



**FACTORY ACCEPTANCE TEST FOR AUTOMATIC SELF ADHESIVE VERTICAL LABELLING MACHINE**

MACHINE NAME : AUTOMATIC SELF ADHESIVE VERTICAL LABELLING MACHINE

MODEL NO. : .....

CLIENT NAME & ADDRESS : .....

DOCUMENT NAME : FACTORY ACCEPTANCE TEST

DOCUMENT NO. : .....

MACHINE SR. NO. : .....

REVISION NO. : 00

WORK ORDER NO. : .....

P.O.NO. & DATE : .....



**FACTORY ACCEPTANCE TEST FOR AUTOMATIC SELF ADHESIVE VERTICAL LABELLING MACHINE**

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**1.0 SYSTEM DESCRIPTION:**

**LABEL DISPENSING DEVICE:**

Machine works on the basic Principle of to apply coded sticker label on Vial. There is one contact less sensor which senses the presence of Vial and sends the signal to Label dispenser. After receiving signal, Label dispenser release one label for coding and fixing on the Vials. Total control of label dispensing device is on servo motor, servo drive, Vial sensor and label (gap) sensor.

**PRESSING DEVICE:**

It works on the basic Principle to press the sticker label on the Vial, which is previously applied by the label dispensing device. When sticker label is applied the applicator simultaneously Vial enters in to the pressing belt assembly and it will start rotating between the pressing belt and pressing pad. This allows the label to stick firmly on Vial and resulting wrinkle free labeling.

**VIAL FEEDING ASSEMBLY:**

It works on the basic Principle of to break the linear motion of the Vial to keep the precise distance between the two Vials.

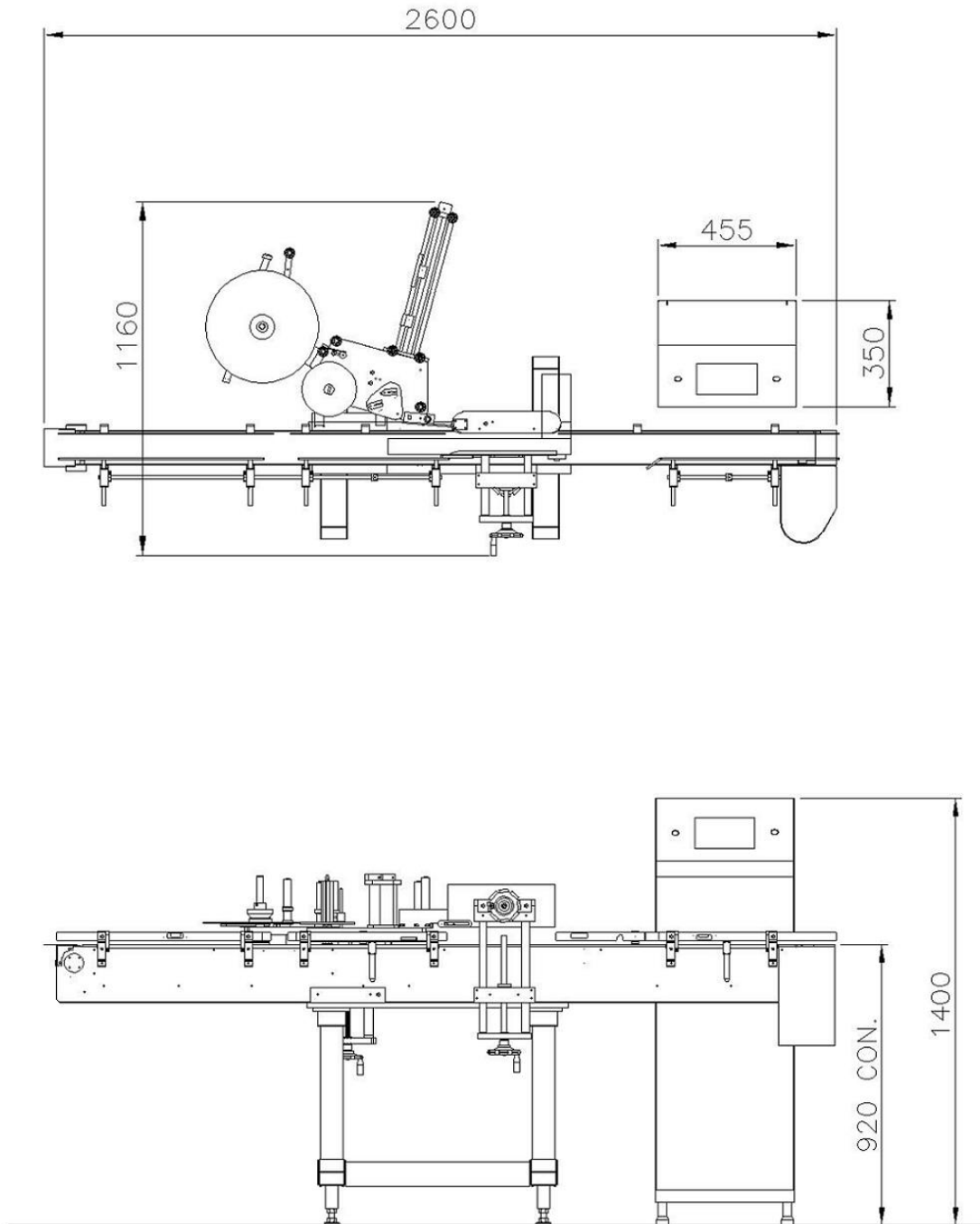
**CONVEYOR BELT ASSEMBLY:**

It works on the basic Principle to deliver the desired quantity of Vial to feeding Roller assembly by linear movement (Left to Right) of Delrin conveyor belt between the two Nylon chain wheels. The % speed can increase or decrease by in HMI. This is provided on the control panel of the machine.



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**2.0 SCHEMATIC DIAGRAM:**



THERE MAY BE  $\pm 20$  MM VARIATION IN MENTION DIMENSIONS



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**3.0 SYSTEM CHECKS:**

**3.1 PHYSICAL CHECKS:**

<b>METHOD</b>	<b>DESCRIPTION</b>	<b>ACCEPTANCE CRITERIA</b>	<b>OBSERVATION</b>	<b>SIGN/DATE</b>
Outer Surface finish Verification	Check Outer surface of machine	-Matt finish -Curved corner -No dent -No visible spot of welding.		
Document Verification	Verification of Wiring diagram	-As per wiring diagram attached in FAT.		
Document Verification	Verification of Input / Output connection	-As per input / output list mention in DQ.		
Document Verification	Verification of MOC certificate	-MOC of all contact and component mentioned in BOM or test certificate from manufacturer /accredited test lab.		
Panel Positioning verification	Panel positioning	Control panel positioning is assessable and at standard visible height.		
Machine Dimension	Verification with machine	As per attached Layout drawing in FAT.		



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**3.2 MECHANICAL DRAWING VERIFICATION:**

S.No.	DRAWING NAME	DRAWING No.	OBSERVATION	SIGN/DATE
1.	MACHINE LAYOUT	001		
2.	TROLLEY BASE ASSEMBLY	002		
3.	CONVEYOR ASSEMBLY	003		
4.	MESSAGE PAD ASSEMBLY	004		
5.	PRESSING DEVICE ASSEMBLY	005		
6.	RUBBER ROLLER ASSEMBLY	006		
7.	LABEL APPLICATOR ASSEMBLY	007		



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**3.3 ELECTRICAL DRAWING:**

S.No.	DRAWING NAME	DRAWING No.	OBSERVATION	SIGN/DATE
1.	POWER DISTRIBUTION CONNECTION DIAGRAM-1	001		
2.	RELAY CARD & SSR CONNECTION DIAGRAM	002		
3.	PLC INPUT TERMINAL CONNECTION DIAGRAM	003		
4.	PLC OUTPUT TERMINAL CONNECTION DIAGRAM	004		
5.	SERVO INTERPHASE CONNECTION DIAGRAM	005		
6.	AC DRIVE CONNECTION DIAGRAM	006		
7.	TERMINAL-1 & 2 CONNECTION DIAGRAM	007		
8.	JUNCTION BLOCK CONNECTION DIAGRAM	008		



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**3.4 COMPONENT VERIFICATION:**

S.No.	Item	Make	Model	Specification	Serial no.	Meet Yes/No	Sign
1.	MOTOR (CONVEYOR)	BONFIGLIOLI	BN63B4	0.18KW,1320RPM			
2.	GEAR BOX (CONVEYOR)	BONFIGLIOLI	VF44F1 28 P63B5B3	RATIO-28:1			
3.	MOTOR (PRESSING BELT)	BONFIGLIOLI	BN63B4	0.18KW,1320RPM			
4.	GEAR BOX (PRESSING BELT)	BONFIGLIOLI	VF30F1 7 P63B5B3	RATIO-7:1			
5.	MOTOR (FEEDER)	PANASONIC	M8MX25G4Y GA	25WATT,1350RPM			
6.	GEAR BOX (FEEDER)	PANASONIC	MX8G30B	RATIO-30:1			
7.	SERVO MOTOR	ALLEN BRADLEY	TL-A2540P- BJ32AA	0.86KW,5000RPM			
8.	SERVO GEAR BOX	SHIMPO	VRSF-5C- 19DB19	RATIO-05:1			
9.	AC DRIVE (CONVEYOR)	ALLEN BRADLEY	22F- A2P5N103	0.5HP,1PH TO 3PH			
10.	AC DRIVE (FEEDER)	ALLEN BRADLEY	22F- A2P5N103	0.5HP,1PH TO 3PH			
11.	AC DRIVE (PRESSING BELT)	ALLEN BRADLEY	22F- A2P5N103	0.5HP,1PH TO 3PH			
12.	SERVO DRIVE	ALLEN BRADLEY	2071-AP8	800WATT.			





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S.No.	Item	Make	Model	Specification	Serial no.	Meet Yes/No	Sign
13.	PLC	ALLEN BRADLEY	1766-L32BxB	24VDC.			
14.	MODE BUS MODULE With 485	ALLEN BRADLEY	1763-NC01	24VDC.			
15.	HMI	ALLEN BRADLEY	2711P-T6C20D8	24VDC.			
16.	MCB (MAIN)	HAGER	NCN410N	C10			
17.	MCB (CONVEYOR ,FEEDER & PRE.BELT DRIVE)	HAGER	NCN206N	C6			
18.	MCB (TRANSFORMER)	HAGER	NCN210N	C10			
19.	MCB (SMPS)	HAGER	NCN206N	C6			
20.	MCB(24V SUPPLY)	HAGER	NCN204N	C4			
21.	SMPS	OMRON	S8VK-C06024	24VDC,2.5AMP			
22.	RELAY CARD (4 CHANNEL)	PHOENIX	PC24D04-CNB	24VDC			
23.	SENSOR (NO VIAL NO LABEL)	PANASONIC	FX-301-P	NA			
24.	SENSOR (VIAL JAM)	PANASONIC	CX-481-P	NA			
25.	SENSOR (NO VIAL FEEDER)	PANASONIC	CX-481-P	NA			



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S.No.	Item	Make	Model	Specification	Serial no.	Meet Yes/No	Sign
	STOP)						
26.	SENSOR (LABEL ROLL EMPTY.)	PANASONIC	CX-481-P	NA			
27.	SENSOR (LABEL)	LEUZE	GS 61/6.3	NA			
28.	SENSOR (PRINTER TRIGGER)	LEUZE	GS 61/6.3	NA			
29.	EMERGENCY BOX	TEKNIC	1WAY	NA			
30.	ACTUATOR	SCHNEIDER	BLACK	NA			
31.	EMERGENCY STOP	SCHNEIDER	RED	230VAC.			
32.	TRANSFORMER	KAMO-CORE	1500VA	250VAC,50/60Hz			
33.	PRINTER ENCODER	PEPPERL + FUCHS	RVI58N-032K5R66N	2500PPR			
34.	PRINT SELECTOR SWITCH	HSAJET	EL V4.0	NA			
35.	PRINTER TCUF	HSAJET	TCUF	NA			
36.	PRINTER HEAD	HSAJET	HPHF1T0P	NA			



**FACTORY ACCEPTANCE TEST FOR AUTOMATIC SELF ADHESIVE VERTICAL LABELLING MACHINE**

**4.0 MATERIAL OF CONSTRUCTION:**

- This is to prove that the materials used for construction of components are as per the DQ Specification / Approved Drawing.
- The Vendor shall present certificates for the parts listed.
- The submitted certificates shall be checked for correct material usage against the details submitted in the DQ / Approved Drawing form by the vendor.

S.No.	COMPONENTS	SPECIFIED	ACTUAL
1.	CONVEYOR BELT	DELRIN	
2.	CONVEYOR GUIDE PATTI	SS304	
3.	LABEL RELEASE PLATE	SS304	

**COMMENTS:**

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**CHECKED BY:**.....



**FACTORY ACCEPTANCE TEST FOR AUTOMATIC SELF ADHESIVE VERTICAL LABELLING MACHINE**

**5.0 COMPONENT CERTIFICATION:**

- This to verify the Test certificates of the designated components.
- The Vendor shall present Test certificates of the designated components (From the original manufacturer laboratory) for verification. Check whether the certificate corresponds to the installed component. Compare the make, Model No. and other specifications from the certificate with the specifications of the component and in the table below.

S.No.	NAME OF COMPONENT	CERTIFICATE AVAILABLE YES / NO
1.	MOTOR (CONVEYOR)	
2.	GEAR BOX (CONVEYOR)	
3.	MOTOR (PRESSING BELT)	
4.	GEAR BOX (PRESSING BELT)	
5.	MOTOR (FEEDER)	
6.	GEAR BOX (FEEDER)	
7.	SERVO MOTOR	
8.	SERVO GEAR BOX	
9.	AC DRIVE (CONVEYOR)	
10.	AC DRIVE (FEEDER)	
11.	AC DRIVE (PRESSING BELT)	
12.	SERVO DRIVE	
13.	PLC	
14.	MODE BUS MODULE With 485	
15.	HMI	
16.	SENSOR (NO VIAL NO LABEL)	
17.	SENSOR (VIAL JAM)	
18.	SENSOR (NO VIAL FEEDER STOP)	
19.	SENSOR (LABEL ROLL EMPTY.)	
20.	SENSOR (LABEL)	



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S.No.	NAME OF COMPONENT	CERTIFICATE AVAILABLE YES / NO
21.	SENSOR (PRINTER TRIGGER)	
22.	PRINTER TCUF	
23.	PRINTER HEAD	

**COMMENTS:**

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**CHECKED BY:** .....

**6.0 FUNCTION VERIFICATION:**

**AS PER ANNEXURE-I**



**FACTORY ACCEPTANCE TEST FOR AUTOMATIC SELF ADHESIVE VERTICAL LABELLING MACHINE**

**7.0 SAFETY FEATURES, ALARMS AND INTERLOCKS TEST:**

Simulate Alarm/Interlock condition and observe results:

S.No.	ALARM INTERLOCK	SPECIFIED FUNCTION	SIMULATION RESULT
1.	No Vial No Labeling Sensor.	No Vial No Labeling System is provided to avoid the wastage of Labels, while machine is running in ideal condition and Vial is not present.	
2.	Servo Drive Faulted	Machine Stop.	
3.	Emergency Switch is Pressed	Machine Stop.	
4.	No Vial Feeder Stop	Feeder Stop	
5.	Vial Jam Feeder Stop	Feeder Stop	
6.	Label Roll Empty	Alarm Indicate on HMI	
7.	Feeder Drive Faulted	Machine Stop	
8.	Conveyor Drive Faulted	Machine Stop	
9.	Pressing Belt Drive Faulted	Machine Stop	
10.	Printer Stop Machine Stop	Machine Stop	



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**8.0 LOGICAL SECURITY VERIFICATION:**

Simulate Alarm/Interlock condition and observe results

**8.1 ACCESS LEVEL TEST:**

S.No.	USER GROUP NAME	RIGHTS & AUTHORIZATION	OBSERVATION	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		



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**9.0 TEST RUN:**

METHOD	DESCRIPTION	OBSERVATION	SIGN/DATE
Start test as per instruction	Observe Sequence of operation and compare with Requirement.		
Test Run successfully.			

**REMARK:**

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**10.0 DEVIATION:**

DEVIATION	REMARKS





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**11.0 APPROVAL:**

APPROVAL TABLE FOR FAT (CLIENT)			
SIGNS FOR	ROLL / NAME	DATE	SIGNATURE
REVIEW			
APPROVAL			

**CONCLUSION:**

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