	DriveIRC01_MPCB_Tripped
26	E211	DriveIRC01_Drive_Not_Ready
27	E212	DriveIRC01_Drive_Overload
28	E213	DriveSHRV01_MPCB_Tripped
29	E214	DriveSHRV01_Drive_Not_Ready
30	E215	DriveSHRV01_Drive_Overload
31	E216	BSC01_MPCB_Tripped
32	E217	BSC02_MPCB_Tripped
33	E218	BDRM01_MPCB_Tripped
34	E219	PTV01_MPCB_Tripped
35	E220	PTV02_MPCB_Tripped
36	E221	BSAKB01_MPCB_Tripped
37	E222	BSDCB01_MPCB_Tripped
38	E223	HVM01_MPCB_Tripped
39	E224	BDVM01_MPCB_Tripped
40	E225	BCAKB01_MPCB_Tripped
41	E226	BCDCB01_MPCB_Tripped
42	E227	HVM02_MPCB_Tripped
43	E228	PCSVP01_MPCB_Tripped
44	E229	PCSVP02_MPCB_Tripped
45	E230	Hopper 1 Low Level _Sensor_Alarm
46	E231	Hopper 1 High Level _Sensor_Alarm
47	E232	Hopper 2 Low Level _Sensor_Alarm

Sr. No.	Code	Description
48	E233	Hopper 2 High Level _Sensor_Alarm
49	E234	PCS_RV01_MPCB_Tripped
50	E235	PCS_RV01_Drive_Not_Ready
51	E236	PCS_RV01_Drive_Overload
52	E237	BDS01_Discoonector Switch Off Alarm
53	E301	DI57 IRC01 Bag Present Sensor WatchDog Timer Alarm
54	E302	DI38 IRC01 Bag Cleaning Entry Present Sensor WatchDog Timer Alarm
55	E303	DI39 IRC01 Bag Cleaning Exit Present Sensor WatchDog Timer Alarm
56	E304	DI40 BIC01 Entry Present Sensor WatchDog Timer Alarm
57	E305	DI41 BIC01 Bag Exit Present Sensor WatchDog Timer Alarm
58	E306	DI45 Cutter Cyl1 Fwd Sensor Absent WatchDog Timer Alarm
59	E307	DI49 Cutter Cyl2 Fwd Sensor Absent WatchDog Timer Alarm
60	E308	DI46 Cutter Cyl1 Rev Sensor Absent WatchDog Timer Alarm
61	E309	DI50 Cutter Cyl2 Rev Sensor Absent WatchDog Timer Alarm
62	E310	DI51 PCS01 Outlet Valve Open FB Absent Watchdog Timer Alarm
63	E311	DI52 PCS01 Outlet Valve Close FB Absent Watchdog Timer Alarm
64	E312	DI53 PCS01 Inlet Valve Open FB Absent Watchdog Timer Alarm
65	E313	DI54 PCS01 Inlet Valve Close FB Absent Watchdog Timer Alarm
66	E314	DI55 PCS01 Vacuum Valve Open FB Absent Watchdog Timer Alarm
67	E315	DI56 PCS01 Vacuum Valve Close FB Absent Watchdog Timer Alarm
68	E316	DI58 PCS02 Outlet Valve Open FB Absent Watchdog Timer Alarm

Sr. No.	Code	Description
69	E317	DI59 PCS02 Outlet Valve Close FB Absent Watchdog Timer Alarm
70	E318	DI60 PCS02 Inlet Valve Open FB Absent Watchdog Timer Alarm
71	E319	DI61 PCS02 Inlet Valve Close FB Absent Watchdog Timer Alarm
72	E320	DI62 PCS02 Vacuum Valve Close FB Absent Watchdog Timer Alarm
73	E321	DI63 PCS02 Vacuum Valve Close FB Absent Watchdog Timer Alarm
74	E322	Bag Stuck at Bag Cleaning Station
75	E323	Spare
76	E324	Bag Stuck at BIC01 Exit Sensor
77	E325	Bag Selection Not Selected
78	E326	Vacuum Pump Not Selected

15 Spare Parts List

15.1 Mechanical Spare List

Item Code	Description	Make	Used Qty	R-Spares	Images
33000000418	PP NON WOVEN BAG ID 225MM X 1850 LG BOTH SIDE OPEN		1	1	-
42000000483	OIL SEAL 55 X 70 X 8 MAKE-IMPORTED	Imported	2	1	
42000000484	OIL SEAL 55 X 70 X 10 MAKE-IMPORTED	Imported	2	1	
81000000355	1" HIGH PRESSURE HOSE WITH LOCK NUT LENGTH 500MM L		5	1	
84000001043	SS316 HONEYCOMB BELT MESH SIZE 1" X 1/2" 650MM(W)		4	1	
010FES000045	DBL.ACTING CYL DNC 63-160-PPV-A FESTO 163407	FESTO	1	1	
010FES163408	DBL.ACTING CYL DNC 63-200 PPV-A FESTO 163408	FESTO	1	1	
011AVC000498	PULSE VALVE-9150B25 / AD / S4 / BN / BSP1"BSP WITHOUT FLP	Avcon-controls	5	1	
011FES010410	SOLENOID VALVE JMFH 5-1/4 FESTO 10410	FESTO	2	1	
021ITV000018	ITALVIBRAS VIBRATORY MOTOR-601373-MVSI 15/550-S02	ITALVIBRAS	2	1	

Item Code	Description	Make	Used Qty	R-Spares	Images
021ITV000035	ITALVIBRAS VIBRATORY MOTOR, MODEL: MVSI 15/1710-S02	ITALVIBRAS	2	1	
021ITV000036	ITALVIBRAS VIBRA MOTOR, MVSI 3 / 200-S02, 60HZ, 3PHASE	ITALVIBRAS	2	1	
0400006005ZZ	DEEP GROOVE BALL BEARING - 6005ZZ	NSK	42	4	
0400006009Z	DEEP GROOVE BALL BEARING- 6009-Z ,	--	8	2	
0400006212ZZ	DEEP GROOVE BALL BEARING 6212 2Z	---	2	1	
040CNZ000041	DEEP GROOVE BALL BEARING 6308 ZZ SS MAKE - CNZ	CNZ	4	1	
040CNZ000042	DEEP GROOVE BALL BEARING 6206 ZZ SS MAKE - CNZ	CNZ	1	1	
040CNZ000043	DEEP GROOVE BALL BEARING 6307 ZZ SS MAKE - CNZ	CNZ	4	1	
040CNZ000044	DEEP GROOVE BALL BEARING 6205 ZZ SS MAKE - CNZ	CNZ	1	1	
040SJS0SJS15	FOUR POINT CONTACT BEARING- SJS 15- MAKE SJS	SJS	2	1	
040SKF000026	SKF SQUARE FLANGED BALL BEARING UCF 209	SKF	2	1	
040SKF000027	SKF TAKE-UP BALL BEARING UNIT UCT 207	SKF	2	1	

Item Code	Description	Make	Used Qty	R-Spares	Images
040SKF000205	OVAL FLANGE BALL BEARING UNIT UCFL - 205, SKF	SKF	2	1	
042SKFOS0936	RADIAL SHAFT SEAL:55X70X8 HMSA10 RG, MAKE-SKF	SKF	2	1	
042SKFOS0939	RADIAL SHAFT SEAL: 55 X 70 X 10 HMSA10 RG , MAKE - SKF	SKF	2	1	
051CLIP00A25	SS EXTERNAL CIRCLIP A-25	CIRCLIP	42	4	
052DSN000313	KNOB HANDLE DKS-30-08-20-SS,MAKE-DARSHANA	Darshana	32	5	
052FIL000188	PTFE MEMBRANE LAMINATED POLYESTER:Ø150X500L	--	3	1	
052FIL000188	PTFE MEMBRANE LAMINATED POLYESTER:Ø150X500L	---	1	1	
052FIL000190	PTFE MEMBRANE LAMINATED POLYESTER:Ø225X500L	--	4	2	
052FIL000194	MICRO PLEATS PTFE LAMINATED POLYESTER:Ø150X600L	--	3	1	
052SKY000018	FILTER BAG PTFE CLOTH DIA 130 ID X 220 LG	--	1	1	
052SKY000020	FILTER BAG PTFE CLOTH DIA 50 & LENGTH 140MM	--	1	1	
084BT000005	300 NB BLOW THROUGH RAV WITH QCK.CLEANING ARRANGEM	--	1	1	

Item Code	Description	Make	Used Qty	R-Spares	Images
084PRM000006	12" DRAWER TYPE MAGNETIC SEPARATOR MOC-SS316	--	2	1	
090OPT000081	OPTIBELT OMEGA TIMING BELT 1160-8MHP-50	--	2	1	
090OPT000218	TIMING PULLEY 40-8M-50 TYPE 6F	---	4	1	
100DMD0008B1	1/2" SIMPLEX CHAIN- ISO NO. 08B-1- MAKE- DIAMOND	Diamond	12	1	
101DMD000018	1/2" SIMPLEX FULL CONNECTING LINK - DIAMOND	Diamond	32	5	
101DMD000019	1/2" SIMPLEX HALF CONNECTING LINK -DIAMOND	Diamond	32	5	
999CMBS89890	ROLLER SLEEVEID50XOD55X550 LG SILICON SLEEVE RED	Std.	18	5	
VAP036020083	BELLOW-3	--	1	1	
VAP036021005	RUBBER PAD	--	4	2	
VAP036022012	RUBBER PAD	--	4	2	
VAP036023113	CUTTER DISC	--	2	1	
VAP036041100	FILTER DISC ASSLY for PCS	--	2	1	

15.2 Electrical Spare List

Item Code	Description	Make	Used Qty	Images
6010AB000225	PLC COMPACTLOGIX 5380 5069-L306ER ALLEN BRADLEY	Allen Bradley	1	
6010AB000207	COMPACT I/O POWER TERM RTB KIT 5069-RTB64 - SCREW	ABB	1	
6010AB000018	MODULE 1734 - AENTR ETHERNET / IP TWISTED IO ADAPTOR	ABB	1	
6010AB000021	MODULE 1734-IB8 24VDC 8 CHANNEL SINK I/P MODULE	ABB	10	
6010AB000022	MODULE 1734-OB8 24VDC 8 CHANNEL SOURCE O/P MODULE	ABB	7	
6010AB000025	ANALOG MODULE 1734-IE4C 24VDC 4 CH.HIGH DENSITY	ABB	2	
6010AB000152	ONE PIECE TERMINAL BASE 1734-TOP SCREW TERMINAL	ABB	19	
6020AB000044	HMI PV+7 2711P-T15C21D8S 15" XGA TFT WIN CE STD	ABB	1	
6010AB000019	MODULE 1734-EP24DC 24VDC POWER / BUS EXTENSION - AB	ABB	1	
607SFN000034	LINE FILTER FN3270H-100-35 100A 3PH EMC - SCHAFFNER	Schaffner	1	
607SIE000965	MCCB 100A 3P 3VA11104EE320AA0 36KA ATFM	Siemens	1	
600SIE000009	ASSEMBLY- 3VA 16-160A MCCB HANDLE & SPREDER LINK	Siemens	1	
607SIE000673	MCCB DOOR MOUNTING MECHANISM 3VA91570FK51-SIEMENS	Siemens	1	

Item Code	Description	Make	Used Qty	Images
607SIE000894	MCCB SPREADER LINKS 3VA91530QC50 FOR 3P - SIEMENS	Siemens	1	
600RIT000005	BAYING ASSEMBLY FOR TS BAYING N PANELS QTY: (N-1)	Rittal	1	
609RIT000112	BAYING BRACKET TS 8800500 MAKE : RITTAL	Rittal	1	
609RIT000113	BAYING ANGULAR BRACKET TS 8800430 MAKE : RITTAL	Rittal	1	
609RIT000114	COMBINATION ANGLE TS 4540000 MAKE : RITTAL	Rittal	1	
609RIT000118	MOUNTING PLATE INFILL TS 4591700 2000H – RITTAL	Rittal	1	
609RIT000126	WIRING POCKETS TS 4116000 MAKE: RITTAL	Rittal	1	
609RIT000111	SIDE PANEL TS 8106235 2000(H) X 600(W) –RITTAL	Rittal	1	
607RIS000002	CURRENT TRANSFORMER 100/5A MAKE - RISHABH	Rishabh Instruments	3	
607TEL000001	VIF METER EM6459H METSEEM6459HCL10NC CONZERV METE	--	1	
610PHX000174	SURGE PROTECTION VAL-US-277/40/3+1FM TYPE1 2910374	Phoenix	1	
607SIE000461	MPCB 2.2-3.2A 3RV20111DA10 SIZE:S00 - SIEMENS	Siemens	2	
607SIE000462	MPCB 3.5-5A 3RV20111FA10 SIZE:S00 – SIEMENS	Siemens	5	
607SIE000136	MPCB 5.5-8A 3RV20111HA10 SIZE:S00 - SIEMENS	Siemens	5	
607SIE000458	MPCB 1.1-1.6A 3RV20111AA10 SIZE:S00 -SIEMENS	Siemens	3	--

Item Code	Description	Make	Used Qty	Images
607SIE000459	MPCB 1.4-2A 3RV20111BA10 SIZE:S00 - SIEMENS	Siemens	3	
607SIE000454	MPCB 0.28-0.4A 3RV20110EA10 SIZE:S00 - SIEMENS	Siemens	2	
607SIE000137	MPCB 9-12.5A 3RV20111KA10 SIZE:S00 -SIEMENS	Siemens	2	
607SIE000138	AUX CONTACT BLOCK 1NO+1NC 3RV29011A - SIEMENS	Siemens	24	
607SIE000410	LINK MODULE S00/S00 AC/DC 3RA19211DA00 - SIEMENS	Siemens	15	
607SIE000425	CONTACTOR 7A 24VDC 3RT20151BB41 1NO -SIEMENS	Siemens	11	
607SIE000426	CONTACTOR 9A 24VDC 3RT20161BB41 1NO - SIEMENS	Siemens	4	
6050AB000050	DRIVE PF525 25B-D2P3N104 0.75KW 1 HP 480VAC - AB	Allen Bradley	2	
6050AB000059	DRIVE PF525 25B-D4P0N104 1.5KW 2HP 3PH MAKE: AB	Allen Bradley	5	
601PHX000026	ETHERNET SW 1016N UNMANAGED 1085255 16 PORT-PHX	Phoenix	1	
608PIZ000007	SAFETY RELAY 777301 PNOZ X2.8P 24 VACDC 3N/O 1N/C	Pilz	1	
610PHX000130	RELAY SLIM PLC-RSC / 24DC / 21 / UWL / IN 1NO + 1NC 1533207	Phoenix	140	
610PHX000054	SOCKET EO-AB/UT/15 125VAC 15A DIN RAIL - 0804152	Phoenix	1	
607SIE011807	DOOR LIMIT SWITCH 3SE5250- 0CC05 SIEMENS UL	Siemens	2	
601PHX000041	SMPS PS-EE-2G / 1AC / 24DC / 240W / SC 24V 10A 1234304	Phoenix	1	

Item Code	Description	Make	Used Qty	Images
600PHX000004	PANEL MOUNTED SOCKET - US 3PIN PHOENIX	Phoenix	1	
610PHX000195	SOCKET MOUNTING FRAME SI-M1A 1404493	Phoenix	1	
610PHX000168	ADAPTER PLATE EO-SI-FRAME PART NO:0804522	Phoenix	1	
610PHX000054	SOCKET EO-AB/UT/15 125VAC 15A DIN RAIL-0804152	Phoenix	1	
613PZT000003	RJ45 SOCKET E2 1RJ459AAK	Pizzato	12	
600RIT000001	PANEL ASSEMBLY FOR TS 600X2000X600 MM (W X H X D)	Rittal	1	
609RIT000075	PANEL TS 8606500 600(W) X 2000(H) X 600(D) MS RITTAL	Rittal	1	
609RIT000103	PLINTH TS 8601600 100(H) X 600 (W) - RITTAL	Rittal	1	
609RIT000110	PLINTH SIDES TS 8601060 FOR 600 DEPTH ENCL RITTAL	Rittal	1	
609RIT000119	HANDLE TS 8611020 RITTAL COMFORT HANDLE	Rittal	1	
609RIT000120	LOCK INSERTS TS 8611180 MAKE : RITTAL	Rittal	1	
609RIT000117	DOOR-OPERATED SWITCH SZ 4127010 MAKE: RITTAL	Rittal	1	
600RIT000002	PANEL ASSEMBLY FOR TS 800X2000X600 MM (W X H X D)	Rittal	1	--
609RIT000082	PANEL TS 8806500 800(W) X 2000(H) X 600(D) MS - RITTAL	Rittal	1	
609RIT000102	PLINTH TS 8601800 100(H) X 800(W) - RITTAL	Rittal	1	

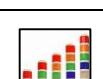
Item Code	Description	Make	Used Qty	Images
609RIT000110	PLINTH SIDES TS 8601060 FOR 600 DEPTH ENCL RITTAL	Rittal	1	
609RIT000119	HANDLE TS 8611020 RITTAL COMFORT HANDLE	Rittal	1	
609RIT000120	LOCK INSERTS TS 8611180 MAKE : RITTAL	Rittal	1	
609RIT000117	DOOR-OPERATED SWITCH SZ 4127010 MAKE: RITTAL	Rittal	1	
607SIE000463	MPCB 10-16A 3RV20114AA10 SIZE:S00 - SIEMENS	Siemens	1	
611LAP000401	CABLE FLEXI 25 SQMM X 1C 4161001 BLACK UL LAPP	Lapp	100	
611LAP000355	CABLE FLEX 4 SQMM X 1C BLACK 4160601-UL-LAPP	Lapp	20	
611LAP000304	CABLE FLEXI 1.5 SQMM X 1C 4160401 BLACK UL-LAPP	Lapp	50	
611LAP000305	CABLE FLEXI 2.5 SQMM X 1C 4160501 BLACK UL-LAPP	Lapp	15	
611LAP000359	CABLE FLEXI 2.5SQMM X 1C 4160500 YELLOW / GREEN LAPP	Lapp	100	
611LAP000301	CABLE FLEX 1.5 SQMM X 1C GREEN/YELLOW 4160400 UL	Lapp	25	
611LAP000276	CABLE FLEX 1 SQMM X 1C BLUE / WHITE 4160326-UL-LAPP	Lapp	100	-
611LAP000312	CABLE FLEXI 1 SQMM X 1C 4160302 BLUE UL-LAPP	Lapp	100	-
611LAP000313	CABLE FLEXI 0.5 SQMM X 1C 4160102 BLUE UL-LAPP	Lapp	400	-
611LAP000356	CABLE FLEX 0.5 SQMM X 1C BLUE / WHITE 4160126-UL-LAP	Lapp	100	-
611ETH000001	ETHERNET PATCH CORD CAT 6 LENGTH: 1 METER	D-Link	2	

Item Code	Description	Make	Used Qty	Images
611ETH000003	ETHERNET PATCH CORD CAT 6 LENGTH :3 METER	D-Link	4	
607SIE000466	MPCB 18-25A 3RV20214DA10 SIZE:S0 - SIEMENS	Siemens	1	
610RIT000011	OUTLET FILTER SK 3238200 4" MAKE RITTAL	Rittal	2	
610BAN000016	LED PANEL LIGHT WLS15XDW0220DSC2 24VDC UL BANNER	Banner	2	
609CON000001	CONNECTOR RECTANGULAR 4 PIN (M+F) BOTTOM OPEN INDO	Indo Electricals	20	---
609CON000002	CONNECTOR RECTANGULAR 6 PIN (M+F) BOTTOM OPEN INDO	Indo Electricals	5	---
609CON000003	CONNECTOR RECTANGULAR 16 PIN (M+F) BOTTOM OPEN IND	Indo Electricals	8	---
609CON000006	CONNECTOR RECTANGULAR 10 PIN(M+F) BOTTOM OPEN INDO	Indo Electricals	3	---
609CON000008	CONNECTOR RECTANGULAR 24 PIN(M+F) 16A BOTTOM OPEN	Indo Electricals	2	
607PHX000002	LINE MONITORING RELAY EMD-BL-PH-480 2903527 UL	Phoenix	1	
610PHX000013	TERMINALS UK 35 ARTICLE NO:3008012 - PHOENIX	Phoenix	3	
600PZT000006	ASSEMBLY- PLASTIC WHITE LAMP FOR RYB 230VAC PIZZ	Pizzato	3	
613PZT000008	PIZZATO INDICATOR LIGHT WHITE E2 1ILA210	Pizzato	1	
613PZT000011	PIZZATO LED HOLDER E2 1BAC11	Pizzato	1	
613PZT000014	PIZZATO LED UNIT WHITE E2 LP4A2V1	Pizzato	1	
610RIT000016	OUTLET FILTERS SK 3237200 3 " MAKE RITTAL	Rittal	2	

Item Code	Description	Make	Used Qty	Images
608SIC000045	FEMALE CONNECTOR M12 4-PIN DOS-1204-G 6007302 SICK	Sick	8	
608SIC000064	MALE CONNECTOR M12 4-PIN STE-1204-G 6009932 SICK	Sick	8	
607SIE000648	ISOLATOR SWITCH 3LD21030TK53 3-POLE 25A – SIEMENS	Siemens	2	
609RIT000004	AE 1350500 500W X 500H X 300D MM MS RITTAL	Rittal	2	
611LAP000413	CABLE FLEX 0.5SQMM X 1C YELLOW 4160110 MAKE - LAPP	Lapp	20	
611LAP000310	CABLE FLEXI 1.5 SQMM X 1C 4160405 WHITE UL-LAPP	Lapp	20	
607TTP000001	WIRING CHANNEL ART NO. 011701074 TBWDN60X60LG2	Trinity Touch	5	
607TTP000009	WIRING CHANNEL ART NO. 011701597 TBWDN80X60LG1 1MTR	Trinity Touch	1	
607TTP000002	WIRING CHANNEL ART NO. 011701070 TBWDN40X60LG2	Trinity Touch	2	
607TTP000011	DIN RAIL ART NO.011700332 TBLS-35/7.5 1 MTR 35MM	Trinity Touch	3	
610PHX000187	FUSE TERMINAL PT4-HESILA 250(5X20) 3211907 - PHOENIX	Phoenix	48	
610PHX000184	TERMINAL DOUBLE PTTB 4 3211786-PHOENIX	Phoenix	14	
610PHX000183	TERMINAL SINGLE PT 4 3211757-PHOENIX	Phoenix	41	
610PHX000182	FUSE TERMINAL PT4-HESILED 24(5X20) 3211903 - PHOENIX	Phoenix	42	
610PHX000186	END COVER FOR PTTB 4 D-STTB 4 3030462 - PHOENIX	Phoenix	2	
610PHX000185	END COVER FOR PT4 D-ST 4 3030420 - PHOENIX	Phoenix	4	

Item Code	Description	Make	Used Qty	Images
610PHX000181	TERMINAL END BRACKET CLIPFIX 35 3022218 - PHOENIX	Phoenix	20	
610FIX000019	LUGS RING TERMINALS (NON-INSU.) SQMM-ID:1.5-5	Fixwell	200	
610FIX000020	LUGS RING TERMINALS (NON-INSU.) SQMM-ID:2.5-5	Fixwell	5	
610FIX000022	LUGS RING TERMINALS (NON-INSU.) SQMM-ID:4.6-6	Fixwell	4	
610FIX000001	LUGS INSULATED CORD END TERMINAL L8 0.5 SQMM	Fixwell	1,000	
610FIX000004	LUGS INSULATED CORD END TERMINAL L8 1.0 SQMM	JIGO	100	
609CON000099	MODULAR DISTRIBUTION BLOCK CDB10/4 16 OUTPUTS	Connectwell	6	
609CON000071	END CLAMP CA702 CONNECTWEL	Connectwell	6	
607SAH000002	TRANSFORMER 1500VA P:480V AC S:120:240V AC UL	Sahara Electricals	1	---
609CON000035	CONNECTOR RECTANGULAR 6 PIN(M+F) 35A BOTTOM OPEN	Connectwell	2	
607ETN000001	MCB 2P 4A FAZ-C4/2 ART. NO.102162 UL APPROVED - EATON	Eaton	3	
607ETN000005	MCB 2P 2A FAZ-C2/2 ART NO:102160 UL APPROVED - EATON	Eaton	4	
610RIT000028	TOP THERM FAN & FILTER SK 3238724 4" 24VDC	Rittal	2	
607PND000004	VERISAFE 1.0 VOLTAGE TESTER VS-AVT-C08-L10 PANDUIT	Panduit	4	
610FUS000017	GLASS FUSE 500MA PSF 0.5A UL PROTECTRON	Protection Electromech	36	
610FIX000006	LUGS INSULATED CORD END TERMINAL L8 1.5 SQMM	JIGO	400	

Item Code	Description	Make	Used Qty	Images
609PHX000087	CONNECTOR SACC-E-M12FS-4PL-M20 1139803 PHOENIX	Phoenix	4	
608SIC000162	MALE CONNECTOR M12 4-PIN ANGLED STE-1204-W 6022084	Sick	4	
611ETH000004	ETHERNET PATCH CORD CAT 6 LENGTH: 2 METER	D-Link	2	
607ETN000055	MCB 2P 10A UL1077 FAZ-C10/2 W/O NA EATON	D-Link	1	
999CMBS00299	INSULATOR TAPPING M6X30 MM RED COLOR	Std.	8	--
610PHX000018	LOOPING STRIP FBST 500-PLC-BU BLUE PARTNO: 2966692	Phoenix	3	
610PHX000017	LOOPING STRIP FBST 500-PLC-RD RED PART NO 2966786	Phoenix	3	
610PHX000234	MARKER PTTB 4 ZBF 6-LSG:01-03-05...19 0808749	Phoenix	8	
610PHX000235	MARKER PTTB 4 ZBF 6-LSG:02-04-06...20 0808749	Phoenix	8	
610PHX000019	MARKERS ZB 6 LGS:1-10 ARTICLE NO:1051016:0001	Phoenix	2	
610PHX000020	MARKERS ZB 6 LGS:11-20 ARTICLE NO:1051016:0011	Phoenix	2	
610PHX000021	MARKERS ZB 6 LGS:21-30 ARTICLE NO: 1051016:0021	Phoenix	2	
610PHX000236	MARKER PTTB 4 ZBF 6-LSG:21-23-25...39 0808749	Phoenix	2	
610ETN000002	GLASS FUSE 1A BK/GMA-1-R UL EATON	Eaton	4	
609PHX000081	RJ45 CONNECTOR CAT6 VS-08-RJ45-10G/Q-1419001 8POS.	Phoenix	10	
6110AB000003	ETHERNET CABLE 1585 - C8TB-S600 TEAL PVC SHIELDED - AB	ABB	60	

Item Code	Description	Make	Used Qty	Images
609CON000028	CONNECTOR RECTANGULAR 5 PIN (M+F) BOTTOM OPEN INDO	Indo Electricals	3	
610FUS000002	FUSE 1 A GLASS FUSE	Protection Electromech	12	
050STUD00008	MS M8 FULL THREADED STUD	--	4	--
609PNL001804	ACRYLIC BOX 170(W) X 250(H) X 250(D) MM 5MM THICKNESS	--	1	--
609PNL001805	ACRYLIC BOX 170(W) X 350(H) X 100(D) MM 5MM THICKNES	--	1	--
607SAH000014	UL-TRANSFORMER 100VA P:110V AC S:24V AC	Sahara Electricals	1	--
608SIC000130	REF.PHOTOELEC.SWITCH GL10-P4212 PART NO 1065887	Sick	6	
011FES552363	PRESSURE S/W DIGITAL SPAN-P10R-G18M-PN-PN-L1 PNP	Festo	3	
011FES572577	CONNECTING LINE NEBS-L1G4-K-5-LE4 572577 FESTO	Festo	3	
608SIC000062	FEMALE CONNECTOR M124P ANGLED 6007303 DOS - 1204 - WS	Sick	10	
610BAN000012	BANNER TOWER LAMP 18-30 VDC TL50GYRA 83222	Banner	1	
610BAN000013	STAND FOR BANNER TOWER LAMP TL-STD-165 BANNER	Banner	1	
608ENH000171	LEVEL SENSOR FTE20-FC16AB21 PADDLE TYPE E&H	E&H	5	
608BDS000004	PRESSURE TRANSMITTER-DMP 331P -1TO1 BAR BD SENSORS	BD Sensors	4	
011FES030935	PLUG SOC WITH CABLE KMF-1-24DC-2 5-LED 2.5M 30935	Festo	6	
608SIC000061	INDUCTIVE PROXIMITY SENSOR IME18-08BPSZCOK 1040965	Sick	4	

Item Code	Description	Make	Used Qty	Images
610BAN000002	TOWER LAMP MODEL NO. K50LGRYP 24VDC PNP BANNER	Banner	1	
608SIC000099	UNIVERSAL BAR CLAMP BEF-KHS-KH3 5322626 SICK	Sick	6	
608TEK000006	LIMIT SWITCH NG1SM510L - 24VDC ROD LEVER - TEKNIC	Teknic	1	
011FES004527	SOLENOID COIL 24VDC MSFG-24/42-50 / 60 FESTO 4527	Festo	4	
011FES010004	SOLENOID COIL INDICATOR MFL-24DC / AC FESTO 10004	Festo	4	
608SIC000064	MALE CONNECTOR M12 4-PIN STE-1204-G 6009932 SICK	Sick	4	
608SIC000045	FEMALE CONNECTOR M12 4-PIN DOS-1204-G 6007302 SICK	Sick	4	
609RIT000278	CP 40 HOUSING COUPLING 6501050 RITTAL	Rittal	1	
609RIT000160	PANEL KL 1503510 300(W) X 200(H) X 120(D) - RITTAL	Rittal	1	
609RIT000012	PANEL KL 1514510 150W X 150H X 80D MM MS RITTAL	Rittal	4	
610GSL000053	GLAND PG-7 POLYAMIDE PART NO.341.0700.1	Geissel	40	
610GSL000054	LOCK NUT PG-7 POLYAMIDE PART NO.792.0700.1	Geissel	40	
609RIT000048	PANEL AE 1050500 500(W) X 500(H) X 210(D) MS RITTAL	Rittal	1	--
610GSL000063	GLAND PG-9 POLYAMIDE LIGHT GREY 341.0900.1 GEISSEL	Geissel	20	
610GSL000064	LOCK NUT PG-9 POLYAMIDE PART NO.792.0900.1	Geissel	11	--
610GSL000071	GLAND PG-21 POLYAMIDE SILVER GREY 341.2100.1 GEISSEL	Geissel	2	

Item Code	Description	Make	Used Qty	Images
610GSL000034	LOCKNUT PG 21 792.2100.1 POLYAMIDE GEISSEL	Geissel	2	
611LAP000321	CABLE FLEX 0.5 SQMM X 25G CORE 0015025 UL - LAPP	Lapp	200	
611LAP000318	CABLE FLEX 0.5 SQMM X 7G CORE 0015007 UL - LAPP	Lapp	150	
611LAP000319	CABLE FLEX 0.5 SQMM X 12G CORE 0015012 UL - LAPP	Lapp	150	
611LAP000320	CABLE FLEX 0.5 SQMM X 18G CORE 0015018 UL - LAPP	Lapp	200	
611LAP000315	CABLE FLEX 1.5 SQMM X 4G CORE 0011138 UL-LAPP	Lapp	420	
611LAP000323	CABLE FLEX 2.5 SQMM X 4G CORE 0011151 UL-LAPP	Lapp	100	
609CON000001	CONNECTOR RECTANGULAR 4 PIN (M+F) BOTTOM OPEN INDO	Indo Electricals	3	--
609CON000006	CONNECTOR RECTANGULAR 10 PIN(M+F) BOTTOM OPEN INDO	Indo Electricals	1	--
610PHX000191	SHORT LINK FOR PT 2.5-3L FBS 20-5 RED 3030226	Phoenix	5	
610PHX000192	SHORT LINK FOR PT 2.5-3L FBS 20-5 BLUE 3036929	Phoenix	5	
610PHX000193	TERMINAL 3 WAY PT 2.5-3L 3210499	Phoenix	40	
610PHX000194	END COVER FOR PT2.5-3L D-PT 2.5-3L 3211647	Phoenix	4	
610PHX000181	TERMINAL END BRACKET CLIPFIX 35 3022218 - PHOENIX	Phoenix	20	
611LAP000357	CABLE FLEX 0.5 SQMM X 2 CORE 0015002 UL - LAPP	Lapp	150	
611LAP000434	CABLE FLEX 4 SQMM X 4G CORE 0011161 UL-LAPP	Lapp	70	

Item Code	Description	Make	Used Qty	Images
600PZT000013	ASSEMBLY FOR EMERGENCY STOP TURN TO RELEASE 1NC	Pizzato	4	--
613PZT000023	EMERGENCY STOP TURN TO RELEASE E2 1PERZ4531 RED	Pizzato	1	
613PZT000011	PIZZATO LED HOLDER E2 1BAC11	Pizzato	1	
607PZT000004	PIZZATO NC CONTACT BLOCK E2 CP01G2V1	Pizzato	1	
613TEK000030	SINGLE PB BOX METAL ONE WAY BOX PDC80 X 90 X 52MM (G/B)	Teknic	2	
613PZT000034	SAFETY RESET METAL PB+LAMP YELLOW E2 AC-DXBC0483	Pizzato	2	--
613PZT000036	SYSTEM RESET METAL PB+LAMP BLUE E2 AC-DXBC0430	Pizzato	1	--
613PZT000035	SYSTEM START METAL PB+LAMP GREEN E2 AC-DXBC0431	Pizzato	2	--
611LAP000380	CABLE SHIELDED 1.0 SQMM X 2C 1123460 UL- LAPP	Lapp	60	
611LAP000322	CABLE FLEX 0.5 SQMM X 4G CORE 0015004 UL-LAPP	Lapp	100	
612AST000001	CABLE TRAY -SS WIREMESH 50(W) X 50(H) X 3M(L)- ASTRA	Astra	23	--
612AST000003	CABLE TRAY -SS WIREMESH 100(W) X 50(H) X 3M(L)- ASTRA	Astra	38	--
612AST000005	SS JOINTER FOR CABLE TRAY SIZE 50 TO 400MM- ASTRA	Astra	150	--
612AST000007	CABLE TRAY -SS WIREMESH 150(W) X 50(H) X 3M(L) – ASTRA	Astra	24	--
611LAP000316	CABLE FLEX 1 SQMM X 3G CORE 0011113 UL - LAPP	Lapp	50	
610GSL000056	LOCK NUT PG-11 POLYAMIDE PART NO.792.1100.1	Geissel	19	

Item Code	Description	Make	Used Qty	Images
610GSL000059	GLAND PG-16 POLYAMIDE PART NO.341.1600.1	Geissel	9	
610GSL000102	GLAND PG-21 POLYAMIDE PART NO.341.2100.1	Geissel	7	
613PZT000037	SYSTEM STOP METAL PB RED E2 AC-DXBC1233	Pizzato	1	
609TMT000008	SS JUNCTION BOX 150(H) X 150(W) X 80(D)MM TRIMURTI	Trimurti	1	--
609TMT000007	SS JUNCTION BOX 200(H) X 200(W) X 120(D) MM TRIMURTI	Trimurti	3	--
601SIE000135	PROFINET CONNECTOR-50QTY 6GK19011BB102AE0 - SIEMENS	Siemens	1	
608SIC000023	MALE CONNECTOR M12 4-PIN ANGLED 6048262 D CODED	Sick	1	
610GSL000119	REDUCER M25X1.5 TO M20 X 1.5 PART NO 713.2520.1	Geissel	10	--
610GSL000055	GLAND PG-11 POLYAMIDE PART NO.341.1100.1	Geissel	12	
610CTI000006	CABLE TIES 100 MM BLACK COLOR MAKE : KSS	KSS	31	
610CTI000007	CABLE TIES 200 MM BLACK COLOR MAKE : KSS	KSS	36	
613TEK000006	ILLUMINATED PB 2ALRF(L) - 6 BLUE 24VDC LED TYPE	Teknic	1	
607TEK000001	CONTACT BLOCK 1NC S-2 NORMALLY CLOSE TEKNIC	Teknic	2	
613TEK000011	PUSH BUTTON 2AF-3 GREEN METAL BODY MAKE : TEKNIC	Teknic	1	
609PNL000231	JUNCTION BOX 150(H) X 150(W) X 80(D) SS 304	--	3	
613PZT000053	GREEN PUSH BUTTON METAL 1HOLDER 1NO E2 AC - DXBC1230	Pizzato	1	--

Item Code	Description	Make	Used Qty	Images
613TEK000005	ILLUMINATED PB 2ALRF(L)-8 YELLOW 24VDC LED TYPE	Teknic	1	
607TEK000002	CONTACT BLOCK 1NO S-1 NORMALLY OPEN TEKNIC	Teknic	1	
610PHX000234	MARKER PTTB 4 ZBF 6-LSG:01-03-05...19 0808749	Phoenix	8	
610PHX000235	MARKER PTTB 4 ZBF 6-LSG:02-04-06...20 0808749	Phoenix	8	
610PHX000210	MARKER PT2.5-3L ZBF 5-LSG:01-10 0808671:0001	Phoenix	8	
610PHX000211	MARKER PT2.5-3L ZBF 5-LSG:11-20 0808671:0011	Phoenix	8	
610PHX000019	MARKERS ZB 6 LGS:1-10 ARTICLE NO:1051016:0001	Phoenix	5	
610PHX000020	MARKERS ZB 6 LGS:11-20 ARTICLE NO:1051016:0011	Phoenix	5	
610PHX000021	MARKERS ZB 6 LGS:21-30 ARTICLE NO:1051016:0021	Phoenix	3	
610PHX000023	MARKERS ZB 6 LGS:41-50 ARTICLE NO:1051016:0041	Phoenix	3	
613TEK000018	LEGENDS EMERGENCY STOP ROUND TYPE YELLOW 2LP41	Teknic	1	
610TAG006020	PLASTIC TAG PATTI 60 X 20 MM WHITE COLOR	--	5	--
610PHX000212	MARKER PT2.5-3L ZBF 5-LSG:21-30 0808671:0021	Phoenix	8	
607SIE000544	ROTARY DISCONNECT SWITCHES 16A 3LD20640TB530	Siemens	3	
607SIE000523	CONTACT BLOCK 3LD92005C - SIEMENS	Siemens	3	
611LAP000366	CABLE SHIELDED 0.25 SQMM X 4C 0044704 LAPP	Lapp	50	

Item Code	Description	Make	Used Qty	Images
611POL000088	CABLE FLEXIBLE 4 SQMM X 3 CORE POLY CAB	Polycab	51	
609TMT000009	SS JUNCTION BOX 300(H) X 200(W) X 120(D)MM TRIMURTI	Trimurti	1	--
610SLV000001	SPIRAL SLEEV 6 MM 1/4 WHITE COLOUR	--	100	
610IND000002	FERRULE SLEEV 3.5 SQMM WHITE COLOUR	Indomax	1	
610IND000003	FERRULE SLEEV 4.2 SQMM WHITE COLOUR	Indomax	1	

16 Preventive Maintenance

Table given below will cover all the areas in the system where periodic maintenance is very important.

Sr. no.	Activity	Weekly	Monthly	Quarterly	Annually
Mechanical Maintenance					
1	Gear box oil			✓	
2	All nuts and bolts should be tight.		✓		
3	Pneumatic cylinders.			✓	
4	Lifting belt Inspection				✓
5	Cleaning of FRL unit			✓	
6	Inflatable bellow		✓		
7	Flexible bellow		✓		
Electrical Maintenance					
1	All sensor brackets should be checked and make sure that they are properly mounted.			✓	
2	All sensor & there inputs should be checked.		✓		
3	All solenoid valve and there check-nuts should be checked.			✓	
4	Air pressure switch should be checked.			✓	
5	All junction box terminals and lugs should be checked.				✓
6	All Magnetic sensors should be checked.			✓	
7	All reed switches should be checked.		✓		

17 Lifecycle of Material

The definition of life cycle is ‘Consecutive and interlinked stages of a product (or service) system, from raw material acquisition or generation from natural resources to final disposal. Life cycle stages include acquisition of raw materials, design, production, transportation/delivery, use, end-of-life treatment and final disposal.’

Table 6: Life cycle of material

Raw Material	Life	Recycle
SS 304 / S.S.316 / S.S.316L	50 Years	Recycle by sorting, Melting and Purification
Mild Steel	20 Years	Recycle by sorting, Melting and Purification
Rubber (Gasket, “O” ring, etc.	5 years	Recycle by sorting and de-vulcanization.
PVC	50 Years	Recycle by Mechanical recycling / Chemical recycling
Aluminum	40 Years	Recycle by aluminum is sorted and cleaned then melted and uses for further process
Polyurethane	5 Years	Recycle by Mechanical recycling / Chemical recycling
Ultra High Molecular Weight Polyethylene	30 Years	Recycle by Shredding and Resizing then Compounding
Silicon	10 Years	Recycle by grinding or tearing shredded silicone granules into a prepared mold
Plastic	No End life	Recycle
Packaging Material (Paper Box, Wooden Box, Carton Box)	No End life	Recycle
Engine Oil	18 Months (Also depends on its Practical use)	Stored in factory hazard areas

Note: Disposal to be done as per local rules and regulations.