



TM-3000S

Vacuum Tumbling Machine

Operation Manual

Version 6.9.1

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1. INSTALLATION

Please check the electric power listed on the vacuum pump and install the vacuum pump correctly,
ground line must on the floor.

2. MAINTENANCE

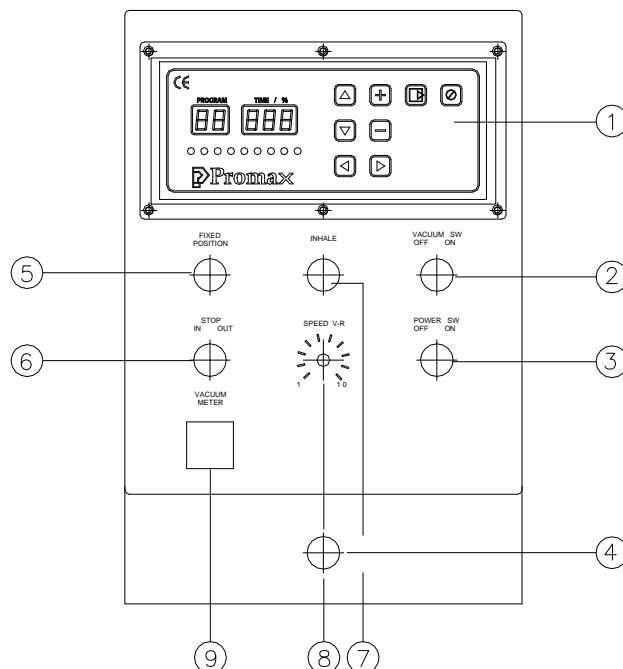
- A. To ensure vacuum pump works smoothly suggest change the vacuum oil every 500 working hours or every a half year.
- B. Check water filter bottle everyday, as soon as the water over a half of the bottle please cleans it.

3. FUNCTIONS AND OPERATIONS

3.1 (For PV-03)

- 1 LED control panel
- 2 Vacuum switch
- 3 Power switch
- 4 Emergency stop
- 5 Fixed position
- 6 In/Stop/Out switch
- 7 Inhale
- 8 Speed V-R
- 9 Vacuum meter

Cleaning. The tumbler inside must be cleaned everyday after working hours.



4.OPERATION

PV-03 CONTROL UNIT MANUAL



1. When power on, STB LED light will be on. Wait for 2 seconds; you will be in the operation display.
2. Press “SHIFT” button , you can choose “Mix Time”, “Rest Time”, and “Cycle” , but you just can read “Total Time”, no data input necessary. Because “Total Time=Cycle x (Mix Time + Rest Time).”
3. “Mix Time” and “Rest Time” can input with Hour and Min. If the numbers on the display without “Dot” (On the lower right hand side of display), this means you input the “MINUTES”. If you want to put HOUR, please press the “HR/MIN” button to switch between HOUR and MINUTES display. When the numbers on the display with “Dot”, this means you are inputting the HOUR. °

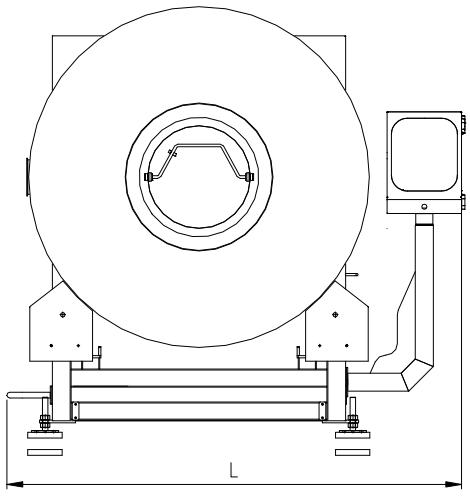
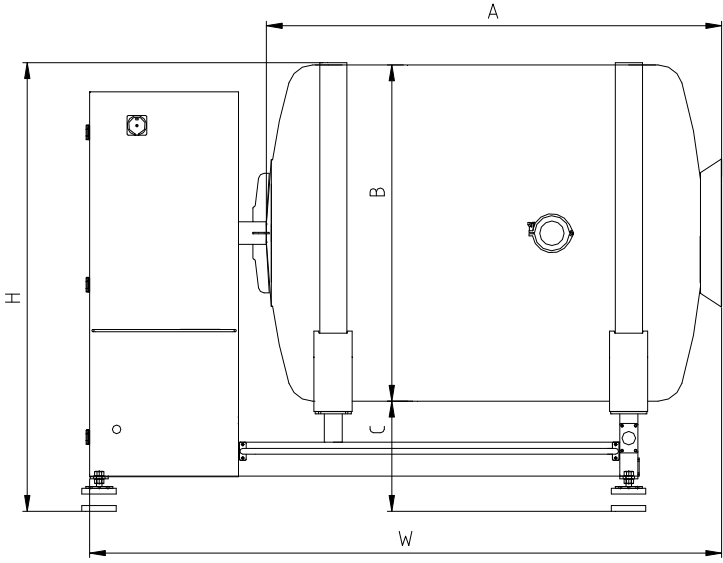
For example:

In program#1, you plan to input 1hr and 20 min mixing time in the control panel.The way to do:
Shift the Led light on the mixing time
Make the display with “Dot” on the lower right hand side of display. This means you are in the Hour input.

1. Use + button to add 1
2. Press the hr/min button one time switching to MINUTE display. Use + button to add 20 on
On the program#1, having mix time with 1hr and 20 min.
3. Use ▲ and ▼ button to switch the PROGRAM. There are 20 programs memory for saving data. Press + or -button to adjust the value and use the shift button to select the mixing time, rest time and cycle.
4. To activate the tumbler, please press START/PAUSE button once. If you want to stop the operation, you can press STOP CYCLE button. If you want to pause the cycle, please press START/PAUSE button during the operation. If you want to restart the operation, please press the START/PAUSE button again.
5. During the operation, presses HR/MIN, you can check the remaining time for the operation.
6. If the single digit has “dot” on, the number means how many HOURS left. If the single digit has NO “dot”, the number means how many MINTUTES left. To know the total time left, you need to check the Hours and Minutes.

5.MACHINE SPECIFICATION

| Model | W | L | H | A | B | C | Capacity |
|----------|--------------|-------------|-------------|-------------|--------------|------------|----------|
| TM-3000S | 2875(113.2") | 1965(77.4") | 2005(78.9") | 2025(79.7") | ø1490(58.7") | 505(19.9") | Kg |



6.MACHINE OPERATION EXPLAIN.

Check the right power source with the name plate of the machine. Plug in the power and ready to operate the machine.

Turn on main power switch and set the value on control panel. After finish all of the setting push down the safety bar and press “Start/Pause” button to start the function. Safety function will be effective and machine will stop at the same time while user pull up the safety bar or gear motor box during working process.

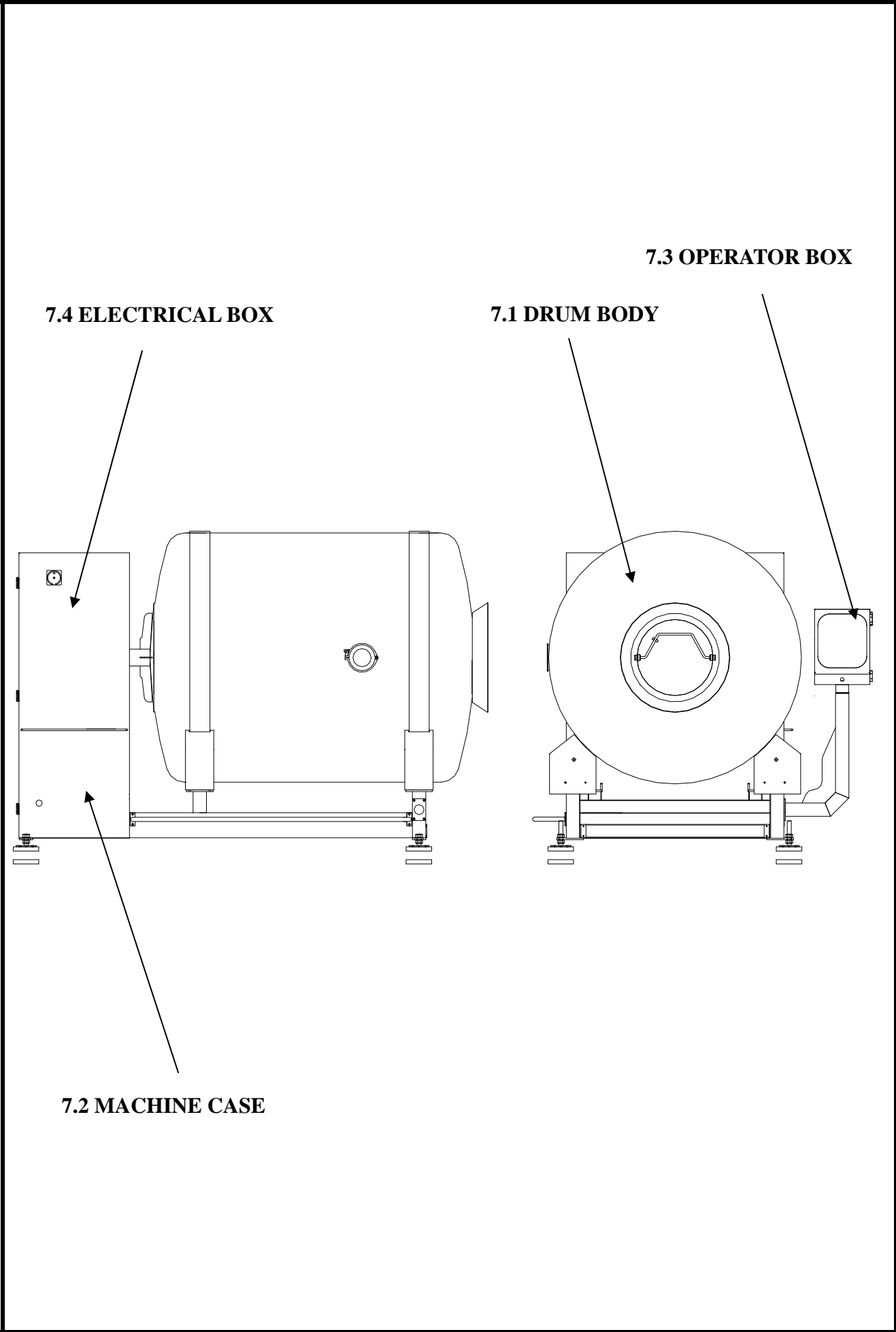
After vacuum tumbling job finish, machine will stop and air ventilation at the same time. As soon as machine finish air ventilation, open the vacuum cover and use unloading switch to unload the product in drum.

The stopper on the side of the machine is design to hold the drum and remain it in the same angle and help user to load in the processing product. How to use the stopper:

- A. Push in the handle bar of stopper to the hole of the drum before load in the processing product.
- B. Pull back the handle bar of stopper from the hole of the drum before start the machine.

Warning: The handle bar of the stopper must be pulled back before user start the machine!! The machine will be damaged if user have not fulfill it!!

7. FABRICATION



7.4 ELECTRICAL BOX

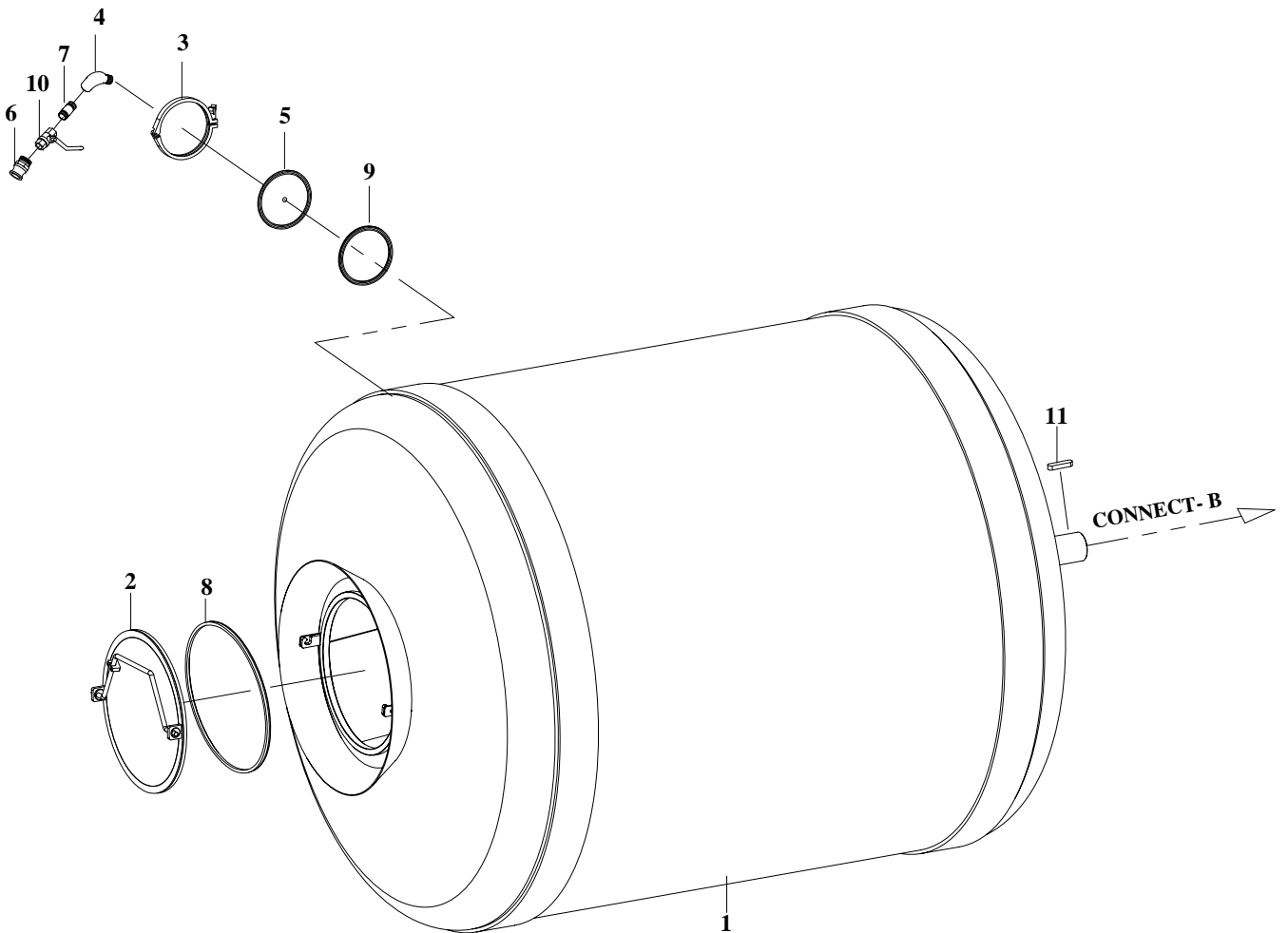
7.1 DRUM BODY

7.3 OPERATOR BOX

7.2 MACHINE CASE

7.1 DRUM BODY

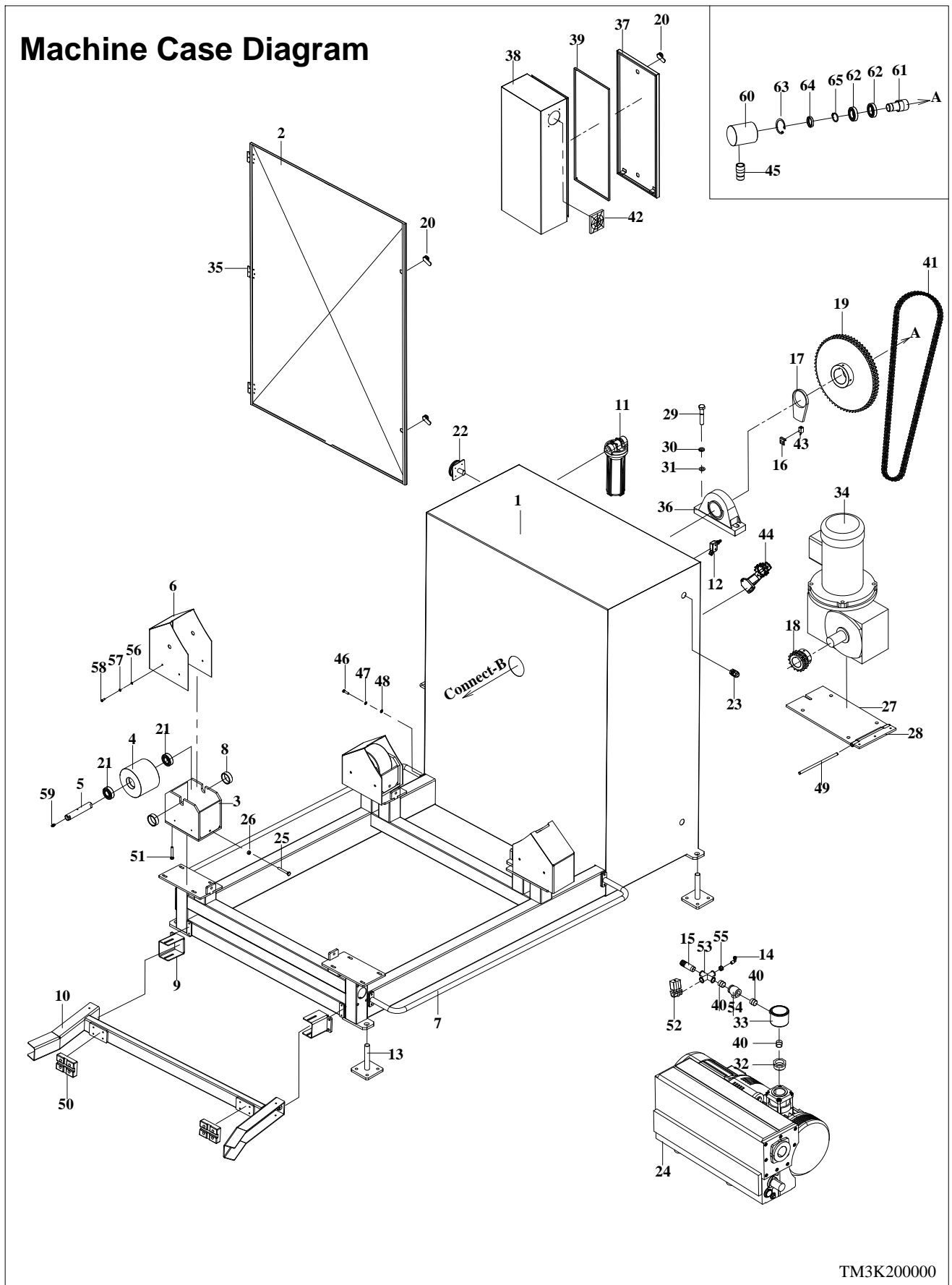
Drum Body Diagram



TM3K10000

| NO. | PART NO. | DESCRIPTION | QTY | NOTES |
|------------|-----------------|--|------------|--------------|
| 1 | TM3K201000 | Drum tank | 1 | |
| 2 | TM3K202000 | Front corver | 1 | |
| 3 | 29092253 | Heavy duty single pin clamp IDF-015 6" | 1 | |
| 4 | 29092621 | Fitting 3/4" | 1 | |
| 5 | TM1K206000 | Fitting | 1 | |
| 6 | 29093294 | Fitting 316 F 3/4" | 1 | |
| 7 | 290932782 | Nipple 3/4"x9cm | 1 | |
| 8 | 3114467 | Lid gasket | 1 | |
| 9 | 29092254 | Gasket IDF-017 6" | 2 | |
| 10 | 29095031 | Fitting 3/4" | 1 | |
| 11 | TM3K231000 | Key 22x14x77 | 1 | |
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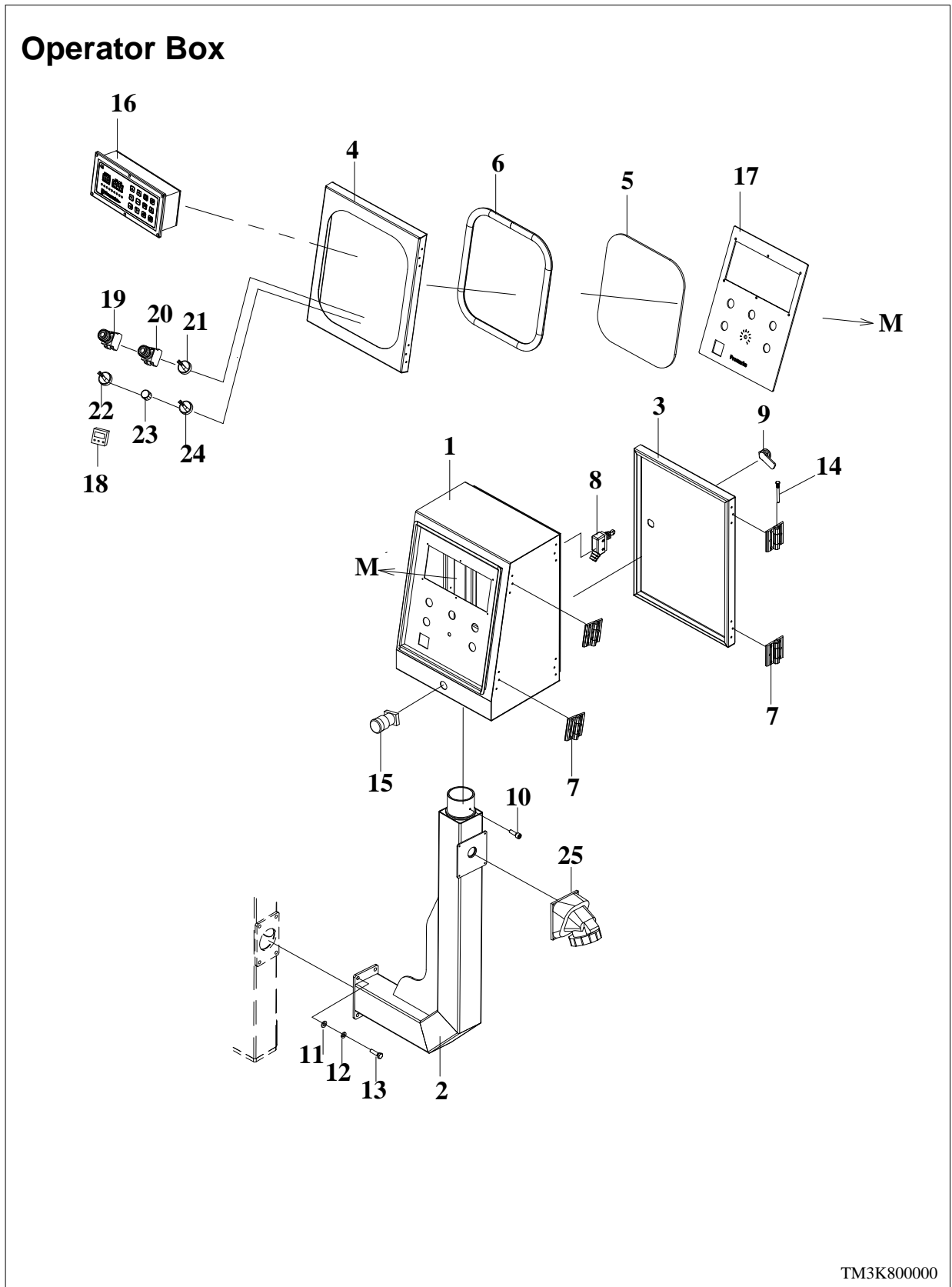
7.2 MACHINE CASE DIAGRAM



| NO. | PART NO. | DESCRIPTION | QTY | NOTES |
|-----|------------|------------------------------|-----|-------|
| 1 | TM3K101000 | Frame | 1 | |
| 2 | TM3K102000 | Side door | 1 | |
| 3 | TM3K103000 | Wheel fixed plate | 4 | |
| 4 | TM3K104000 | Wheel | 4 | |
| 5 | TM3K105000 | Shaft | 4 | |
| 6 | TM3K117000 | Wheel cover | 4 | |
| 7 | TM3K107000 | Protect rod | 2 | |
| 8 | TM3K113000 | Pad | 8 | |
| 9 | TM3K125000 | Plate | 2 | |
| 10 | TM3K124000 | Plate | 1 | |
| 11 | 2940004 | Filter bottle | 1 | |
| 12 | 2853313 | Limit switch | 1 | |
| 13 | TM3K106000 | Base leg | 4 | |
| 14 | 29093432 | Fitting A036-2 1/2"x5/16" 90 | 1 | |
| 15 | TM1K122000 | Fitting | 1 | |
| 16 | TM1K112000 | Sensor fixed plate | 1 | |
| 17 | TM3K111010 | Switch sensor plate | 1 | |
| 18 | TM3K109000 | Chain wheel | 1 | |
| 19 | TM3K116000 | Chain wheel | 1 | |
| 20 | 2883349 | Round lock C-408K | 4 | |
| 21 | 27280423 | Bearing 6206 | 8 | |
| 22 | 28017051 | Switch | 1 | |
| 23 | 2861025 | Straight connectot MG20A | 1 | |
| 24 | PRA205-230 | Vacuum pump | 1 | |
| 25 | 2700454 | Hex head screw M10x70 | 4 | |
| 26 | 2707017 | Nut M10 | 4 | |
| 27 | TM3K121000 | Motor fixed plate | 1 | |
| 28 | TM3K122000 | Motor fixed plate | 1 | |
| 29 | 27002051 | Hex head screw M22x70 | 2 | |
| 30 | 2705232 | Split lock washer M22 | 2 | |
| 31 | 27051291 | Flat washer M22 | 2 | |

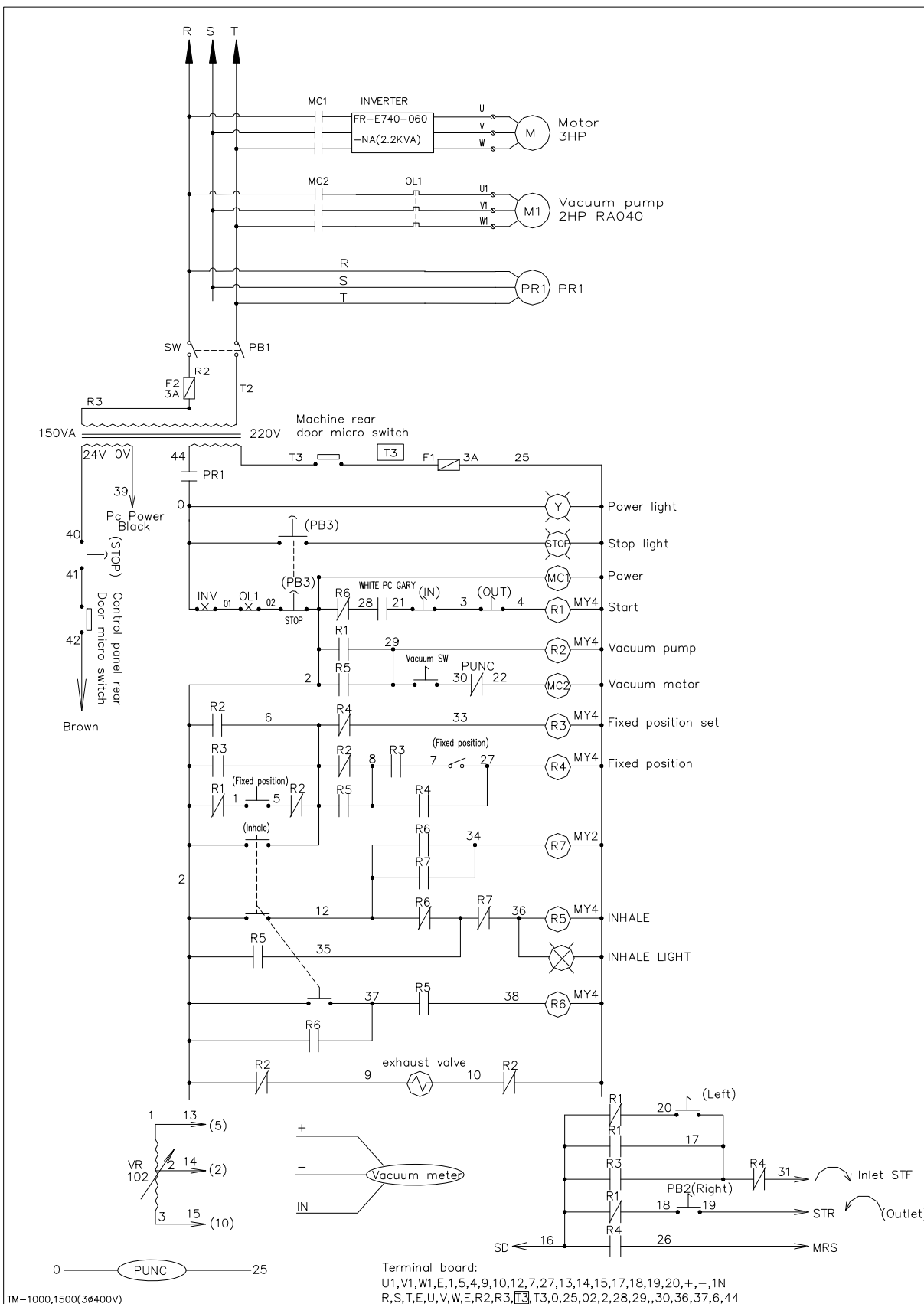
| NO. | PART NO. | DESCRIPTION | QTY | NOTES |
|-----|------------|--|-----|-------|
| 32 | 29092083 | Fitting 1-1/4"x3/4" | 1 | |
| 33 | 293080 | Air filter 3/4" | 1 | |
| 34 | 28143068 | Motor WRS AEUL 5HP/4P 220/380V 50/60HZ | 1 | |
| 35 | D2320000 | Hinge | 3 | |
| 36 | 272855713 | Bearing pillow block UCP216 | 1 | |
| 37 | TM1K802001 | Electrical box door | 1 | |
| 38 | TM1K801001 | Electrical box | 1 | |
| 39 | TM1K803001 | Panel | 1 | |
| 40 | 29092183 | Fitting 3/4"x3cm | 3 | |
| 41 | 2713RS60-2 | Chain RS60-2 | 1 | |
| 42 | 2893126 | Fan | 2 | |
| 43 | 28511110 | Sensor | 1 | |
| 44 | 2714252 | Chain wheel plate RSC-45-60D | 1 | |
| 45 | DC80150001 | Fitting | 1 | |
| 46 | 2700408 | Hex head screw M8x20 | 12 | |
| 47 | 2705301 | Split lock washer M8 | 12 | |
| 48 | 2705152 | Flat washer M8 | 12 | |
| 49 | TM3K123000 | Shaft | 1 | |
| 50 | 27412084 | Protect plate | 2 | |
| 51 | 2700400 | Hex head screw M10x25 | 16 | |
| 52 | 29110018 | Valve MUV-20-D-AC220V | 1 | |
| 53 | 29091507 | Fitting 3/4" | 1 | |
| 54 | 2914059 | Valve YORK itap 3/4" | 1 | |
| 55 | 2909141 | Fitting 3/4"x1/2" | 1 | |
| 56 | 2705151 | Flat washer M8 | 12 | |
| 57 | 2705302 | Split lock washer M6 | 12 | |
| 58 | 27004021 | Hex head screw M6x20 | 16 | |
| 59 | 2740140 | Nipple graese 1/8T | 4 | |
| 60 | TM3K204000 | Fitting | 1 | |
| 61 | TM3K205000 | Fitting | 1 | |
| 62 | 27280643 | Bearing 6008 | 2 | |
| 63 | 2706241 | Ring R68 | 1 | |
| 64 | 274005922 | Oil seal D40x62x11 | 1 | |
| 65 | 27060131 | Ring S40 | 1 | |

7.3 OPERATOR BOX

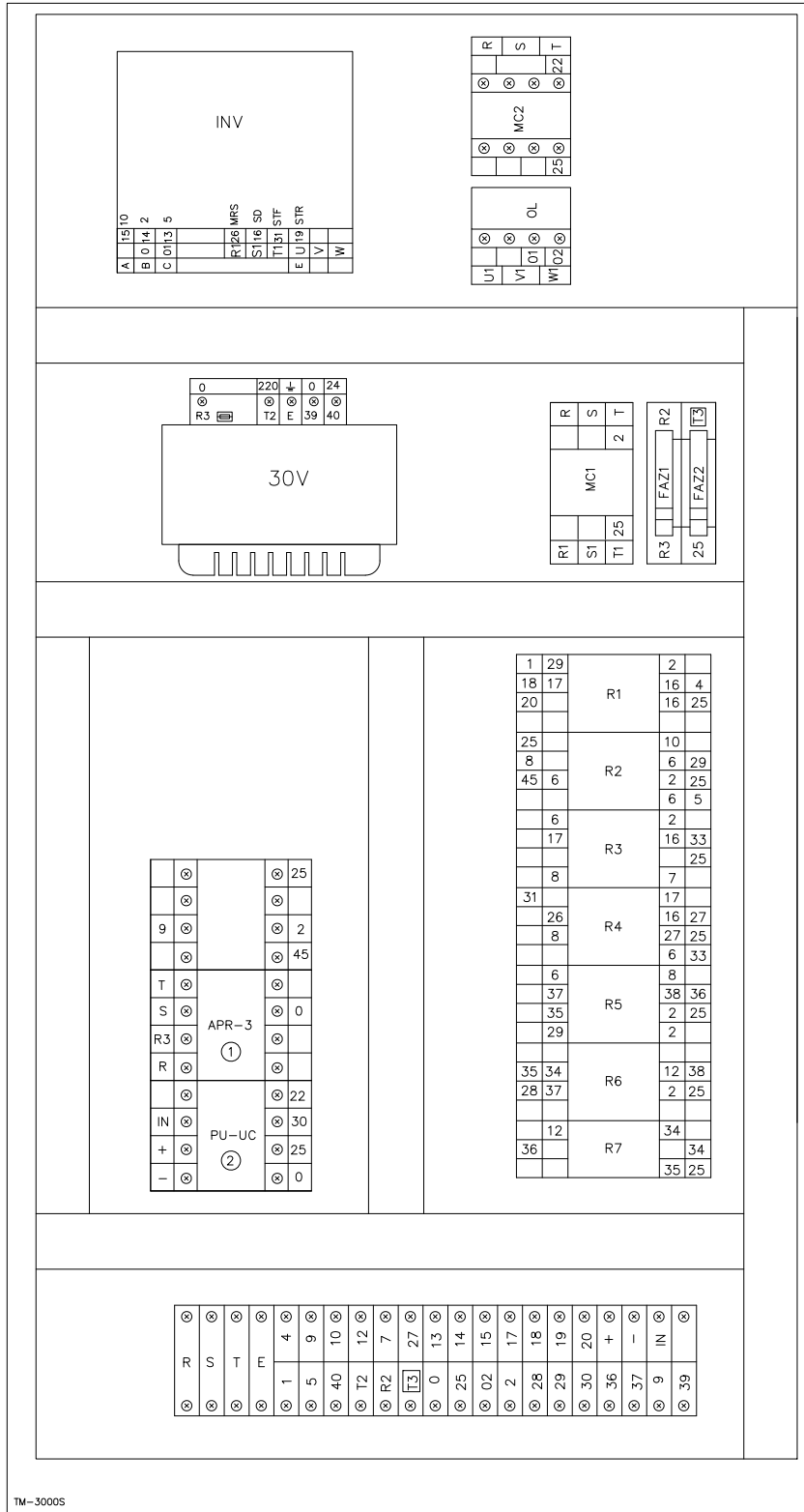


| NO. | PART NO. | DESCRIPTION | QTY | NOTES |
|-----|------------|-----------------------------------|-----|-------|
| 1 | TM1K811001 | Operation box | 1 | |
| 2 | 137017A0 | Operation box support base | 1 | |
| 3 | TM1K813000 | Operation box back-cover | 1 | |
| 4 | TM1K814010 | Operation box cover | 1 | |
| 5 | TM1K814020 | Window | 1 | |
| 6 | TM1K814030 | Gasket L=1020 | 1 | |
| 7 | D2320000 | Hinge | 4 | |
| 8 | 2853313 | Limit switch | 1 | |
| 9 | 2883349 | Door lock C408K | 1 | |
| 10 | 2701167 | Socket, hex hd M5x20 (S) | 1 | |
| 11 | 2890132 | Washer, flat M10 (S) | 4 | |
| 12 | 2705304 | Split lock washer M10 | 4 | |
| 13 | 27004001 | Screw, hex hd M10x20 (S) | 4 | |
| 14 | MSK1122000 | Pin, hinge | 4 | |
| 15 | 28700782 | Stop emergency NLB22-R11RI AC220V | 1 | |
| 16 | 2874044 | Control panel | 1 | |
| 17 | TM1K812000 | Control panel plate | 1 | |
| 18 | 2961019 | Pressure switch | 1 | |
| | 2961018 | Pressure switch mount | | |
| 19 | 2871704 | Switch yellow TE ZB4-BA5 | 1 | |
| | 28704940 | Button guard ZBPO | 1 | |
| 20 | 2871764 | Switch blue TE ZB4-BW36 | 1 | |
| | 28704940 | Button guard ZBPO | 1 | |
| 21 | 2871722 | Switch TE ZB4-BD2 | 1 | |
| 22 | 2871724 | Switch TE ZB4-BD3 | 1 | |
| 23 | 2896418 | Switch black | 1 | |
| | 2896440 | Variable resistor | | |
| 24 | 2871782 | Switch TE ZB4-BK1243 | 1 | |
| 25 | 2844012 | 3P+E380V/16A LEG55307 | 1 | |
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7.4 ELECTRICAL DIAGRAM



7.4 ELECTRICAL BOX



TM-3000S

| ITEM | PART NO. | DESCRIPTION | SPECIFICATION | Q'TY | NOTE |
|-----------|----------|-----------------|----------------------------------|------|----------------------------------|
| MC1 | 28107282 | Contactora | TELC1D018M7 (AC220V)F | 1 | |
| MC2 | 28107283 | Contactora | TELC1D09M7 (AC220V)F | 1 | |
| R1~6 | 2830197 | Relay | RXM4AB-2P7 AC220 | 6 | |
| | 2831106 | Socket,Relay | SY4S-05D | 6 | |
| R7 | 2830198 | Relay | RXM2A2P7 AC220 | 1 | |
| | 2833327 | Socket,Relay | PYF08A-C MY2 | 1 | |
| T1 | 28960018 | Transformer | 30VA/0-110-220V.OF- 24V UL | 1 | 3 ϕ 220V |
| | 28960082 | Transformer | 150VA/380-400- 415V.OF-24V UL | 1 | 3 ϕ 380/400V |
| KM1 OL | 2811645 | Relay, Overload | LRD-14(7-10A) | 1 | 3 ϕ 220V |
| | 2811616 | Relay, Overload | LRD-012(5.5-8A) | 1 | 3 ϕ 380/400V |
| IN1 | 2805424 | INVERTER | FR-E720-110-NA | 1 | 3 ϕ 220V TM1000/1500 |
| | 2805434 | INVERTER | FR-E740-060 | 1 | 3 ϕ 380/400V TM1000/1500 |
| QM1 | 28017051 | Switch selector | P1-32/EA/SVB | 1 | |
| TMR1 | 2832020 | TIMER | GE1A-B30HA220 | 1 | |
| PU-NC | 28560093 | Controller | DC12V 50mA (AC220) | 1 | |
| | 2833202 | Socket | PF-085A | 1 | |
| APR-3 | 2830154 | Relay | APR-3S AC208-440V | 1 | |
| | 2833202 | Socket | PF-085A | 1 | |
| T.B | 2843204 | Terminal,block | PUW-20 | 23 | |
| | 2843202 | Terminal,block | PTU-20L | 2 | |