

# INSTALLATION QUALIFICATION PROTOCOL CUM REPORT FOR AUTOMATIC SELF ADHESIVE HORIZONTAL LABELING

**MACHINE** 

PROTOCOL No.:

# INSTALLATION QUALIFICATION PROTOCOL CUM REPORT FOR AUTOMATIC SELF ADHESIVE

HORIZONTAL LABELLING MACHINE

EQUIPMENT ID. No.	
LOCATION	Packing Hall
DATE OF QUALIFICATION	
SUPERSEDE PROTOCOL No.	NIL



# INSTALLATION QUALIFICATION PROTOCOL CUM REPORT FOR AUTOMATIC SELF ADHESIVE HORIZONTAL LABELING

PROTOCOL No.:

### **PROTOCOL CONTENTS**

**MACHINE** 

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#### **FOR**

## AUTOMATIC SELF ADHESIVE HORIZONTAL LABELING MACHINE

PROTOCOL No.:

### 1.0 PROTOCOL PRE – APPROVAL:

#### PREPARED BY:

DESIGNATION	NAME	SIGNATURE	DATE
OFFICER/EXECUTIVE (QUALITY ASSURANCE)			

#### **REVIEWED BY:**

DESIGNATION	NAME	SIGNATURE	DATE
OPERATING MANAGER (QUALITY ASSURANCE)			
HEAD (ENGINEERING)			

#### **APPROVED BY:**

DESIGNATION	NAME	SIGNATURE	DATE
HEAD (PRODUCTION)			



### **FOR**

### AUTOMATIC SELF ADHESIVE HORIZONTAL LABELING MACHINE

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#### 2.0 OBJECTIVE:

- To provide documented evidence for the Installation Qualification of Automatic Self Adhesive Horizontal Labeling machine.
- To confirm that the equipment and its components are installed as per the Specifications mentioned in the design qualification document and other requirements given by supplier.

#### 3.0 SCOPE:

- The scope of this installation qualification protocol cum report is limited to qualification of Automatic Self Adhesive Horizontal Labeling machine (Make: .........) to be installed in packing hall.
- This document provides all the relevant information related to specification, installation checks and acceptance criteria to be required to perform installation qualification activity of Automatic External Ampoules Washing, Drying & Self Adhesive Labeling Machine.



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## AUTOMATIC SELF ADHESIVE HORIZONTAL LABELING MACHINE

### 4.0 **RESPONSIBILITY:**

The Validation Group, comprising of a representative from each of the following departments shall be responsible for the overall compliance of this Protocol cum Report:

DEPARTMENTS	RESPONSIBILITIES		
	Preparation, Review, Authorization and Compilation of the Installation     Qualification Protocol cum Report.		
Quality Assurance	Co-ordination with Production and Engineering to carryout Installation     Qualification.		
	<ul> <li>Monitoring of Installation Qualification Activity.</li> <li>Post approval of Installation qualification Protocol cum Report after execution.</li> </ul>		
Production	<ul> <li>Review &amp; Pre Approval of Installation Qualification Protocol cum Report.</li> <li>To Co-ordinate and support for Execution of Qualification study as per Protocol.</li> <li>Post Approval of Installation Qualification Protocol cum Report after Execution.</li> </ul>		
Engineering	<ul> <li>Review &amp; Pre Approval of Installation Qualification Protocol cum Report.</li> <li>Co-ordination, Execution and technical support in Installation Qualification Activity.</li> <li>Responsible for Trouble Shooting (if occurs during execution).</li> <li>Post Approval of Installation Qualification Protocol cum Report after Execution.</li> </ul>		



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### AUTOMATIC SELF ADHESIVE HORIZONTAL LABELING MACHINE

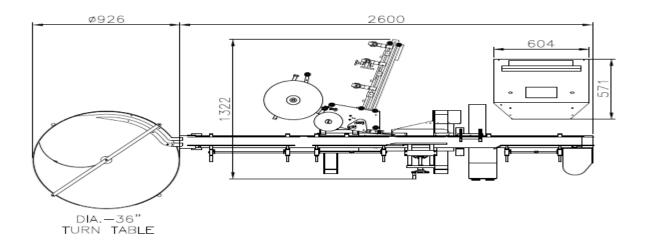
### 5.0 EQUIPMENT DETAILS:

<b>Equipment Name</b>	Automatic Self Adhesive Horizontal Labeling machine	
Equipment ID.		
Manufacturer's Name		
Machine No.		
Model No.		
Capacity	200-250 label per Minute	
Supplier's Name	Aseptic Technology inc.	
Location of Installation	Packing Hall	

#### **6.0 SYSTEM DESCRIPTION:**

This machine is designed to give High Output of Labeling on Bottle. After inspection the Bottle are loaded on In-feed turn table. From in feed turn table, Bottle entered in to infeed conveyor belt. Before the discharge the label device is positioned. Label device having a Printer for printing of batch no/mfg. date/expiry date & then camera system to inspect the printing matter OCR, Pharma code, Barcode etc. & once camera inspect the matter & if found any error then same Bottle with Rejected label is collected into a Box provided for rejected Bottle. The label applicator gets activated as soon as Bottle comes in the position of label; it gets sticks on the Bottles. After this, Bottles move toward the pressing belt meant for proper fixing of label. After pressing of the labels, good Bottles are move forward for further process

### **GA** of Automatic Self Adhesive Horizontal Labelling machine





**MACHINE** 

### FOR AUTOMATIC SELF ADHESIVE HORIZONTAL LABELING

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### 7.0 PRE – QUALIFICATION REQUIREMENTS:

#### **7.1** Verification of Documents:

- Executed and approved design qualification document.
- Technical specification of equipment.
- MOC Certificate of components.

#### 7.1.1 Procedure:

- Verify the above mentioned documents for availability, completeness and approval status
- If any deviation is observed the same has to be recorded giving reasons for deviation and approved.

  Deviation should be approved by Authorized person.
- Approved Drawings and supporting documents would form a part of the IQ Protocol cum Report.

#### 7.1.2 Acceptance Criteria:

• All the documents should be available, complete and approved by respective authorities.



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### AUTOMATIC SELF ADHESIVE HORIZONTAL LABELING MACHINE

### 8.0 CRITICAL VARIABLES TO BE MET:

### 8.1 Installation Qualification Checklist:

INSTALLATION CHECKS	ACCEPTANCE CRITERIA	OBSERVATION	OBSERVED BY (ENGINEERING) SIGN/DATE
Grouting and	Should be properly grouted		
Mounting	and mounted.		
Leveling	Should be properly balanced		
	and leveled.		
Edges of parts	Metal parts should be		
	properly ground without any		
	sharp edges.		
Welding of Joints	Welding of joints should be		
	without any welding burrs.		
Place of Installation	Packing Hall		
<b>Room Condition</b>	General Room Conditions.		
Illumination	NLT 300 Lux		
Working space	Should be sufficient for easy		
around the	operation, cleaning,		
Equipment.	sanitation and maintenance.		

	sanitation and maintenance.		
Checked By Production Sign/Date:		Verified I Quality A Sign/Date	
Inference:			
		Reviewed	By
		Manager (	QA
		Sign/Date	



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## AUTOMATIC SELF ADHESIVE HORIZONTAL LABELING MACHINE

### **8.2** Technical Specification:

CRITICAL VARIABLES	ACCEPTANCE CRITERIA	OBESERVATION	OBSERVED BY (ENGINEERING) SIGN/DATE
Equipment	THIDN TADLE		
Name	TURN TABLE		
Make	Aseptic Technology Inc.		
Machine No	TT-103/01/17-18		
Capacity	36"		
MOTOR			
Make	BONFIGLIOLI		
Model	BN71B4		
RPM	1370RPM		
Volts	0.37 Kw		
Sr. No.			
GEAR BOX			
Make	BONFIGLIOLI		
Model	W63UFC1 100 P71B5 B3		
Ratio	100:1		
Sr. No.			
AC DRIVE			
Make	ALLEN-BRADLEY		
Model	22F-A2P5N103		
Specification	0.5HP, 1PH TO 3PH.		
Sr. No.			
MCB			
Make	HAGER		
Model	NCN206N		
Specification	C6		
ACTUATOR			
Make	SCHNEIDER		
Model	BLACK		



### **FOR**

## AUTOMATIC SELF ADHESIVE HORIZONTAL LABELING MACHINE

CRITICAL VARIABLES	ACCEPTANCE CRITERIA	OBESERVATION	OBSERVED BY (ENGINEERING) SIGN/DATE
Specification	230VAC		
SPEED POT			
Make			
Model	10ΚΩ		
LABELING MA	CHINE		
Equipment	Automatic Self Adhesive		
Name	Horizontal Labeling		
	machine		
Make	Aseptic Technology Inc.		
Model	200-250 Label Per Minute		
Capacity	SL-501/02/17-18		
Sr. No.			
MOTOR (Main	Conveyer)		
Make	BONFIGLIOLI		
Model	BN63B4		
RPM	1320RPM		
Volts	0.18 kw		
Sr. No.			
GEAR BOX (Ma	nin Conveyor)		
Make	BONFIGLIOLI		
Model	VF44F1 28 P63B5B3		
Ratio	28:1		
Sr. No.			
MOTOR (Pressi	ng Belt)		I
Make	BONFIGLIOLI		
Model	BN63B4		
RPM	320RPM		
Volts	0.18 kw		
Sr. No.			
GEAR BOX (pre	essing belt)		1



### **FOR**

## AUTOMATIC SELF ADHESIVE HORIZONTAL LABELING MACHINE

CRITICAL VARIABLES	ACCEPTANCE CRITERIA	OBESERVATION	OBSERVED BY (ENGINEERING) SIGN/DATE
Make	BONFIGLIOLI		
Model	VF30F1 7 P63B5B3		
Ratio	7:1		
Sr. No.			
MOTOR (feeder)	)	1	<b>L</b>
Make	PANASONIC		
Model	M8MX25G4YGA		
RPM	1350RPM		
Watts	25 watts		
GEAR BOX (Fee	eder)		<b> </b>
Make	PANASONIC		
Model	MX8G30B		
Ratio	30:1		
MOTOR (pusher	•)		
Make	PANASONIC		
Model	M8MX25G4YGA		
RPM	1350RPM		
Watts	25 watts		
GEAR BOX (pus	sher)		
Make	PANASONIC		
Model	MX8G30B		
Ratio	30:1		
SERVO MOTOR	<u> </u>	1	<b>L</b>
Make	ALLEN BRADLEY		
Model	TL-A2540P-BJ32AA		
RPM	0.86KW		
Volts	5000RPM		
Sr. No.			
SERVO GEAR E	BOX		<u> </u>
Make	SHIMPO		
L		1	1



### **FOR**

## AUTOMATIC SELF ADHESIVE HORIZONTAL LABELING MACHINE

CRITICAL VARIABLES	ACCEPTANCE CRITERIA	OBESERVATION	OBSERVED BY (ENGINEERING) SIGN/DATE
Model	VRSF-5C-19DB19		
Ratio	5:1		
AC DRIVE (mai	in conveyor)		
Make	ALLEN BRADLEY		
Model	22F-D2P5N103		
Specification	1НР,3РН ТОЗРН		
Sr. No.			
AC DRIVE (pres	ssing belt)		
Make	ALLEN BRADLEY		
Model	22F-A2P5N103		
Specification	0.5HP,1PH TO 3PH		
Sr. No.			
AC DRIVE (feed	ler)		
Make	ALLEN BRADLEY		
Model	22F-A2P5N103		
Specification	0.5HP,1PH TO 3PH		
Sr. No.			
AC DRIVE (pus	her wheel)		L
Make	ALLEN BRADLEY		
Model	22F-A2P5N103		
Specification	0.5HP,1PH TO 3PH		
Sr. No.			
SERVO DRIVE			
Make	ALLEN BRADLEY		
Model	2071-AP8		
Specification	800WATT.		
Sr. No.			
MODE BUS MO	DULE WITH 485		
Make	ALLEN BRADLEY		
Model	1763-NC01		



### **FOR**

## AUTOMATIC SELF ADHESIVE HORIZONTAL LABELING MACHINE

CRITICAL VARIABLES	ACCEPTANCE CRITERIA	OBESERVATION	OBSERVED BY (ENGINEERING) SIGN/DATE
Specification	24VDC.		
SINK/SOURCE	INPUT MODULE		
Make	ALLEN BRADLEY		
Model	1762-IQ8		
Specification	24VDC.		
Sr. No.	217M6HR5LQ		
OUTPUT MOD	ULE		l
Make	ALLEN BRADLEY		
Model	1762-OW8		
Specification	24VDC.		
Sr. No.	217M6HN3HI		
SMPS (PLC)			I
Make	OMRON		
Model	S8VK-C12024		
Specification	24VDC, 5 AMP.		
SMPS (CAMER			
Make	OMRON		
Model	S8FS-C01512J		
Specification	12VDC,1.3 AMP.		
RELAY CARD	(8 CHANNEL)		
Make	PHOENIX		
Model	PC24D08-C0B		
Specification	24VDC		
SSR			
Make	UNISON		
Model	807 PMDD 100 08 01		
Specification	8AMP,		
SSR card			
Make	UNISON		
Model	704-B PMDD 200 05 00		
Specification	5AMP,		



### **FOR**

## AUTOMATIC SELF ADHESIVE HORIZONTAL LABELING MACHINE

CRITICAL VARIABLES	ACCEPTANCE CRITERIA	OBESERVATION	OBSERVED BY (ENGINEERING) SIGN/DATE	
Actuator	SCHNEIDER			
Emergency stop	SCHNEIDER			
1way box	TEKNIC			
Transformer	KAMO CARE			
Tower light	MENICS			
Air pressure switch	DANFOSS			
Sensor (label roll empty)	PANASONIC			
Sensor (no vial feeder stop)	PANASONIC			
Sensor (vial jam feeder stop)	PANASONIC			
Sensor (rejection bin full)	PANASONIC			
Sensor (fallen vial)	PANASONIC			
Sensor (ref. For rejection)	PANASONIC			
Sensor (no vial no label)	PANASONIC			
Sensor (vial present at rejection station)	PANASONIC			
Sensor ( label gap)	LEUZE			
Sensor (printer trigger)	LEUZE			
Sensor (camera trigger)	LEUZE			
Sensor (vial at in feed Rej. Bin)	LEUZE			
Sensor (good vial counting)	BANNER			
Sensor (label detection 1&2)	LEUZE			
ENCODER (REJECTION)				
Make	BAUMER			
Model	EIL580-SC10.5LN.05000.A			



### **FOR**

## AUTOMATIC SELF ADHESIVE HORIZONTAL LABELING MACHINE

CRITICAL VARIABLES	ACCEPTANCE CRITERIA	OBESERVATION	OBSERVED BY (ENGINEERING) SIGN/DATE
Specification	5000PPR		
Sr. No.	700001694507		
<b>ENCODER (PRI</b>	NTER)		
Make	PEPPERL + FUCHS		
Model	RVI 58N-032K5R66N- 02500		
Specification	2500PPR		
Sr. No.	4000005/4600603		
CAMERA SYST	EM		
Make	IMAGING SOURCE		
Model	DMK 23G618		
Sr. No.	06710807		
PRINTER	,		
Make	HSAJET		
Model	TCUF		
Power	100-240VAC		
FRL	SMC		
Buzzer cum flasher	MIMIC		
Valve (rejection)	SMC		
Cylinder (rejection)	SMC		
<b>COMPUTER SY</b>	STEM		
MAKE	DELL		
ТҮРЕ	Microsoft windows 7 (32 Bit) professional License OS		
PLC			
Туре	PLC with color HMI touch		
	Screen		
Make	ALLEN BRADLEY		
Model	1766-L32BXB		



### **FOR**

## AUTOMATIC SELF ADHESIVE HORIZONTAL LABELING MACHINE

CRITICAL VARIABLES	ACCEPTANCE CRITERIA	OBESERVATION	OBSERVED BY (ENGINEERING) SIGN/DATE
Sr. No.	48890633		
Volt	24VDC.		
HMI			
Make	ALLEN BRADLEY		
Model	2711P-T6C20D8		
Power Supply	24VDC.		
Sr. No	2711P-T6C20D8		
Other Feature			
Fault Indication	Fault is indicated in HMI		
System	screen.		
Gear Box	Make Bonfiglioli gear box with motor for machine.		
User Friendly	Machine can be easily set for other size of Bottles.		
Vision System	Vision System for Barcode (1D/2D) / Pharma code / Printed matter like Batch no., Mfg. Date, Exp. Date and MRP (1.2mm Font). (All above mention matter to be check within 50mm x 50mm area).		



### **FOR**

## AUTOMATIC SELF ADHESIVE HORIZONTAL LABELING MACHINE

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CRITICAL VARIABLES	ACCEPTANCE CRITERIA	OBESERVATION	OBSERVED BY (ENGINEERING) SIGN/DATE
	Ink Jet Printer (HSAJET)		
	(Make : HP) (Window for		
Printer	Batch Printing in case of		
Finter	laminated / Glossy Labels) –		
	For 8 Line Printing, Two		
	head Printer.		
	Pneumatic Container		
	Rejection Device for		
Optional	Rejecting of Container if		
Accessories	BAR CODE / PHARMA		
	CODE / OCR / OCV is not		
	present/wrong.		

Checked By Production Sign/Date:	Verified By Quality Assurance Sign/Date:
Inference:	
	Reviewed By Manager QA Sign/Date:



PROTOCOL No.:

Sign/Date:....

### **FOR**

### AUTOMATIC SELF ADHESIVE HORIZONTAL LABELING MACHINE

#### **8.3** PLC INPUT / OUTPUT SPECIFICATIONS:

INPUT	DESCRIPTION	OBSERVATION	OUTPUT	DESCRIPTION	OBSERVATION
X0	Gap sensor		Y0	Servo enable	
X1	No vial no label sensor		Y1	Rejection solenoid valve	
X2	Camera output		Y2	Servo start indexing	
X3	End of sequence		Y3	Spare	
X4	Encoder a channel		Y4	Servo drive fault reset	
X5	Encoder b channel		Y5	Main conveyor	
X6	Vial at infeed rejection bin sensor		Y6	Pressing belt drive	
X7	Vial jam feeder stop		Y7	Feeder drive	
X8	Power failure		Y8	Hooter	
X9	Spare		Y9	Index 0 select input	
X10	Vial present at rejection station		Y10	Spare	
X11	Air pressure switch		Y11	Inching index 2 select	
X12	Emergency stop		Y12	Spare	
X13	Rejection bin full		Y13	Red light	
X14	Label roll empty		Y14	Yellow light	
X15	Vial present at fallen vial sensor		Y15	Green light	
X16	Fallen vial sensor		Y16	Spare	
X17	Spare		Y17	Spare	
X18	Good vial counting sensor		Y18	Pusher wheel drive	
X19	Spare				
X20	Label detection sensor -1				
X21	Printer stop machine stop				
X22	No vial feeder stop sensor				
X23	Camera stop machine stop				
X24	Spare				
X25	Spare				
X26	Label detection sensor -2				
X27	Reference sensor for rejection				

Checked By Production Sign/Date:	Verified By Quality Assurance Sign/Date:
Inference:	
	Reviewed By Manager QA



### **FOR**

### AUTOMATIC SELF ADHESIVE HORIZONTAL LABELING MACHINE

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### **8.4 LOGICAL SECURITY SPECIFICATIONS:**

S. No.	USER GROUP NAME	RIGHTS & AUTHORIZATION	Observation	OBSERVED BY (ENGINEERING) SIGN/DATE
1	Administrator	All rights		
2	Manager	Change in the process parameters, Operation, Recipe Creation, Deletion & edit, Print reports		
3	Supervisor	Operation, Variable parameters change, Print report, Recipe download, alarm ack.		
4	Maintenance	I/O list		
5	Operator	Operation, print reports alarm acknowledge		

Checked By Production Sign/Date:	Verified By Quality Assurance Sign/Date:
Inference:	
	Reviewed By Manager QA Sign/Date:



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# AUTOMATIC SELF ADHESIVE HORIZONTAL LABELING MACHINE

### **8.5 MATERIAL OF CONSTRUCTION:**

COMPONENT	МОС	OBESERVATION	OBSERVED BY (ENGINEERING) SIGN/DATE
Machine frame	MS. Angle Duly Cladded with		
structure	SS.304 Sheet		
External cladding	SS 304, (No Painted Surface)		
Star Wheel	Aluminum Casting		
In Feed & Out worm	Delrin		
In Feed Tray	SS 304		
Out Feed Tray	SS 304		

Checked By Production Sign/Date:	Verified By Quality Assurance Sign/Date:
Inference:	
	Reviewed By Manager QA Sign/Date:



PROTOCOL No.:

### **FOR**

## AUTOMATIC SELF ADHESIVE HORIZONTAL LABELING MACHINE

8.6	Safety	<b>Feature:</b>
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CRITICAL VARIABLES	ACCEPTANCE CRITERIA	OBSERVATION	OBSERVED BY (ENGINEERING) SIGN/DATE
	Welding of joints without any		
Joints	welding burrs.		
	All the metal parts should be		
Metal Parts	Properly grounded without any		
	sharp Edges.		
Leveling and	Equipment should be properly		
Balancing	balanced & leveled.		
Earthing	Proper Earthing should be		
	provided.		
	Sticker Sensor senses the presence		
	of container for labeling.		
Sensor	Label Sensor sense the presence of		
	upcoming label for labeling.		

Checked By Production Sign/Date:	Verified By Quality Assurance Sign/Date:
Inference:	
	Reviewed By
	(Manager QA) Sign/Date:



PROTOCOL No.:

### **FOR**

### AUTOMATIC SELF ADHESIVE HORIZONTAL LABELING **MACHINE**

### 8.7 Utility Verification List:

CRITICAL VARIABLES	ACCEPTANCE CRITERIA	OBSERVATION	OBSERVED BY (ENGINEERING) SIGN/DATE
	Voltage : 415 V (±10		
<b>Electrical Supply</b>	%)		
Electrical Supply	Phase : 3 Phase		
	Frequency: 50 HZ		
Compressed Air	4 Kg/Cm <sup>2</sup>		
Power Requirement	2.5 H.P		

Checked By Production Sign/Date:	Verified By Quality Assurance Sign/Date:	
Inference:		
	Reviewed By Manager QA Sign/Date:	



PROTOCOL No.:

## AUTOMATIC SELF ADHESIVE HORIZONTAL LABELING MACHINE

#### 9.0 REFERENCES:

- Validation Master Plan
- Design Qualification Documents
- P & ID, Utility, and GA Drawing
- WHO Essential Drugs and Medicines Policy, QA of Pharmaceuticals, Vol-2-Good Manufacturing Practices and Inspection.

#### **10.0 DOCUMENTS TO BE ATTACHED:**

- Certificate of MOC.
- Any other Relevant Document

11.0	DEVIATION FROM PRE-DEFINED SPECIFICATION, IF ANY:
12.0	CHANGE CONTROL, IF ANY:
13.0	REVIEW (INCLUSIVE OF FOLLOW UP ACTION, IF ANY):
14.0	CONCLUSION:



### **FOR**

### PHARMA DEVILS AUTOMATIC SELF ADHESIVE HORIZONTAL LABELING MACHINE

PROTOCOL No.:			

			MACHINE	
15.0	RECOMM	ENDAT	ION:	
		• • • • • • • • • • • • • • • • • • • •		
	•••••	• • • • • • • • • • • • • • • • • • • •		
16.0	ABBREVI	ATIONS	<b>:</b>	
	cGMP	:	Current Good Manufacturing Practice	
	CI.	:	Cast Iron	
	DQ	:	Design Qualification	
	HP	:	Horse Power	
	Hr	:	Hour	
	Hz	:	Hertz	
	IQ	:	Installation Qualification	
	Kg	:	Kilogram	
	KW	:	Kilo Watt	
	mm	:	Millimeter	
	MMI	:	Man Machine Interface	
	MOC	:	Material of Construction	
	MS	:	Mild Steel	
	No	:	Number	
	RPM	:	Revolution per minute	
	SS	:	Stainless steel	
	VFD	:	Variable Frequency Drive	
	WHO	:	World Health Organization	



#### **FOR**

### AUTOMATIC SELF ADHESIVE HORIZONTAL LABEL **MACHINE**

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PROTOCOL No.:

### 17.0 PROTOCOL POST -APPROVAL:

PREPARED BY:

DESIGNATION	NAME	SIGNATURE	DATE
OFFICER/EXECUTIVE (QUALITY ASSURANCE)			

#### **REVIEWED BY:**

DESIGNATION	NAME	SIGNATURE	DATE
OPERATING MANAGER (QUALITY ASSURANCE)			
HEAD (ENGINEERING)			

#### **APPROVED BY:**

DESIGNATION	NAME	SIGNATURE	DATE
HEAD (PRODUCTION)			