



PHARMA DEVILS

PRODUCTION DEPARTMENT

STANDARD OPERATING PROCEDURE

Department: Production	SOP No.:
Title: Cleaning and Operation of Air Jet Cleaner (Pharma Pack)	Effective Date:
Supersedes: Nil	Review Date:
Issue Date:	Page No.:

Vernacular SOP: No

1.0 OBJECTIVE:

1.1 To lay down a procedure for cleaning and operation of Air Jet Cleaner (Pharma Pack).

2.0 SCOPE:

2.1 This procedure is applicable for cleaning & operation of Air Jet Cleaner in production department.

3.0 RESPONSIBILITY:

3.1 Technical Associate : Cleaning and Operation of Air Jet Cleaner.

3.2 Officer and Executive : Supervision for cleaning and operation of Air Jet Cleaner.

3.3 Officer and Executive IPQA : Line clearance and SOP Compliance

3.4 Head Production : SOP Compliance of cleaning and operation of Air Jet Cleaner.

4.0 DEFINITION (S):

4.1 NA

5.0 PROCEDURE:

5.1 CLEANING:

5.1.1 Ensure that all the materials of previous batch are removed from the cubicle.

5.1.2 Remove "EQUIPMENT STATUS" label and affix "UNDER CLEANING" label on the machine with date and sign of the production officer.

5.1.3 Switch "OFF" the electric supply from main junction box and compressed air before start the cleaning of machine.

5.1.4 Clean the control panels with clean and dry lint free cloth.

5.1.5 Clean the top and outer surface of machine with the dry lint free cloth.

5.1.6 Open the guards of machine clean the area inside the guard with clean and dry lint free cloth and then moist lint free cloth.

5.1.7 Clean the conveyor belt, Hook unit, "T" shaped bottle rotating assembly, Slide assembly plate with clean and dry lint free cloth and then with moist lint free cloth open the guard of hopper and clean the hopper with dry lint free cloth and wipe with 70% v/v IPA solution.

5.1.8 Clean the Elevator and rotating disc (Orienter disc) and rotating assembly with dry lint free cloth and wipe with 70 %v/v IPA solution.



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- 5.1.9 Clean the air nozzle of air jet cleaner, Discharge bin and Vacuum filter after every batch with compressed air.
- 5.1.10 Replace the “UNDER CLEANING” status label by “CLEANED” status label on the machine with date and sign of the production officer.
- 5.1.11 Record the cleaning activity in equipment usage log as per SOP, “Making entries in equipment usage and cleaning log sheet”.
- 5.1.12 Clean the area as per SOP “Cleaning of production area”.
- 5.1.13 If machine is ideal for more than 72 hrs. Then clean the machine with lint free cloth dipped in 70% v/v IPA solution.

5.2 BASIC SETTINGS OF MACHINE

- 5.2.1 Adjust the all five-conveyor belt (horizontal position) as per the bottle size, by losing the adjusting knob of the conveyor belt.
- 5.2.2 Adjust the hook unit for rotating the bottle for traveling in the right way
- 5.2.3 Adjust the hopper and orienter disc sensor in such a manner that elevator should be stop if jamming of bottle occur in orienter disc
- 5.2.4 Adjust the ” T” shaped assembly for change the direction of bottle before and after air jet cleaning at the both side of air jet cleaning assembly. Adjust the position of rotating fan by loon the knob to stop jamming of bottle.

5.3 OPERATING PROCEDURE

- 5.3.1 Feed the empty bottle in the hopper manually.

NOTE: After feeding the empty bottle lock the acrylic door of the feeding port.

- 5.3.2 Switch “ON” the main supply of the machine from control panel which will activate the machine for operation and HMI will display as follow:



- 5.3.3 Press against the “NAME” and HMI will display as follow:



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Enter password with the help of keyboard.

5.3.4 OPERATIONAL screen will open and display as follow:



5.3.5 Press the “MANNUAL” key for setting .The screen will display as following:





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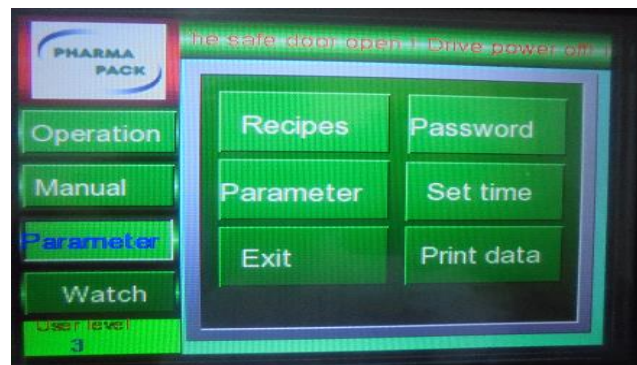
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Note: - “MANNUAL” has three pages displayed as 1/3, 2/3, 3/3 we can switch into different pages for different parameters by pressing $\square \uparrow$ $\square \downarrow$. Each of the parameter displayed can be “START” and “STOP” by pressing the key.

5.3.6 Press the “PARAMETER” key and HMI will display following options:



5.3.7 Press the “RECIPE” key from the above screen (It contains the different parameters used for setting of product) and HMI will display:

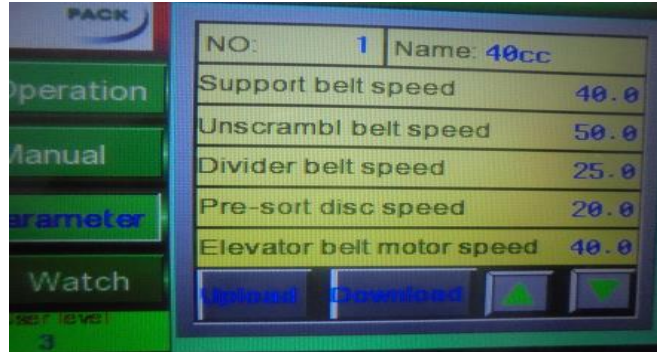


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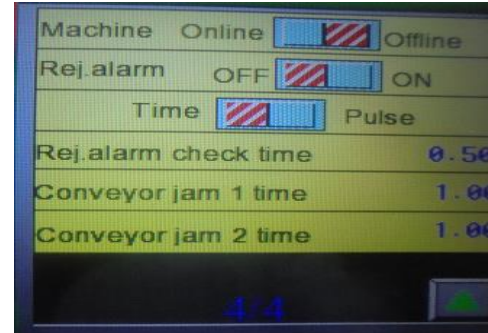
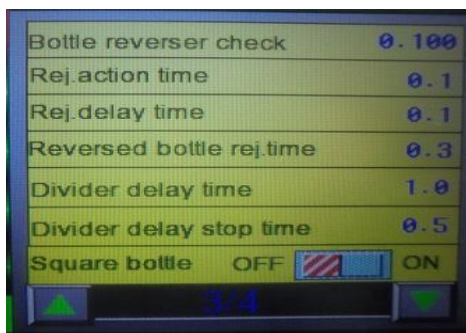
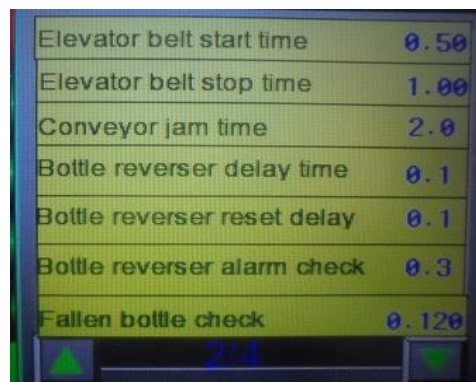
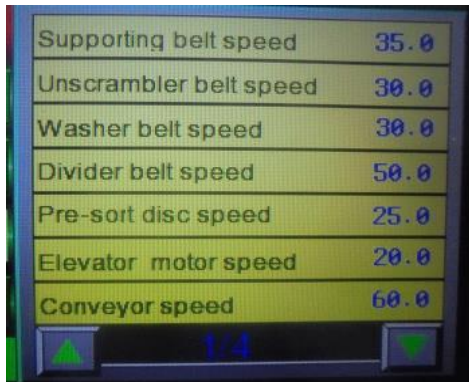
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5.3.8 After "RECIPIE" press the "PARAMETER" key and HMI will display :



NOTE : "PARAMETER" has three pages displayed as 1/4 , 2/4 , 3/4 , 4/4. we can switch into different pages by pressing Δ ∇ . Each of the parameter displayed (numeric value) can be edited. Press the number and key pad will be displayed which will help in entering the value, then press "ENTER".

5.3.9 To set the "PASSWORD" press the key and HMI will display:-

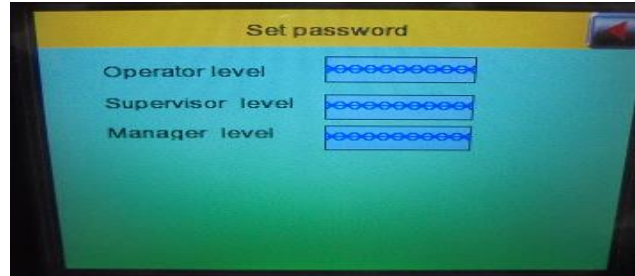


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NOTE: We have three phase password protection as displayed in picture.

- 5.3.10 Press “WATCH” to check any alarm in “ALARM DISPLAY” and input and output signal working/ not working in INPUT CHECK and OUTPUT CHECK.
- 5.3.11 Further the guide track guides the empty bottles to travel in the right path. During the travel the bottles should be in horizontal position and facing its bottom face. Opposite traveling bottle are rotated by the hook and made straight ,further the bottle guide (Round Teflon ring) directs the bottle to form its right way for further traveling.
- 5.3.12 The “T” shaped bottle rotating assembly tilts the bottle upside down for air jet cleaning. The air purging unit blows the fresh air inside the bottle where on the other side the vacuum unit sucks the dust particles from the bottle and the sucked dust particles are collected in the vacuum filter provided on the left side of the air jet cleaner unit.
- 5.3.13 The cleaned bottles travel to the slide assembly where a plate in between changes the reverse direction of the bottles making it straight and allows the bottle to get discharge the collection bin.
- 5.3.14 After bottle cleaning press the stop key in the HMI to stop the operation. Switch off the main supply switch on the control panel to in – activate the machine operating panel.
- 5.3.15 Switch off the mains from the main junction box which will cut off the electric power from the MACHINE.

6.0 ABBREVIATION (S):

- 6.1 SOP - Standard Operating Procedure
- 6.2 HMI - Human Machine Interface
- 6.3 IPA – Isopropyl alcohol
- 6.4 v/v- Volume by Volume

7.0 RERERENCE (S)



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7.1 SOP No.: Making entries in equipment usage and cleaning log sheet.

7.2 SOP No.: Cleaning of production area.

8.0 ANNEXURE (S):

8.1 Nil

9.0 DISTRIBUTION:

9.1 **Master Copy** : Quality Assurance

9.2 **Controlled Copy (S)** : Production Department (01), Quality Assurance (01)

9.3 **Reference Copy (S)** : Production Department (01), Store Department (01)

10.0 REVISION HISTORY:

S.No.	Version No.	Change Control No.	Reason (s) For Revision	Details Of Revision	Effective Date