VT-400

TRAY SEALER PACKAGING MACHINE

Operation Manual

Version 6.9.1

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S/N: _____ **QC SIGNATURE:** _____

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NOTES FOR LOOKING UP IN THE INSTRUCTION MANUAL

Do not use the machine if you are under the influence of alcohol, drug or medicines causing sleepiness.

Be advised to protect the main feeding line by safety switches.

The presence of magnetic or electromagnetic fields at a very low distance could compromise the good functioning of the control panel. Ideal conditions of temperature and humidity for a correct use of the machine are the environmental ones.

Check the electric circuit is conveniently protected and corresponds to the motor features: the machine is endowed with a nameplate showing power, frequency and feeding tension values. In addition, please check if there is the grounding and a switch regularly placed before the feeding cable. The Manufacturer declines all responsibility for damages to people or things caused by a wrong grounding.

Before making any adjustment, maintenance and/or replacement operation in the working area, the operator must wait for a certain length of time from the machine stop, which is necessary to have the cooling of the areas which are heated during the machine normal functioning.

This manual is a valid help to better know and use your machine.
Please read it carefully before using the machine.
The instruction manual is always supplied with the machine. The User is responsible of the present manual for all the machine life and will destroy it only on the demolition of the machine itself.
Promarks does not answer for any modification to the manual or to the machine by the User after the delivery, which are not foreseen in the present manual. This would involve the loss of guarantee.

DOCUMENT PURPOSE

Purpose of the manual is to supply the User with indications and information to follow scrupulously for a correct use of the machine and for the Operator's protection and safety. For this reason the User is invited to:

-Make the manual available and known to all operators
-Give the manual to the next owners of the group.

WARNING AND IDENTIFICATION PLATES

On the indentification plate of the machine there are the Manufactures details, the machine model ,serial number and construction year
For any communication relevant to the machine (problems, interventions under warranty,spare parts etc…..) you have always to make reference to the details on the plate.

USE AND PRESERVATION OF THE MANUAL

The present manual is addressed to the User of the machine, to responsible in charge of its moving, installation, use, control and final demolition.

The manual shows the machine use foreseen by the project hypothesis and technical features; it supplies instruction for moving, for a suitable and sure installation, the mounting, and the use. It supplies information to makes order of spare parts easy and supplies indications regards eventual residual risks.

In particular, it must be always available to be looked up for the following information:

-Conditions of use foreseen for the machine
-Operator's working area
-Instruction relevant to:

- Start up
- Use
- Transport
- Installation
- Maintenance and repair

MANUAL PRESERVATION

The manual is considered part of the machine and must be kept in good conditions till the final demolition of the machine.
The manual must be preserved in a protected place and always available for its consultation, next to the machine.

INFORMATION FOR THE USER

1– The Manufacturer reserves the right to improve the manuals, without the obligation to update the previous versions.

2– The features of the materials can be modified at any moment, depending on the technical development, without any notice.

3– If the machine is supplied without control and protection electrical part (electrical board on the machine), the Manufacturer doesn't assume any responsibility regarding safety problems deriving from electrical parts not in compliance with what recommended and/or prescribed. In any case, the respect of all the electric Laws and Regulations for the equipment supplied with the machine will be at Customer's charge, that will have to make them properly and suitable for their usage.

4– The Manufacturer considers himself released from any eventual responsibility in the following cases:

- improper use of the machine;
- use by untrained personnel;
- use not in compliance with the manual instructions;
- use not in compliance with the Regulations in force;
- use with faulty power supply (missing or incorrect)
- use with serious deficiency in proper maintenance
- use with modifications not expressly authorised by the Manufacturer's written note
- use with not original spare parts or not specifically defined for model
- use with total or partial inobservance of the instructi

WARRANTY

General selling warranty expires in case of:

- Improper use
- Tempering
- Bad maintenance
- Inconvenient for wrong use
- Inexperience in usage
- Machine overwork
- Excessive mechanical and/or electric and pneumatic stress

Any use that is different from the one that machine has been conceived for represents an anomalous condition that can damage the machine and be dangerous for the operator.

-It is strictly forbidden to keep metal objects near the working surface because they could accidentally fall into the tray chamber chain and enter the packaging area causing dangerous situations.

-The working order is tested repeatedly before shipment

-All the elements that are not mentioned in the manual as far as the adjusting or replacement are concerned, can be modified only by the skilled manufacturer's staff

-For any use of the machine or anyway any modification on it, the User must inquire at the Manufacturer about the possible contraindications or dangers coming out from an improper use of the machine itself.

MAIN WARNINGS

The machine must be conducted by an operator who well knows its working. The contemporary use of the machine by two operators (for instance one operates on the left push button and one on the right) is not allowed. Visually check the position of the buttons and their function before pushing them. Do not touch any control while being in the cycle . It is admissible to have voltage oscillations up to 10% of the nominal value. Wider fluctuations jeopardise the regular working of the machine.

TECHNICAL DATA FOR STANDARD VERSION

OVERALL DIMENSIONS:	AS PER THE LAY OUT BELOW
ELECTRICAL REQUIREMENTS:	220 Volt 50/60Hz (Standard)
COMPRESSED AIR:	0,6/0,7 MPa
AIR CONSUMPTION:	Approx. 3,3 litres /cycle
MAX. TRAY DIMENSIONS:	380 x 300 x 100 mm.
OUTPUT (*)	500-600 cycles/hr.

LAY-OUT

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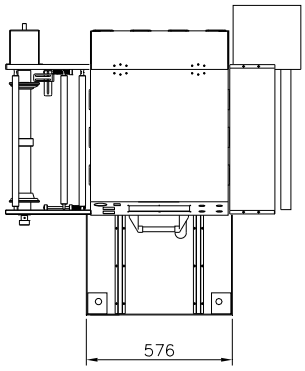
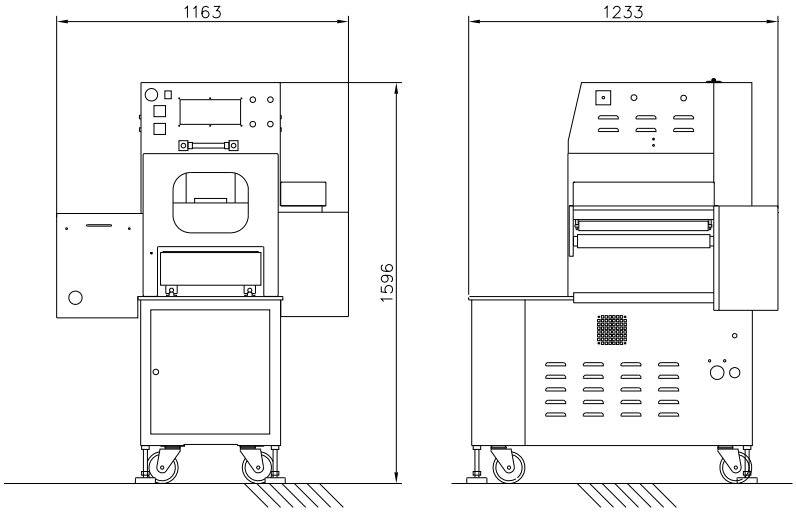




1. MACHINE INSTALLATION

1.1 GENERAL CAUTIONS

The machine is delivered in a special packing, which must be carefully handled in order to avoid any damage.

After removing the machine packing, execute the following controls:

- Nothing has been lost during the transport
- Each part of the packing has been removed
- The power of the electrical plant is suitable to the power required by the machine, with protection fuses placed according to the electrical diagram.

1.2 CONNECTIONS

To do the connections is necessary:

- A plug of power supply (with the right tension and able to satisfy the electrical consumption of the machine).
- A connection for the air compressed feeding with a constant pressure .

1.3 MACHINE PLACEMENT

STANDARD MACHINE

- Connect the air pipe coming from the compressor.
- Connect the electrical plug with a suitable (220V) .
- Connect the gas pipe to the proper tab

1.4 PLANT VERIFICATION

For a good starting of the machine, it needs to carry out previously some verifications:

- Please verify that the pump run turn towards the direction indicated by the arrow. Otherwise , it is necessary to reverse the phases into the feeding plug.
- Set the thermoregulator at a temperature of approx. 120°-180°C and verify if the sealing plate becomes hot
- Set a very short sealing time on the control panel.

1.5 THERMOSEALING FILM INSERTION

- Insert the reel foil into the proper shaft.
- Drive the film under the sealing station.
- Verify that the film is perfectly aligned with the sealing station.
- Fix the film to the unwinding (scrap) shaft by means of the proper lock.
- Verify that the film thermosealing side is facing the tray.

2. GENERAL DESCRIPTION

The VT-400 is able to thermoseal trays with different sizes and made by different materials such as aluminium, PVC, APET, CPET, PP, coupled paper, etc., with a thermosealing film (the film should be compatible with the material of the trays to be thermosealed).

The VT-400 is a semi-automatic machine easy to be used, in its structure :

- One to four tray-carrier
- One shaft for film reel
- One scraps shaft
- Control panel
- Vacuum pump
- Options

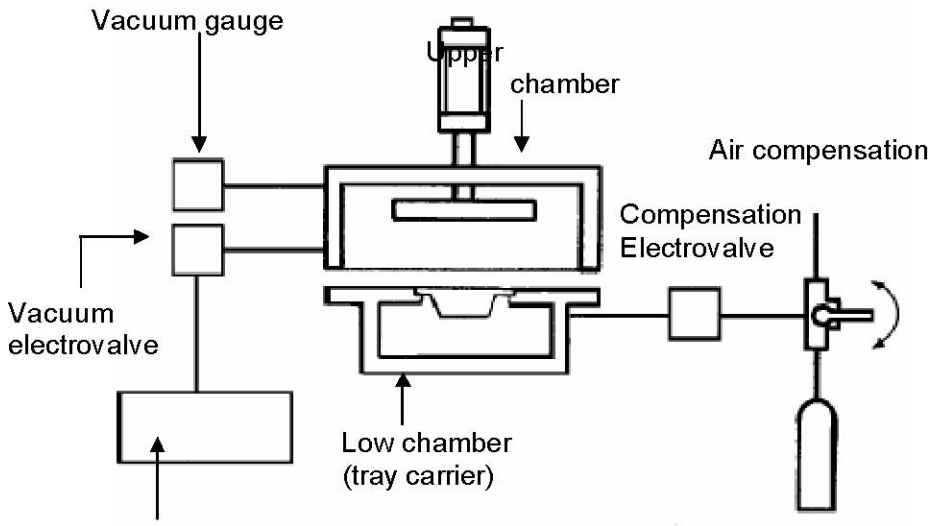
The tray-chamber has to support the tray both during the preparation phase and the closing phase when it is behind the sealing station.

The unwinding-rewinding group consists on an holding roller for reel and an holding roller for scraps moved by a motor. The motor receives the starting signal detecting the presence of the tray-carrier in the right position. When the tray-carrier is removed from the sealing position,signal to the motor and the next unwinding-rewinding operation happens.

After the sealing the remaining part of the film is rewound in the scraps holder. The scrap is kept tightened when coming out from the sealing station roll and then rewound on the scrap-holder shaft. The closure of the trays with the thermosealing film is realised by the sealing mould, such mould is equipped by a sealing plate heated by an heating element,a cutting blade and some press film.

The sealing plate consist on a plate heated by an heating element with a temperature adjusted by a thermoregulator placed on the control panel of the machine.

The press-films keep well tight the film during the sealing to avoid wrinkles on the sealing film The blade cut the film around the tray rim, after the first cuts the machine makes the scraps. The scrap is unwound by means of the scraps holder shaft.



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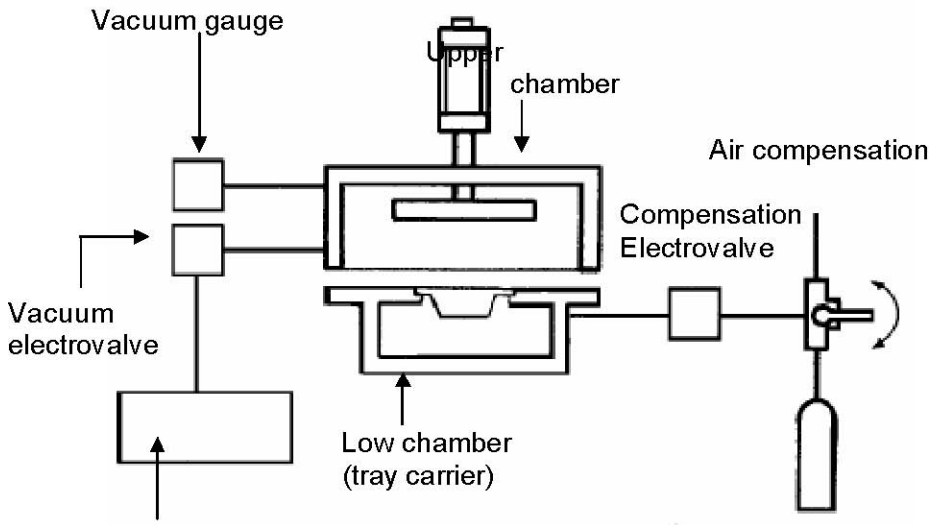
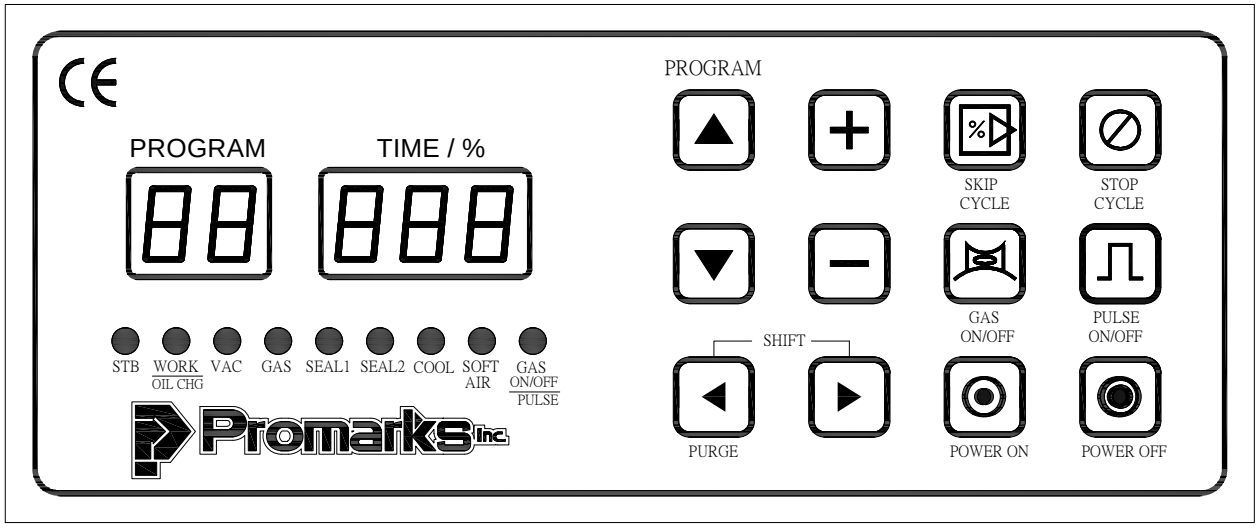


3. OPERATION

3.1 LED CONTROL PANEL FUNCTIONS



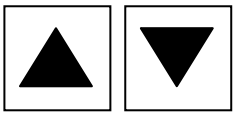
Basic Operation Instructions

1. **Standby Mode**： After turning on the power of machine, at this time the operation panel is under **standby mode**, **STB** lamplights up, other lamps all turn off, digital indicator is off, too.
2. **Start Operation Panel**： After pressing **POWER ON**, the digital indicator shows software revision, then about 3 seconds later, enters into general operation mode, during this time the digital indicator shows the numeric values of program and **VAC** steps used last time, **STB** and **VAC** lamps light up.
3. **Start Vacuum Packaging**： During this time, put package in the chamber, close the vacuum lid, then start proceeding **vacuum packaging mode.** Machine will accord to the steps of **VAC**、**GAS**、**SEAL1**、**SEAL2**、**COOL**、**SOFT** and so on to proceed packaging step by step. When finishing, cause will recover to normal air pressure, so the vacuum lid will open automatically.
4. **Setting Parameters**： Under **general operation mode,** press either one of ◀ ▶ buttons over 3 seconds, at this time, figure、**VAC** lamps flash, enters into **setting mode**, then press the ◀ ▶ buttons to select the items which required to be set, change numeric value with + - buttons, press either one of Program buttons, can store file and escape this mode.
5. **Close Operation Panel**：Under **general operation mode,** press **POWER OFF** button, can turn off the operation panel, then only **STB** lamp will light up.

Packaging Flow & The Adjustable Items List

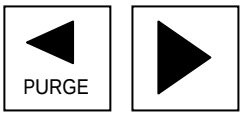
Close Vacuum Lid (CLOSE) →	Vacuum (VAC steps) →	Gas Flushing (GAS steps) →	Sealing 1 Heat (SEAL1 step) Sealing 2 Heat (SEAL2 steps) →	Sealing Bar Cool (COOL steps) →	Slow Speed Pressure Back (SOFT steps) →	Open Vacuum Lid (OPEN)
Steps	With vacuum percent、vacuum percent & extension seconds、and use only time counted with seconds to control vacuum.	Flushing gas, with seconds to control.	According to the set seconds to heat sealing bars **1 & 2** individually at the same time, stop heating separately, after all stop, enters next step.	The cooling time for sealing bars **1& 2**, prevents from overheat of sealing bars, cause packaging error.	Pulse recover general air pressure, to improve the outlook and quality of packed product.	
General Functions	With vacuum percent to control vacuum.	Press **GAS** button, starts gas flushing function.	Can set heating time for sealing bars **1 & 2** separately.		Can set total time of steps and interval time.	
	When vacuum up to **100%**, use extension seconds to higher up vacuum percent.	Then press **PULSE** button, starts pulse gas flushing function.				
	Use only time to control vacuum counted by seconds.	Can set total pulse action time and gas flushing interval time.				
Advanced Functions	**PURGE** function： Combine vacuum & gas flushing two steps, acts synchronously, when press PURGE button, starts this function. Function **1**：Vacuum & gas flushing exchange 5 times, the final ending action is gas flushing. Function **2**：Pre-vacuum **2** seconds to close vacuum lid, then gas flushing & vacuum exchange **5** times, the final ending action is vacuum.					
	VAC step pulse： To let this step not continuously, but pulse.					
	Restriction settings when vacuum percent can't up to **99%**： Maybe have the factors of air leakage, or local's air pressure is high, or it's the high mountain area … and so on, cause vacuum percent can't up to **99%**. Can set under-mentioned functions restrictedly Function **1**：Cancel the setting of vacuum percent and vacuum extension seconds, user can only set with seconds. Function **2**：Remain original status (**VAC** motor will keep running until up to vacuum percent, then skip to next step or user presses **SKIP** …) Function **3**： After up to the setting value of vacuum percent, continuously acts according to the set seconds.					

Buttons Instructions (General Mode)

GROUP Selections : 

May select **01 ~ 24 Groups** of setting values, under normal operating condition, can only review the setting value of **Group**, if make sure would like to use specified **Group** setting value, must press either one of these two buttons over **3 seconds**, at this time, the **Group** numbers will flash, then confirm to use this **Group** value.

Under normal operating condition, when review other **Group** setting value, once close the vacuum lid of vacuum packaging machine, will return to the original setting **Group** value.

STEP Selections : 

Available for selecting the setting value for **VAC、GAS、SEAL 1、SEAL 2、COOL、SOFT AIR** and so on. Under general operation condition, can only review the setting value, can't revise, if would like to revise, please press either one of these two buttons over 3 seconds, at this time, the indicated numbers will start flashing, then can revise the setting parameters of individual section. After finishing the setting, then press **STEP** button, the above setting value will be stored immediately, if would like to quit this status, press **GROUP** button, then can escape.

VAC : Under the section of **VAC**, can set the values of operating completion conditions.

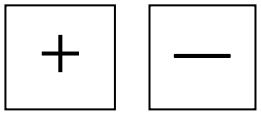
(1) Required vacuum percent **(0 ~ 99%)**.
(2) Required vacuum percent **99%**, and the seconds for continuously vacuuming.
(3) Vacuum time counted by seconds.

GAS : Set the total open time of **GAS** valve under **GAS ON** status.

SEAL 1、SEAL 2 : The heating time for sealing bar 1 and sealing bar 2, **SEAL 1** and **SEAL 2** will start at the same time, then accords to individual setting time to finish action.

COOL : The cooling time for sealing bar, it's the set seconds for waiting **COOL** after **SEAL 1** and SEAL 2 both have finished heating. This function is to prevent from constantly using the sealing bars cause the temperature of heating band can't go down, lead to overheat during next operation and causes the sealing effect not good.

SOFT： Slow speed soft air time, the first stage is to set total soft air time, the second stage is to set pulse soft air acting time (**SOFT AIR ON**), the third stage is to set pulse soft air shut down time (**SOFT AIR OFF**), when the setting of **SOFT AIR OFF** is over 0.1 second, to match the setting of **SOFT AIR ON**, will start pulse soft air. Such as **SOFT AIR ON** ⟶ **SOFT AIR OFF** ⟶ **SOFT AIR ON**……continuously exchange until the setting time of SOFT AIR TOTAL is up or vacuum lid opens.

Increase、Decrease ： 

Under normal operating condition, these two buttons are ineffective. Only press **STEP** over 3 seconds later, ready to start setting parameters, then can use these two buttons to change parameters.

Among them, the setting of **VAC TOTAL** is much more special, in the **VAC** section, while setting parameters, the change order of parameters is :

Press ＋ button, will increase the vacuum percent from **99**, then to be **+1 +2 +3 ….**. the value means when vacuum percent up to 99% , the lasting seconds of continuously vacuuming.

Press — button, the change of figure will be **+2 +1 –1 –2 -3 ….**, the figures with – (minus) sign are the seconds for controlling vacuum percent.

Skip This Section： 

After close the vacuum lid, machine will start vacuum packaging procedure. During running procedure, can press this button to interrupt (skip) the current executing section, and continue the next packaging section. During under setting mode, press **SKIP** to change the figure value increased by **10** times to speed up the figure value setting.

Stop All Sections： 

In proceeding vacuum packaging section, press this button will stop and end all the current sections immediately, and open vacuum lid.

Gas Flushing : GAS

Under normal operating condition, this section won't be executed, that is the **GAS** lamp won't light up. When press this button, the **GAS** lamp lights up, and during the vacuum packaging flow, will execute this **GAS** section, if would like to cancel this section, before the vacuum lid closing, press this button again, the **GAS** lamp turns off, then this section will not be executed.

Pulse Gas Flushing : PULSE

When press **GAS** button, **GAS** lamp lights up, then when press this **PULSE** button, **GAS** lamp starts flashing, vacuum packaging flow goes to **GAS** section, will proceed pulse action according to the setting seconds of **GAS ON** and **GAS OFF** sections.

If would like to cancel this action, press this button again before the vacuum lid closing, **GAS** lamp recovers lightening up constantly, this function will not proceed in **GAS** section.

Start and Standby : ON OFF

When press the main power switch of vacuum packaging machine, **STB** lamp lights up, 5 digital figures don't light up, at this time is standby mode.

During standby mode, press **ON** button, then controller enters normal operation mode, at this time, except **STB** lamp lights up, the all 5 digital figures are indicated, too.

When in normal operation, press **OFF**, all digital figures turn off, at this time, system enters standby mode.

Except to press **OFF** button to enter standby mode, if not operate the controller over 10 minutes, system will enter standby mode automatically.

During standby, **VAC** motor will be set at **STOP**.

Setting Special Functions： STOP

Advanced User Level：Under general operation mode, press **STOP** button over **5** seconds, enter password **111**, thus enters advanced user level.

If press **STOP** button with shorter time, then system will back to normal mode.

Enter Password ：

Press「up arrowhead」 for centesimal digital; press「+」 for decimal digital; press「**SKIP**」for the unit digital; press the figure one time the value will increase 1, over 9, back to 0; confirm password by pressing「**STOP**」 button, if the password is incorrect, back to normal mode.

Instructions For Each Special Selection Item：

(A) **Treatment When VAC % Can't Up To 99%**：Maybe have the factors of air leakage, or local's air pressure is high, or it's the high mountain area … and so on, cause vacuum percent can't up to **99%**.

Setting values are：

-1：Cancel the settings of vacuum percent and vacuum percent extension seconds, user can only set with seconds. (**-10 –25** … etc.)

0：Remain original status (**VAC** motor will keep running, until up to vacuum percent, then skip to next step or user presses **SKIP** …)

0 Up：After up to the setting value of vacuum percent, continuously acts according to the set seconds.

For example, set vacuum percent to be **70**, after up to **70**, then continuously acts according to the set seconds.

25PIN D Type Terminal Wiring Connection Instructions

PIN NO	FUNCTION		PIN NO	FUNCTION	
1	AC24V Input – For Internal		13	External DC24V Grounding	Rectificated
2	AC24V Input – For Internal		14	External DC24V Output	Rectificated
3	AC24V Input – For External		15	Sealing Bar 2 Heat Contact	Relay Contact
4	AC24V Input – For External		16	Pulse Soft Air Contact	Relay Contact
5	Air Inlet Valve	Relay Contact	17	×	
6	Sealing Press Bar Gas Flushing	Relay Contact	18	×	
7	Sealing Bar 1 Heat	Relay Contact	19	×	
8	External Special Gas Valve	Relay Contact	20	×	
9	Vacuum Valve	Relay Contact	21	Over Relay Input Same As 25	External Input
10	COM	Relay Contact	22	Internal Grounding	External Input
11	Internal Grounding	External Input	23	COM point	Relay Contact
12	Vacuum Lid Signal Input	External Input	24	Vacuum Motor Contact	Relay Contact
			25	Over Relay Input Same As 21	External Input

4. KINDS OF PACKAGING

The three kinds of packaging which the machine is able to carry-out are as follows:

- Traditional packaging (sealing only)
- Vacuum packaging (vacuum + sealing) (option)
- Controlled atmosphere packaging (vacuum + gas + sealing) (option)

4.1 TRADITIONAL PACKAGING

Place the tray-carrier containing the tray to be sealed under the sealing station, then push the START buttons. The sealing mould goes down towards the tray, on which the foil-press clamps the thermosealing film. When the mould has finished its down stroke, then it is performed the sealing and cutting of the foil on the tray. After this phase has taken place, the sealing mould goes up and it is possible to extract the tray-carrier and then the sealed tray. The duration of the contact between the sealing plate and the tray is determined by the time previously fixed on the sealing timer

4.2 VACUUM PACKAGING (OPTION)

Place the tray-carrier containing the tray to be sealed under the sealing station, then push the START buttons. The sealing mould goes down towards the tray, on which the foil-press clamps the thermosealing film. Once that the upper chamber is placed on the tray-carrier, the vacuum valve opens thus allowing the vacuum pump to evacuate the air into the chamber and therefore into the tray. When inside the vacuum chamber the wished vacuum degree is reached, the vacuum valve closes and the machine carries out the sealing in the usual way. When this phase is terminated, the gas/air valve opens, allowing in this case the compensation with air. This allows to annul the depression created by the vacuum inside the mould, so that the atmospheric pressure can be restored. In this way, the 2 parts of the vacuum chamber can be separated again (without compensation there would be a "sucking effect" that could damage the plant). The wished vacuum degree can be selected and visualized by the VACUUM GAUGE.

4.3 CONTROLLED ATMOSPHERE PACKAGING (OPTION)

Before pressing the START buttons, check that the feeding pressure of gas is approx. 0,8-1 bar. In this working process the closure of the vacuum chamber, as in the above described case, is followed by the opening of the vacuum valve and the consequent air suction by means of the vacuum pump. As soon as the wished vacuum degree is reached, the vacuum valve closes followed by the opening of the gas valve. When the gas valve is open, the gas can flow in the vacuum chamber and, consequently, into the tray. At this point, being the modified atmosphere performed and restored the usual atmospheric pressure, the sealing can be carried out.

According to quantity and gas pressure necessary to compensate the vacuum it is possible to obtain different effect of the film over the tray:

TIGHT FILM: the gas value brings the inside and outside pressure to be identical, so the film is tight.

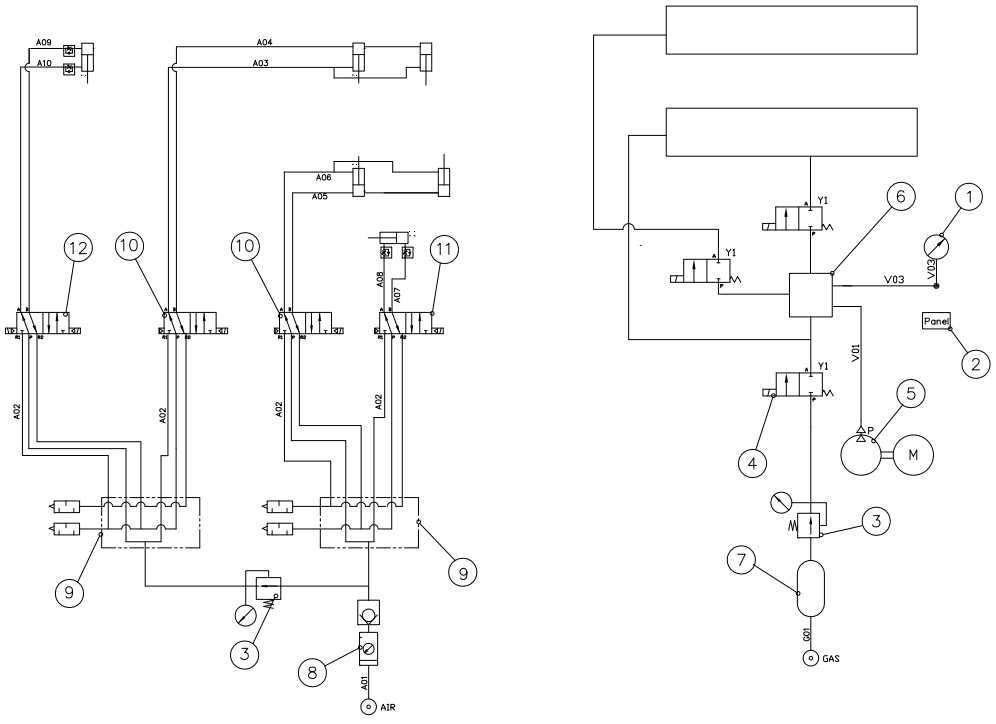
CONCAVE FILM: the fixed value of the gas is lower (lightly) respect the outside atmosphere and not completely sufficient to compensate the vacuum inside the tool, so the film profile appears concave on the tray.

CONVEX FILM: the fixed value of the gas is higher respect the outside atmosphere, so the film profile appears convex on the tray.

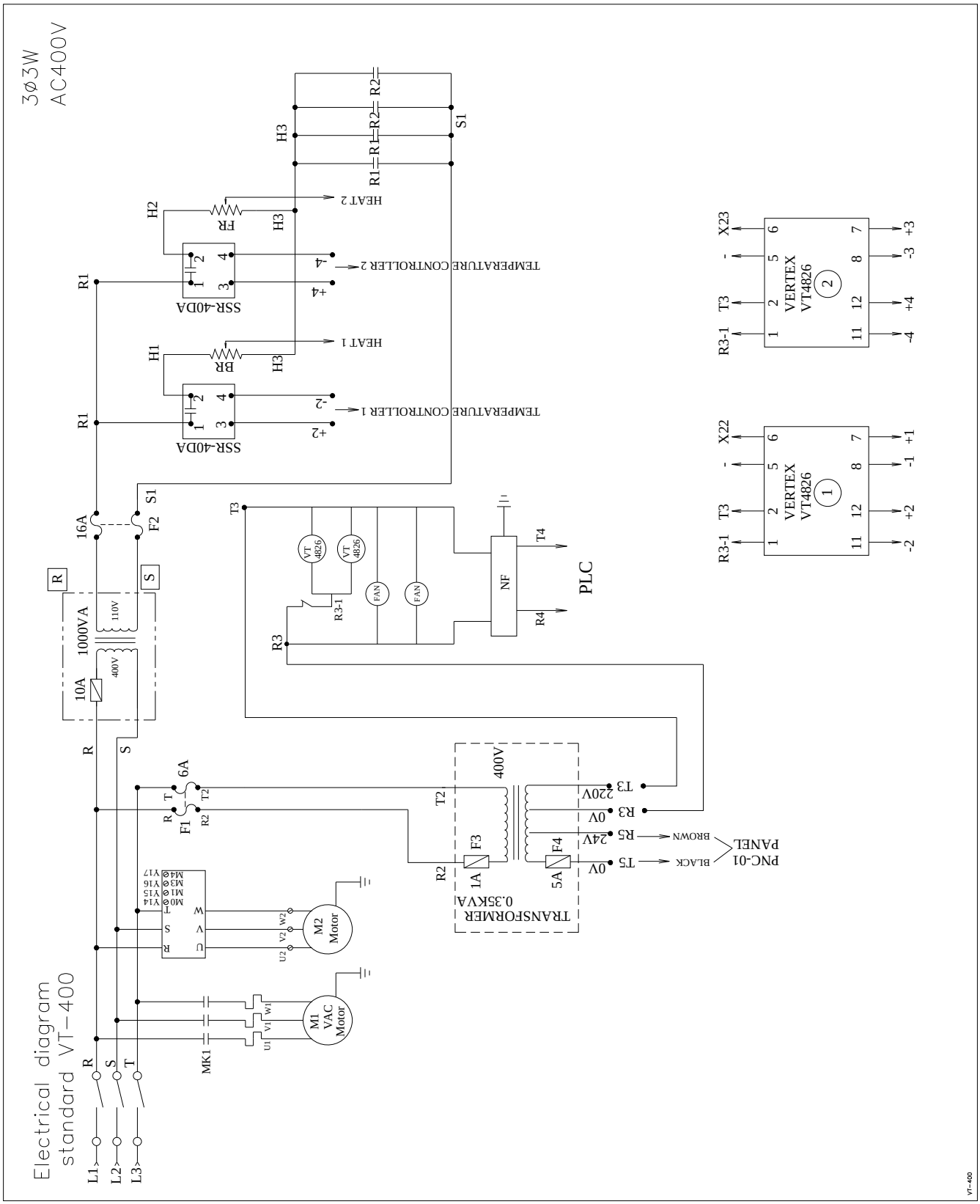
5. PNEUMATIC DIAGRAM

5.1 PNEUMATIC DIAGRAM

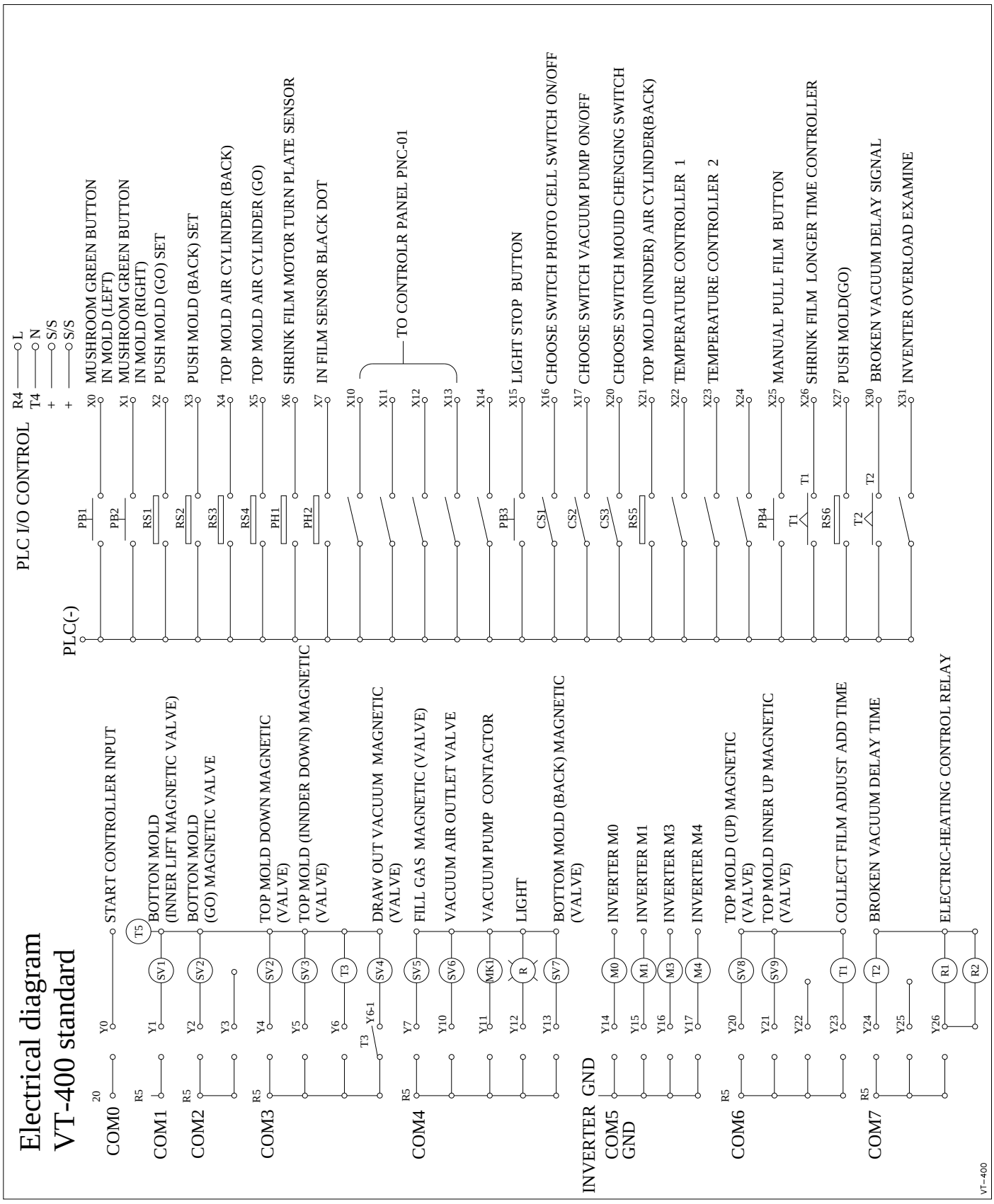
NO	DESCR	QTY	NOTE
1	Vacuum gauge	1	
2	Control panel	1	
3	Pressure control valve	2	
4	Gas valve	2	
5	Vacuum pump	1	
6	Distributing connector	1	
7	Reservoir air	1	
8	Air units	1	
9	Bracket	2	
10	Valve	2	
11	Valve	1	
12	Valve	1	



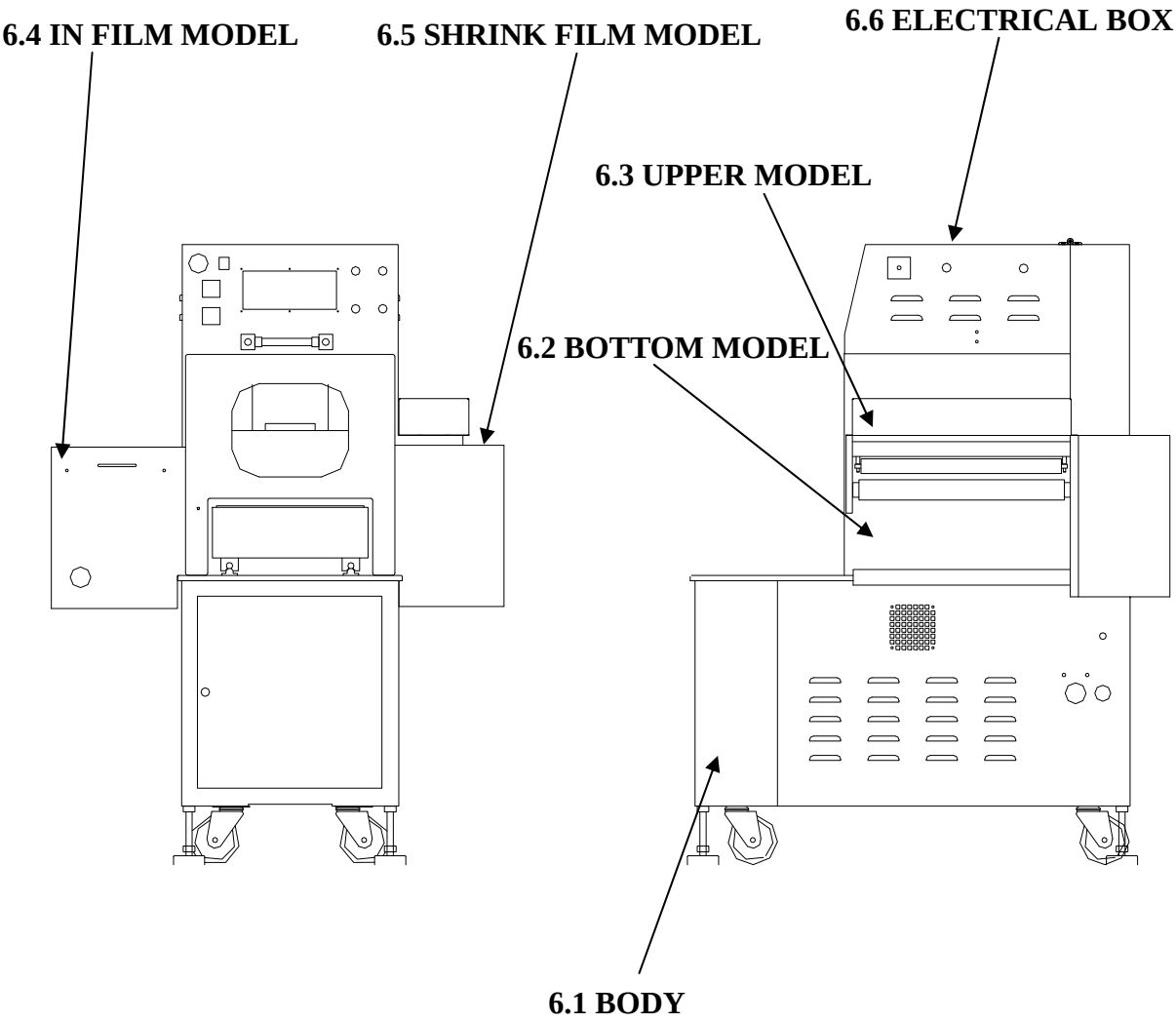
5.2 ELECTRICAL DIAGRAM(AC220V)



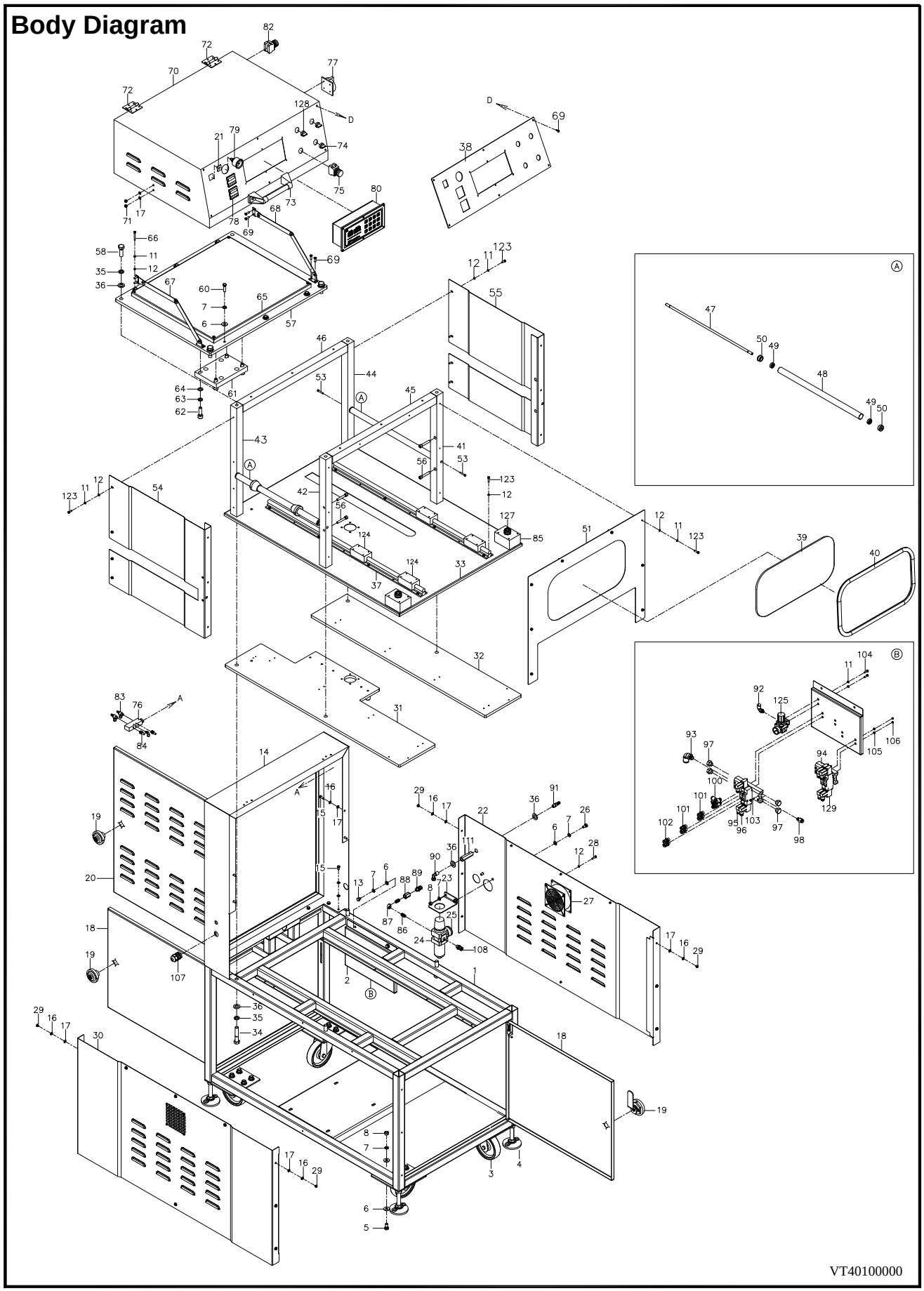
5.2 ELECTRICAL DIAGRAM



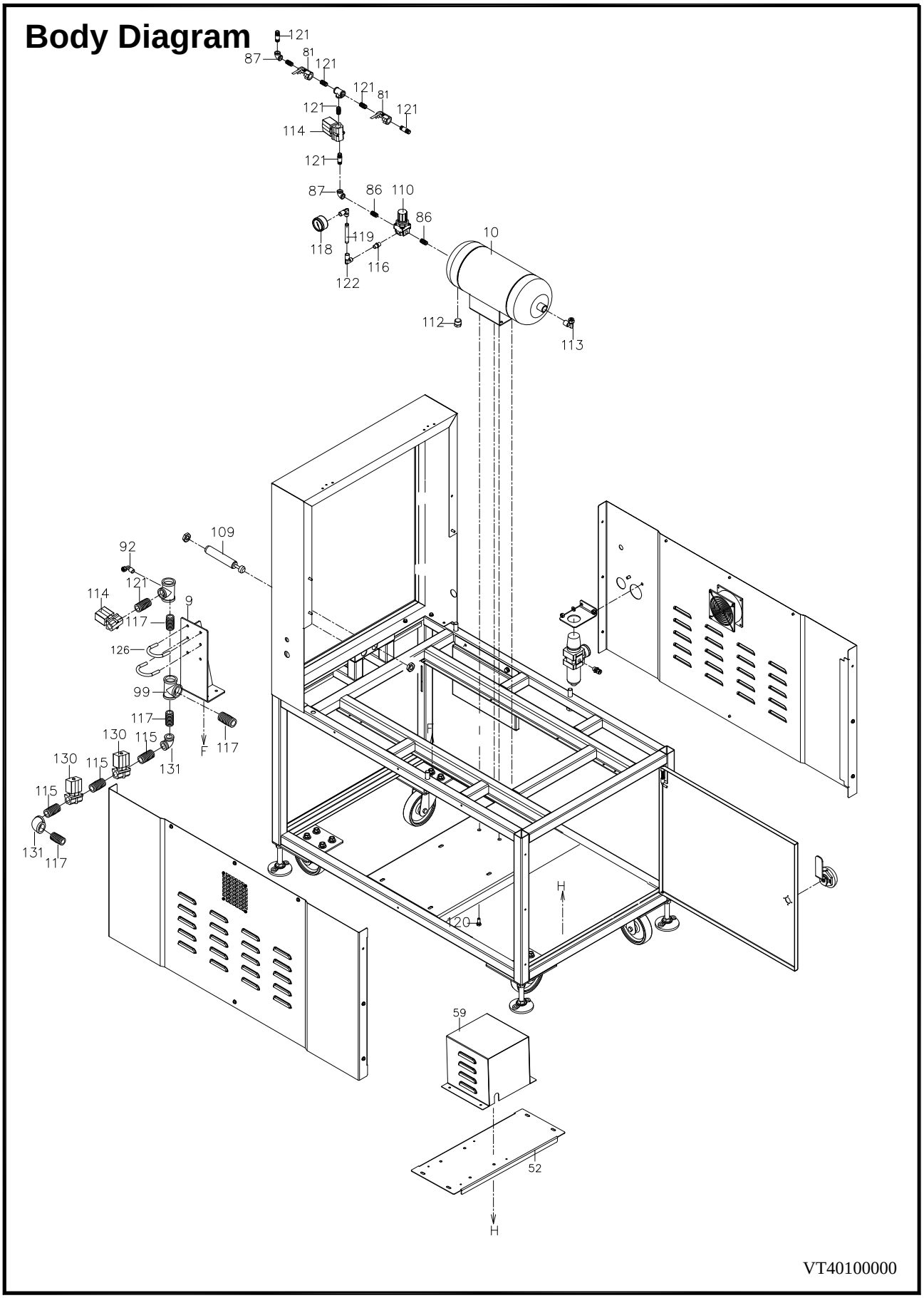
6. FABRICATION



6.1 BODY



6.1 BODY


Body Diagram
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VT40100000

NO.	PART NO.	DESCRIPTION	QTY	
1	VT40101002	Frame	1	
2	VT57112000	Plant, cylinder	1	
3	27121181	Caster 5"	4	
4	2712222	Hoof comp	4	
5	2700408	Screw, hex hd M8x20 (S)	16	
6	2705152	Washer,flat M8 (S)	42	
7	2705301	Washer, spring M8 (S)	28	
8	27072032	Nut M8 (S)	18	
9	VT40153000	Fixed Plant	1	
10	VT57901001	Air pail	1	
11	270461513	Washer, spring M5 (S)	26	
12	2704615	Washer,flat M5 (S)	48	
13	27004152	Screw, hex hd M8x10 (S)	2	
14	VT40108000	Cover	1	
15	2700401	Screw, hex hd M6x12 (S)	10	
16	2705302	Washer, spring M6 (S)	30	
17	2705151	Washer,flat M6 (S)	34	
18	VT40103000	Cover	2	
19	2883349	Door lock	3	
20	VT40104000	Cover	1	
21	2833329	Socket relay	2	
22	VT40106002	Cover	1	
23	VT57113000	Plant, Regualtor	1	
24	29119056	Regualtor, air main	1	
25	2910571	Gauge, pressure PG-50(PT 1/4)	1	
26	2700415	Screw, hex hd M8x16 (S)	2	
27	2813507	Fan, motor	2	
28	2703302	Screw, round hd M5x15 (S)	8	
29	2701318	Screw, button hd M6x8 (S)	20	
30	VT40107002	Cover	1	
31	VT40124001	Plant	1	
32	VT40125001	Plant	1	
33	VT40114001	Plant	1	
34	2700471	Screw, hex hd M14x70 (S)	4	
35	2705333	Washer, spring M14 (S)	8	

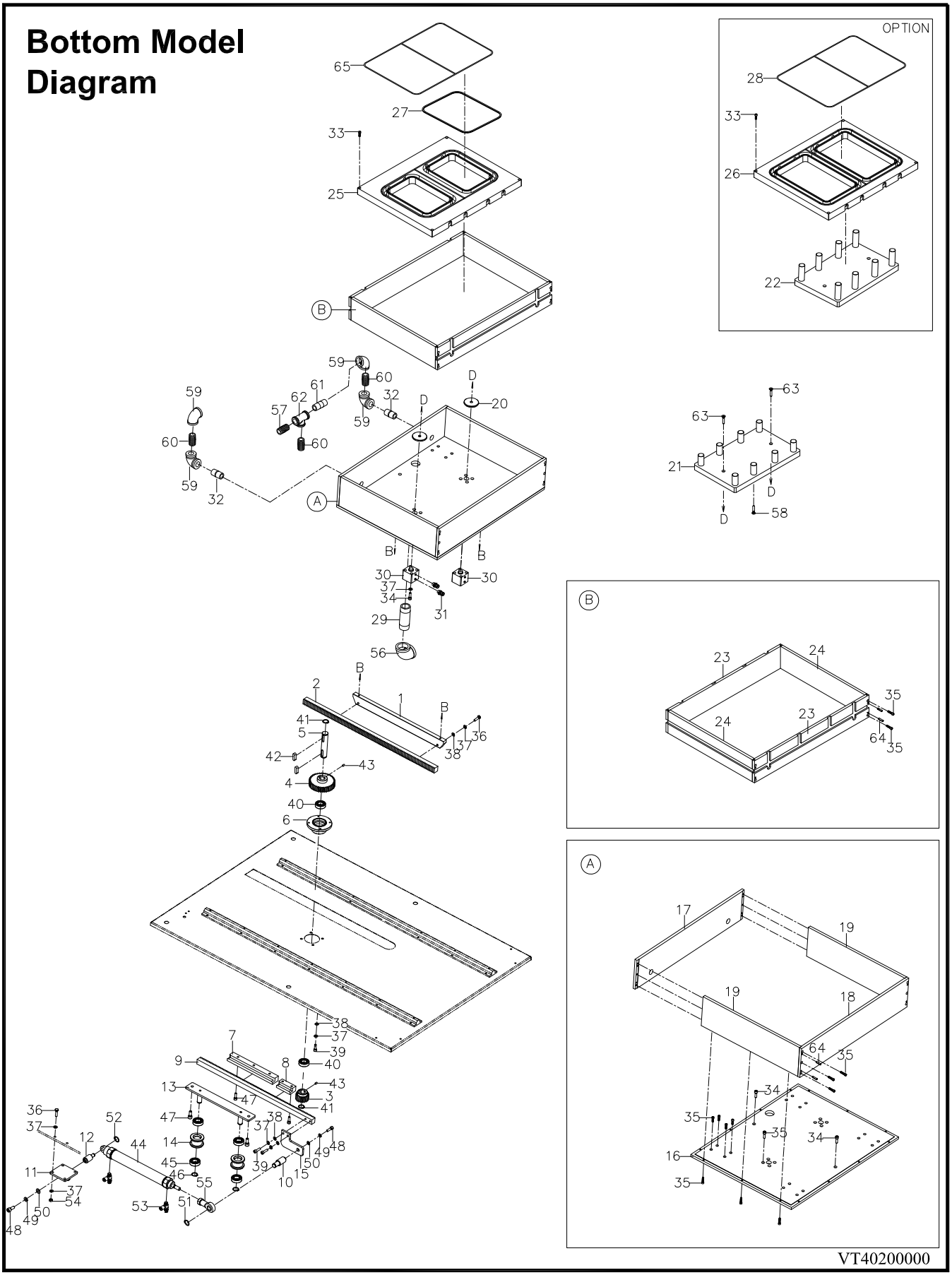
NO.	PART NO.	DESCRIPTION	QTY	
36	2705155	Washer,flat M14 (S)	10	
37	VT57166000	Bracket, shaft	2	
38	VT40162001	Panel operation	1	
39	VT40163000	Window	1	
40	VT40167000	Gasket	1	
41	VT57119000	Mast	1	
42	VT57120000	Mast	1	
43	VT57121000	Mast	1	
44	VT57122000	Mast	1	
45	VT40116000	Mast	1	
46	VT40117000	Mast	1	
47	VT57128000	Shaft, roller	2	
48	VT57129000	Roller	2	
49	27280609	Bearing 609ZZ	4	
50	VT57130000	Cap, roller	4	
51	VT40136001	Plate, cover	1	
52	VT40152000	Fixed plate	1	
53	27001189	Hex.socket head cap bplt M5x30 (S)	4	
54	VT57110000	Cover	1	
55	VT57111000	Cover	1	
56	27004071	Hex.socket head cap bplt M8x45 (S)	4	
57	VT40115000	Plant, cylinder	1	
58	2700472	Screw, hex hd M14x30 (S)	4	
59	VT57153000	Cover	1	
60	2700427	Hex.socket head cap bplt M8x30 (S)	6	
61	VT57123000	Plant, cylinder	1	
62	27004573	Hex.socket head cap bplt M12x40 (S)	4	
63	2705305	Washer, spring M12 (S)	4	
64	2705137	Washer,flat M12 (S)	4	
65	VT40118000	Plant, ctrl box	1	
66	27004601	Screw, hex hd M5x35 (S)	4	
67	2740139	Hinge (52-3) H-24-F (L)	1	
68	2740147	Hinge (52-3) H-24-F (R)	1	
69	2703332	Screw, round hd M6x10 (S)	8	
70	VT40109001	Cover, ctrl box	1	

NO.	PART NO.	DESCRIPTION	QTY	
71	2707110	Nut, hex nylon lock M6	4	
72	D2320000	Hinge	2	
73	2740213	Handle	1	
74	2871220	Knob, selector switch YW1S-2E10P	2	
75	2870075	Switch, Illuminated musheroom DC24V AVLW33302 22ψ 2B	1	
76	2933093	Valve, mechanical MVMB-220-4TB-22	1	
77	28017051	Switch P1-32/EA/SVB/SW	1	
78	2827305	Temperature controller VERTEX VT4826	2	
79	29135560	Pressure Gauge	1	
80	2874045	Control panel	1	
81	29093277	Valve,1/2"	2	
82	2870048	Round flat button YW1B-A1E20G	1	
83	2909321	Fitting SPL 601	3	
84	2916001	Silencer 1/8”	2	
85	2873106	Box, wiring BX-01	2	
86	29093278	Nipple 1/2"	7	
87	274000661	Elbow 1/2"	4	
88	2909133	Fitting B-30 1/2"x1/2"	1	
89	29081004	Fitting SPC 10-04	1	
90	29090428	Fitting, nylon tube A-028 1/4PTx5/16N 90°	1	
91	29091755	Fitting, nylon tube P-18 1/4"PTx5/16"N	1	
92	2909049	Fitting, nylon tube A-33	1	
93	2909345	Fitting SPL 8-02	2	
94	2911226	Bracket, soclenoid valve MVSC180-5B2	2	
95	2911225	Valve MVSC180-4E2-AC24	1	
96	2911222	Valve MVSC180-4E1-AC24	1	
97	2916004	Silencer FSL-02 1/4”PT	4	
98	2909461	Fitting SPC 8-02	2	
99	2909275	Tee branch valve 1"	1	
100	2908016	Controller, speed JSC 8-01	2	
101	2909460	Fitting SPC 8-01	4	
102	29093339	Fitting SPC 6-01	2	
103	27030072	Screw, round hd M4x35 (S)	4	
104	2700413	Screw, hex hd M5x16 (S)	2	
105	2705306	Washer, spring M4 (S)	4	

NO.	PART NO.	DESCRIPTION	QTY	
106	2707210	Nut M4 (S)	4	
107	2861057	Connector, straight PGA-16L-16B	1	
108	29081004	Fitting SPC10-04	1	
109	9624075T	Mindman AD2540	1	
110	29100104	Regualtor AR40-04	1	
111	2914049	Valve check 1/4"	1	
112	2909184-1	Cap 1/2"	1	
113	29093432	Fitting 1/2"x5/16"	1	
114	29118086	Valve VX2240S-04-BGR1	2	
115	2909232	Nipple 1"	3	
116	2909111	Fitting 1/2"x1/4"	1	
117	29092321	Nipple 1"	4	
118	2910516	Pressure Gauge	1	
119	29093253	Nipple 1/4"x3"	1	
120	2700405	Screw,hex hd M8x25	4	
121	290932569	Nipple 1/2"x60mm	6	
122	2909155	Fitting P108 1/4"	1	
123	27000361	Screw, hex hd M5x20 (S)	32	
124	27281058	Bearing, linear LMC16 LUU	4	
125	29100104	Regualtor AR40-04	1	
126	2704984	U style screw	2	
127	28717135	Round flat button YW1B-M4E10G	2	
128	2871119	Knob, selector switch YW1S-2111P (1A1B)	1	
129	2911223	Valve MVSC180-4E2C-AC24	2	
130	2911945	Valve VXS2360-10-BDR1	2	
131	2909258	Elbow 1"	2	

6.2 BOTTOM MODEL

Bottom Model Diagram



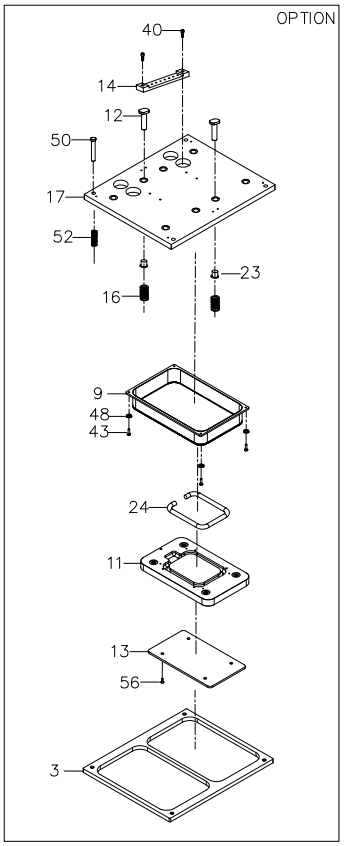
NO.	PART NO.	DESCRIPTION	QTY	NOTES
1	VT57150000	Chain fixed mount	1	
2	VT57134000	Chain	1	
3	VT57135000	Gear	1	
4	VT57137000	Gear	1	
5	VT57138000	Gear shaft	1	
6	VT57139000	Bearing mount	1	
7	VT57140000	Guide block	1	
8	VT57141000	Guide block	1	
9	VT57142001	Chain	1	
10	VT57143000	Axle	1	
11	VT57144000	fixed mount	1	
12	VT57145000	Axle	1	
13	VT57147000	Guide roller mount	1	
14	VT57148000	Guide roller	2	
15	VT57149000	Shaft fixed plate	1	
16	VT40201010	Bottom seal box	1	
17	VT40201020	Bottom box back out side plate	1	
18	VT40201030	Bottom box front out side plate	1	
19	VT57231040	Bottom box out side plate	2	
20	VT57203000	Cylinder top block	2	
21	VT40M12000	Cylinder top plate	1	
22	VT40M28000	Cylinder top plate (2 box)	1	OPTION
23	VT40232010	Bottom box inner side plate	2	
24	VT57232020	Bottom box inner side plate	2	
25	VT40M20000	Bottom box plate	1	
26	VT40M27000	Bottom box plate(2 box)	1	OPTION
27	VT40M21000	Bottom box silicone	1	
28	VT40M29000	Bottom box silicone(2 box)	2	OPTION
29	290932582	Nipple 1"x2"	1	
30	29276381	Cylinder MCJT-12-25-15	2	
31	2909323	Fitting SPC6-M5	4	
32	29093278	Nipple 1/2"x30	4	
33	2701190	Socket set screw M5x35	4	
34	2701151	Socket set screw M6x12	10	
35	2701152	Socket set screw M6x16	8	

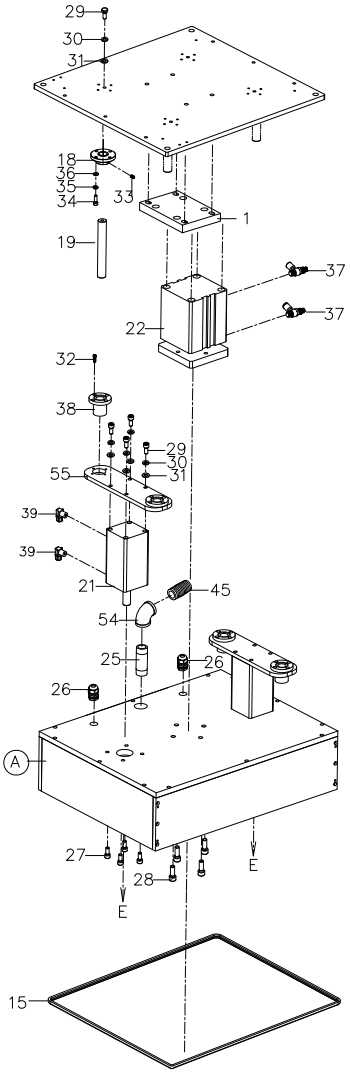
NO.	PART NO.	DESCRIPTION	QTY	NOTES
36	2700439	Hex head screw M6x25	6	
37	2705302	Split lock washer M6	14	
38	2705151	Flat washer M6	6	
39	2701153	Socket set screw M6x20	6	
40	27280044	Bearing 6004ZZ	2	
41	27060151	Ring S20	2	
42	2709206	key	2	
43	2704601	Cap M6x6	2	
44	29201581	Cylinder CDM2C40-250A-C73	1	
45	27280135	Bearing 6902ZZ	4	
46	27060041	Ring S15	2	
47	2701168	Socket set screw M8x16	2	
48	27004152	Hex head screw M8x10	2	
49	2705301	Split lock washer M8	2	
50	2705152	Flat washer M8	2	
51	27060071	Ring S14	1	
52	2706060	Ring S10	1	
53	2908015	Fitting JSC 6-02	2	
54	2707204	Nut M6	4	
55	2728413	Rod eye PHS M14x1.5 R	1	
56	2909258	Elbow 1"	1	
57	290932584	Nipple 1"x3	1	
58	27004114	Flat head screw M6x30	8	
59	274000661	Elbow 1/2"	4	
60	290932651	Nipple 1/2"x2"	3	
61	29093269	Nipple 1/2"x4"	1	
62	29090097	Pipe 1/2"	1	
63	27004114	Flat head screw M6x30	8	
64	27080071	Pin φ5x20	8	
65	VT40M21000	Bottom box silicone	1	

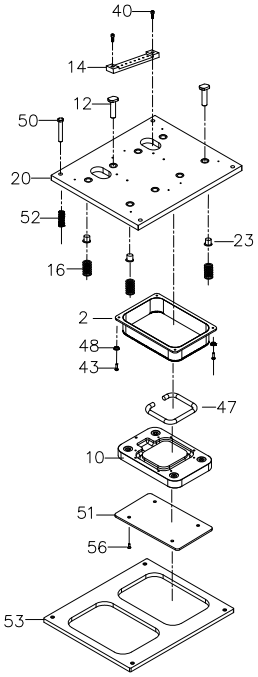
NO.	PART NO.	DESCRIPTION	QTY	NOTES
A	VT40231000	Bottom box assembly	1	
B	VT40232000	Bottom box inner assembly	1	

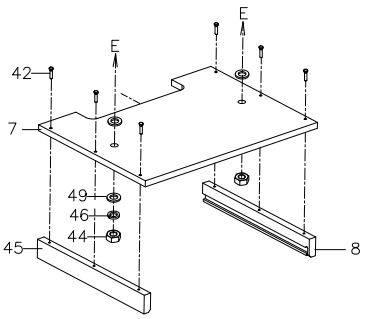
6.3 UPPER MODEL

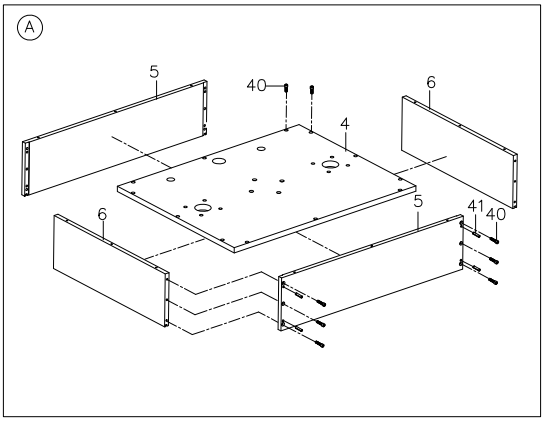
Upper Model Diagram











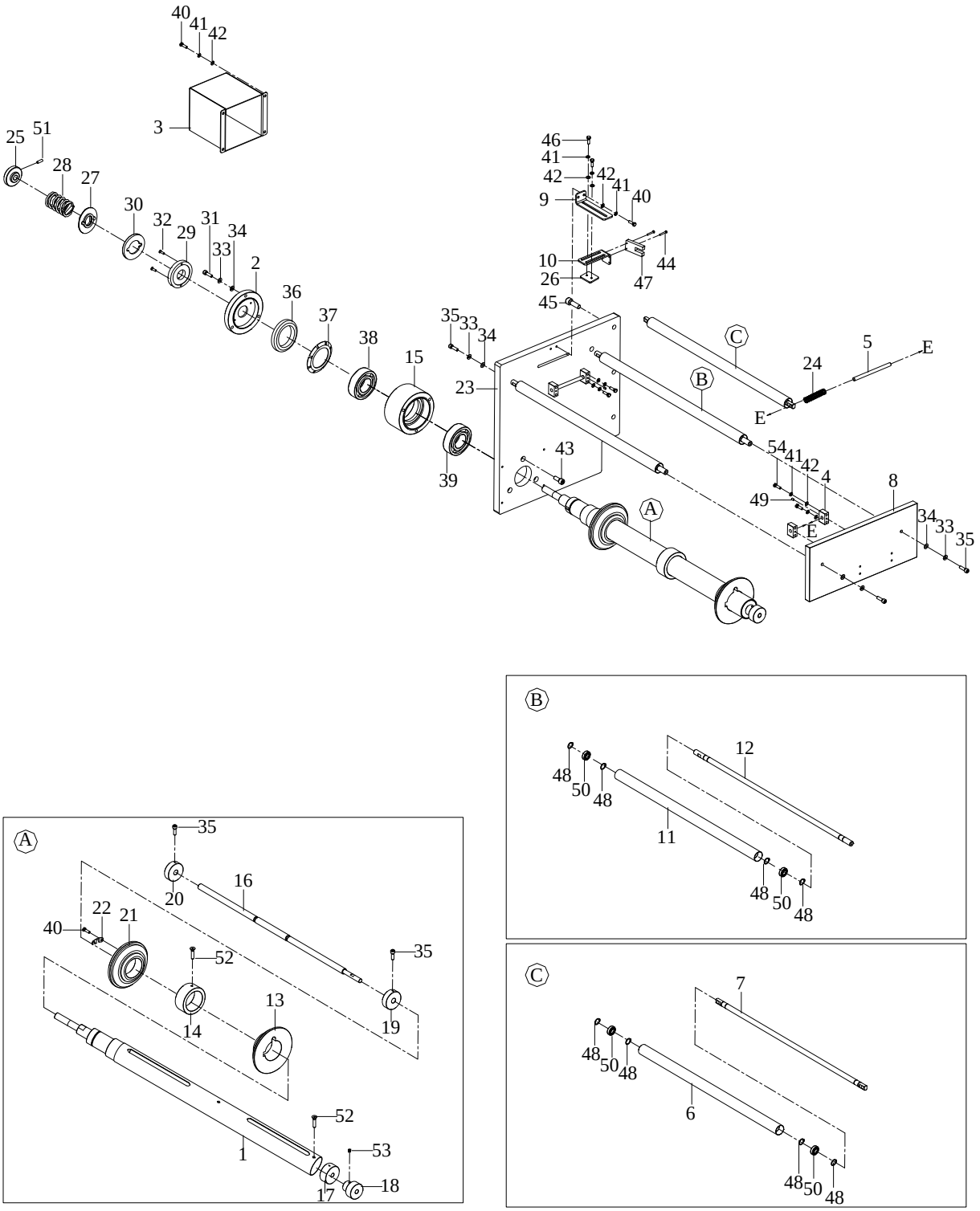
VT40300000

NO.	PART NO.	DESCRIPTION	QTY	NOTES
1	VT57123000	Cylinder fixed plate	1	
2	VT40M22000	Cutter mount	2	
3	VT40M36000	Presses the plate	1	OPTION
4	VT40330010	Top box up plate	1	
5	VT40330022	Top box side plate	2	
6	VT40302032	Top box side plate	2	
7	VT40336000	Top box cylinder connect plate	1	
8	VT57338000	Top mold left guide	1	
9	VT40M32000	Cutter mount	1	OPTION
10	VT40M24000	Bottom plate	2	OPTION
11	VT40M34000	Bottom plate	1	
12	VT57311001	Spring mount	8	
13	VT40M35000	Heat insulation	1	OPTION
14	VT57313000	Heat slice connect mount	2	
15	VT40338000	Top box silicon	1	
16	VT57315001	Spring	8	
17	VT40M33000	Cutter mount plate	1	OPTION
18	VT57317000	Shaft fixed mount	2	
19	VT57318000	Shaft	4	
20	VT40M23000	Cutter mount plate	1	
21	29276380	Cylinder MCJT-11-63-100M	2	
22	29276379	Cylinder MCJG-12-100-80	1	
23	27283412	Dried bearing LFF-1212	16	
24	VT40M05000	Heat slice	2	OPTION
25	290932582	Nipple 1"x2"	1	
26	2861071	Connector,NBA21-H4-04	2	
27	2701174	Socket set screw M8x30	8	
28	2701159	Socket set screw M10x20	4	
29	2701173	Socket set screw M8x25	24	
30	2705301	Split lock washer M8	24	
31	2705152	Flat washer M8	24	
32	2701165	Socket set screw M5x12	32	
33	2704603	Set screw M6x10	4	
34	2701153	Socket set screw M6x20	16	
35	2705302	Split lock washer M6	32	
36	2705151	Flat washer M6	16	

NO.	PART NO.	DESCRIPTION	QTY	NOTES
37	2908017	Fitting JSC802	2	
38	27281027	Bearing linear LMF20UU	4	
39	29093211	Fitting JPL802	2	
40	2701167	Socket set screw M5x20	14	
41	27080071	Pin 5x20	8	
42	2701208	Socket set screw M6x30	6	
43	2703320	Round head screw M4x12	8	
44	27070411	Nut M18x1.5	2	
45	VT57337000	Top mold right guide	1	
46	2705325	Split lock washer M18	2	
47	VT40M05000	Heat slice	1	
48	2705154	Split lock washer M4	8	
49	2705192	Washer M18	2	
50	VT57345000	Bolt	4	
51	VT40M25000	Heat insulation	1	
52	VT57346000	Spring	4	
53	VT40M26000	Presses the plate	1	
54	27400069	Elbow 1"	1	
55	VT57316000	Linear bearing fixed mount	2	
56	VT40M45000	Bolt	8	

6.4 IN FILM MODEL

In Film Model Diagram



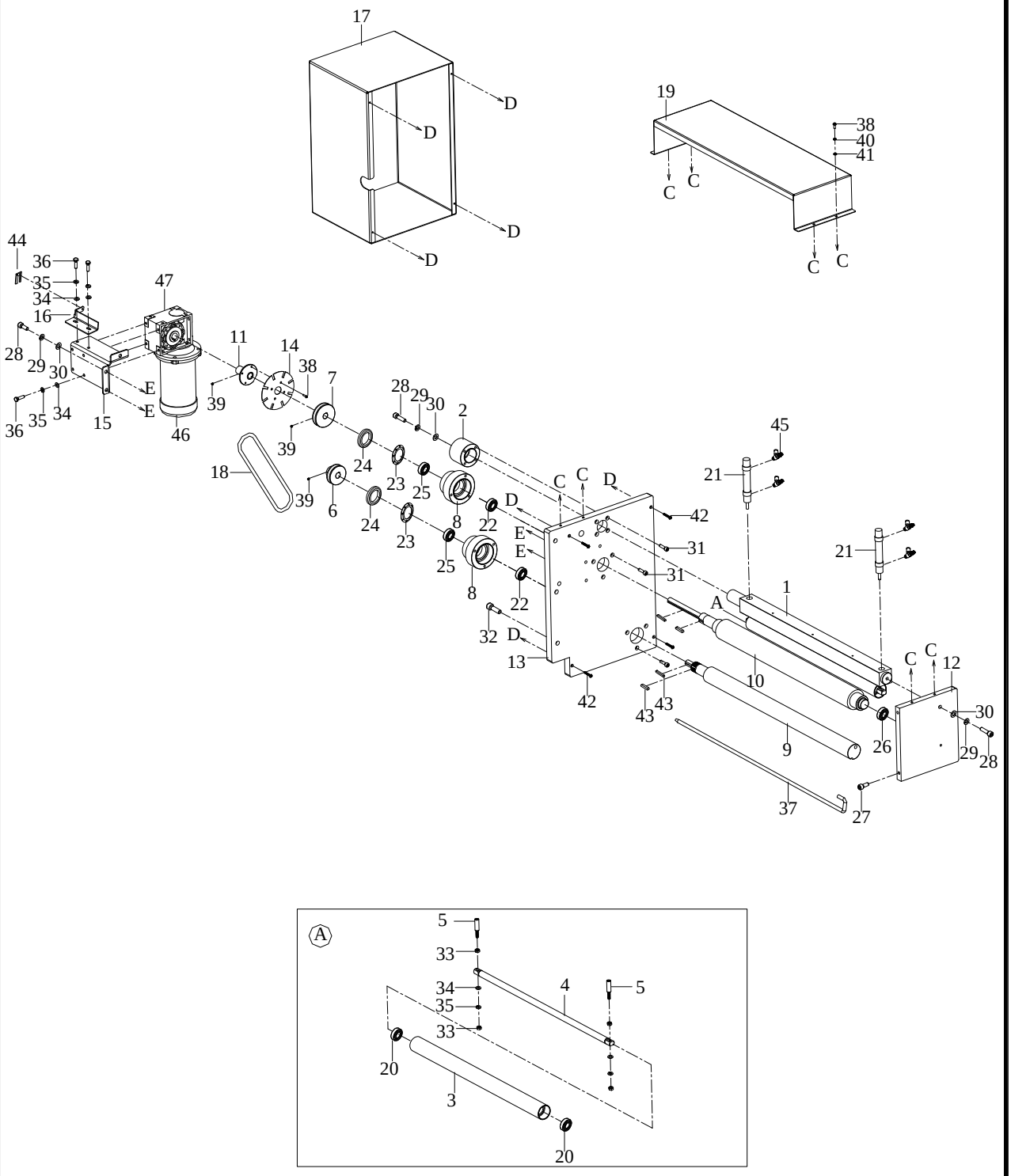
VT40400000

NO.	PART NO.	DESCRIPTION	QTY	NOTES
1	VT57401000	Adjust roller shaft	1	
2	VT57402000	Bearing fixed mount	1	
3	VT57403000	Cover plate	1	
4	VT57404000	Roller shaft fixed mount	8	
5	VT57405000	Roller guide shaft	4	
6	VT57406000	Roller	2	
7	VT57407000	Roller shaft	2	
8	VT57408000	Roller mount side plate	1	
9	VT57409000	Proximity fixed plate	1	
10	VT57410000	Proximity fixed plate	1	
11	VT57411000	Roller	1	
12	VT57412000	Roller shaft	1	
13	VT57413000	Adjust guide bushing	1	
14	VT57414000	Bushing	1	
15	VT57415000	Bearing fixed mount	1	
16	VT57416000	Adjust rod	1	
17	VT57417000	Adjust rod shaft bushing	1	
18	VT57418000	Adjust nut	1	
19	VT57419000	Adjust bushing	1	
20	VT57420000	Adjust bushing	1	
21	VT57421000	Adjust bushing	1	
22	VT57422000	Adjust bushing	1	
23	VT57423000	Roller mount side plate	1	
24	VT57424000	Roller spring	2	
25	VT57425000	Nut	1	
26	VT57431000	Fixed plate	1	
27	VT57427000	Fixed part	1	
28	VT57428000	Spring	1	
29	VT57519000	Fixed part	1	
30	2A316032	Rub slice	1	
31	2701208	Socket set screw M6x30	3	
32	2702261	Flat head screw M4x12	2	
33	2705302	Split lock washer M6	5	
34	2705151	Flat washer M6	5	
35	2701153	Socket set screw M6x20	6	

NO.	PART NO.	DESCRIPTION	QTY	NOTES
36	2728980	Bearing nut AN08	1	
37	2728981	Bearing waher AW08	1	
38	27062195	Bearing 30208	1	
39	2728047	Bearing 6208ZZ	1	
40	2700414	Hex head screw M5x12	8	
41	2705303	Split lock waher M5	10	
42	2705150	Flat waher M5	10	
43	2701173	Socket set screw M8x25	3	
44	27033311	Round head screw M3x16	2	
45	2701159	Socket set screw M10x20	2	
46	2700413	Hex head screw M5x16	2	
47	2850123	Sensor SU-07X	1	
48	27060021	Ring S12	12	
49	27046081	Cap M4x6	1	
50	27062197	Bearing NA4901	6	
51	27080071	Pin φ5x20	1	
52	2702252	Flat head screw M6x12	1	
53	2704603	Set screw M6x10	1	
54	27004131	Hex head screw M5x25	4	

6.5 SHRINK FILM MODEL

Shrink Film Model Diagram



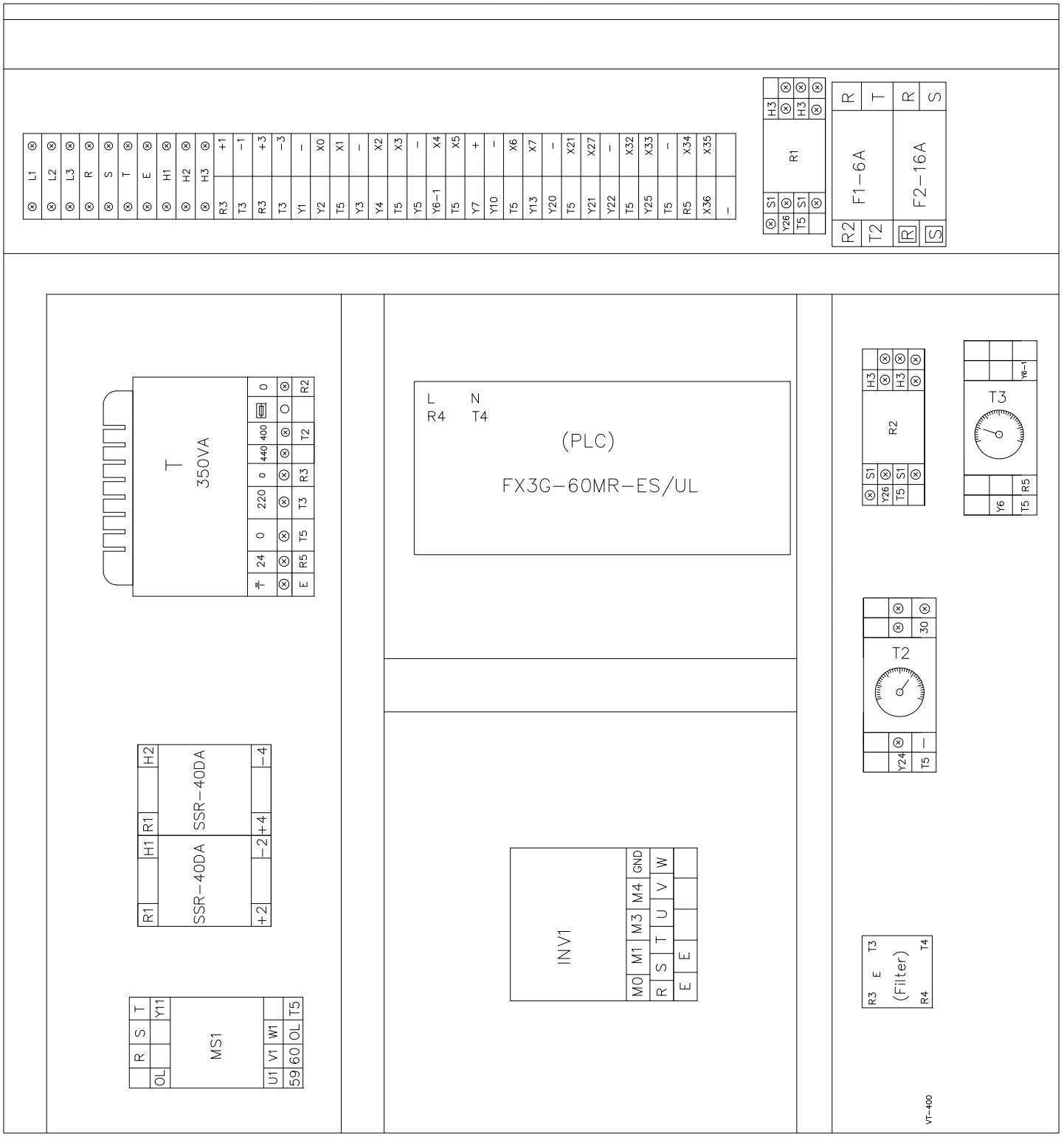
VT40500000

NO.	PART NO.	DESCRIPTION	QTY	NOTES
1	VT57501000	Roller mount	1	
2	VT57502000	Roller mount	1	
3	VT57503000	Roller	1	
4	VT57504000	Roller shaft	1	
5	VT57505000	Cylinder connect rod	1	
6	VT57506000	Belt roller mount -R	1	
7	VT57507000	Belt roller mount -R	1	
8	VT57508000	Shrink film bearing mount	2	
9	VT57509000	Shrink film roller	1	
10	VT57510000	Right rubber roller	1	
11	VT57511000	Motor turn plate bushing	1	
12	VT57512000	Right roller mount side plate	1	
13	VT57513000	Shrink film roller side plate	1	
14	VT57515000	Sensor plate	1	
15	VT57516000	Sensor fixed mount	1	
16	VT57517000	Sensor fixed mount	1	
17	VT57518000	Cover	1	
18	VT57520000	Belt	1	
19	VT57521000	Cover	1	
20	27280091	Bearing 6202	2	
21	29276382	Cylinder MCMI-11-16-25	2	
22	27280531	Bearing 6205	2	
23	2728987	Bearing washer AW05	2	
24	2728989	Bearing nut AN05	2	
25	27062196	Bearing 30205	2	
26	27280165	Bearing 6905	1	
27	2701157	Socket set screw M8x45	2	
28	2701156	Socket set screw M8x20	2	
29	2705301	Split lock washer M8	1	
30	2705152	Flat washer M8	1	
31	2701154	Socket set screw M6x25	10	
32	2701159	Socket set screw M10x20	2	
33	2707204	Hex nut M6	4	
34	2705151	Flat washer M6	2	
35	2705302	Split lock washer M6	2	

NO.	PART NO.	DESCRIPTION	QTY	NOTES
36	2700401	Hex head screw M6x12	6	
37	VT57522000	Rod	1	
38	2703344	Round screw head M4x10	1	
39	27046081	Cap M4x6	3	
40	2705306	Split lock washer M4	4	
41	2705154	Flat washer M4	4	
42	2703327	Round screw head M4x20	4	
43	27090081	Key 5x5	1	
44	2850025	Sensor EE-SX672	1	
45	2909302	Fitting KLC6-M5	4	
46	2819981	Motor,CM-09-I-A-90-TB-F-LK	1	
47	2819980	Decelerator LE-NEOM-30-30-90W	1	

6.6 ELECTRICAL BOX

3ϕ 220V 50/60Hz



ITEM	PART NO.	DESCRIPTION	SPECIFICATION	Q'TY	NOTE
MSI	2810739	Contactor	CU-11-B5 (AC24V)	1	
F1	2801815	Switch	FAZ-2-S6	1	
F2	2801817	Switch	FAZ-S16-2	1	
SSR-40DA	2896421	Colling	Colling HS-50	2	
	2830027	Relay	SSR-40DA	2	
PLC	2823531	PLC	FX3G-60MR-ES/UL	1	
T1	28960041	Transformer TBSW-1I-350VA	OF-400-440V/0-220,OF 0-24V	1	
MSI	28961076	Filter	Y06T1	1	
MSL OL	2811535	Relay,Overload	RHN-10K	1	
IN1	2805144	INVERTER	VFD004S43A	1	
PTU-30	2843209	Terminal Block	BLOCK PTU-30	10	
PUW-20	2843205	Terminal Block	BLOCK PUW-20	27	
R1-R2	2831106	Relay basement	SY4S-050	1	
	2830132	Relay	RU4S-C、A24		
T1-T3	2833329	OMRON Relay basement	PYF108A-E	1	
	2833328		AMY.26S		