

PRODUCTION DEPARTMENT

STANDARD OPERATING PROCEDURE

Title: Operation and Cleaning of Hi-Cart Plus Cartoning Machine

SOP No.:		Department:	Production
SOP No.:		Effective Date:	
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1.0 OBJECTIVE:

To lay down a Procedure for Operation and Cleaning of Hi-Cart plus Cartooning Machine.

2.0 SCOPE:

This SOP is applicable for Operation and Cleaning of Hi-Cart plus Cartooning Machine (Make: ACG Pampac) used in LVP Line.

3.0 RESPONSIBILITY:

Officer / Executive-Production

4.0 ACCOUNTABILITY:

Head Production

5.0 ABBREVIATIONS:

SOP Standard Operating Procedure

No. Number

QA Quality Assurance
IPA Iso Propyl Alcohol
BPR Batch Packing Record
HMI Human Machine Interface

6.0 PROCEDURE:

6.1 PRECAUTION:

- **6.1.1** Line Clearance shall be taken by Production (Packing) Officer / Executive & given by QA Officer / Executive prior to start up of the Hi Cart plus Machine.
- **6.1.2** Do not rush while running the Machine to avoid any accidental injury or Packing of substandard bottle / Cartons / Leaflet.
- **6.2 INSTRUCTIONS:** The machine starting, stopping and controlled from the HMI.

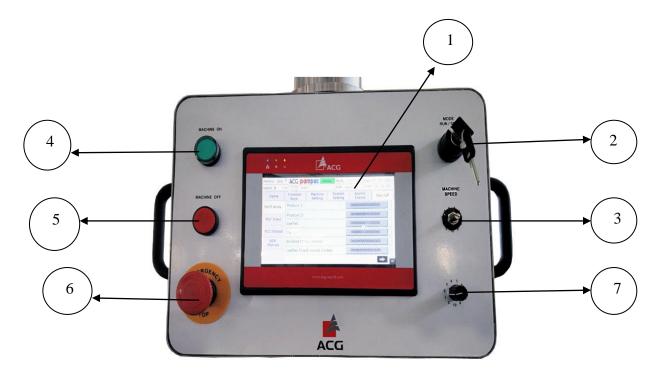


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- **1. HMI Touch Screen:** Displays the messages and used to operate the machine. The individual Functions are activated by touching the buttons on the HMI screen.
- **2. Key Switch:** Two operating modes can be operating by Key switch.
- 3. Speed knob: This is used for machine drive speed control from zero to maximum.
- **4. Machine Start Button:** This button is used to start the machine once the machine is ready for Automatic run or production runs.
- **5. Machine Stop Button:** This button is used to stop the machine under the normal circumstances. Machine stops after the completion of cycle.
- **6. Emergency Stop Button:** Used to stop the machine in dangerous situations. The machine stops Immediately without completing the current operating cycle.
- **7. Conveyor Speed Knob (Optional):** Used to vary the speed of the upstream machine output Conveyor.

6.3 **OPERATION:**

- **6.3.1** Switch "ON" the Control Switch of the Machine.
- **6.3.2** Open the Compressed Air Valve & adjust the Compressed Air Pressure 6.0 to 6.5 Kg/cm².



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- **6.3.3** Select login on HMI and enter user and password.
- **6.3.4** Turn the knob on control panel to SET mode to set the machine.
- **6.3.5** Feed the required Unit Cartons in the Carton Magazine (the direction of carton will be as the carton pasting side will be in back side of the magazine).
- **6.3.6** Feed the required Leaflet in the Leaflet Magazine as per applicability (the direction of leaflet will be as the folding close side will be in back side of the magazine)
- **6.3.7** Feed the visually inspected good bottles to the machine for packing with uniform direction as per the direction of carton.
- **6.3.8** Fix the Rubber Stereo in Printing Block with the help of both side adhesive tapes.
- **6.3.9** Select the function key option in HMI.
- **6.3.10** Set the machine as per pack size, carton coding setting (Check the counter reading and note in the BMR).
- **6.3.11** Turn the knob of the Set Mode to the Run Mode and press the "Machine On".
- **6.3.12** Check the Batch Coding details on Unit Carton & get it approved from Packing Supervisor, Production Officer & QA officer before running the Machine.
- **6.3.13** After cartooning the bottles, Unit Cartons comes out on Conveyor Belt where Air Jet has been provided to displace empty Carton if it comes.
- **6.3.14** Individual packed Carton will be checked for Batch Coding details and any damage.
- **6.3.15** Keep the Packed Cartons in corrugated boxes.
- **6.3.16** After completion of the packing again take the counter reading and confirm the packed quantity and record in BPR.

6.4 CLEANING:

- **6.4.1** After completion of Packing Operation remove the excess Packing Material from the Packing line and Machine. Return the excess material with MR note to store.
- **6.4.2** Collect the Rejected Cartons in separate crate or Poly Bag.
- **6.4.3** Count the Rejected Cartons and record in the BPR.
- **6.4.4** Put the Status Label "TO BE CLEANED" on the Machine.



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- **6.4.5** Transfer the Finished Goods to the Finished Goods Store.
- **6.4.6** Remove the Stereos from the Machine and hand over the Production Officer/Executive for verification and destruction in presence of QA Officer / Executive.
- **6.4.7** Run the Machine for cleaning.
- **6.4.8** Remove the side panels of the machine and clean the machine properly and confirm the removal of all rejected leaflets and cartons from the machine (Use Compressed Air to clean the inner side of the Machine).
- **6.4.9** Check the Machine and Area for remnant of the Preceding batch.
- **6.4.10** Clean the surface of the Machine with the 70% IPA.
- **6.4.11** Clean the area by Moping.
- **6.4.12** Put the Status Label "CLEANED" on the Machine.
- 7.0 ANNEXURES:

Not Applicable

ENCLOSURES: SOP Training Record

- **8.0 DISTRIBUTION:**
 - Controlled Copy No. 01 Quality Assurance Department
 - Controlled Copy No. 02 Production Department
 - Master Copy Quality Assurance Department
- 9.0 **REFERENCES**:

Not Applicable

10.0 REVISION HISTORY:

CHANGE HISTORY LOG

Revision No.	Changes Control No.	Details of Changes	Reason for Change	Effective Date	Updated By