SEMI-AUTO PALLET STRAPPING MACHINE

GENESIS HORI

TP-502MH

IMPORTANT
Keep it

OPERATION, SAFETY & SPARE PARTS MANUAL

TP-502MH
TP-502MHB (with battery)

Made in Taiwan

Read All Instructions Before Operating This Product

Original Instruction

03/2025

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PART I

1. General Safety Instructions

THIS MANUAL GIVES YOU INFORMATION ON SAFETY INSTRUCTIONS, SPECIFICATIONS, OPERATION AND MAINTENANCE OF STRAPPING MACHINES.

BEFORE OPERATING OR SERVICING THE MACHINE, PLEASE REVIEW THE ENTIRE MANUAL AND FOLLOW THE SAFETY INSTRUCTIONS CAREFULLY.

(1) Before Operating

a. Verify that the power line voltage is correct.
b. The machine must be properly grounded to avoid a shock hazard. All wiring must be in accordance with local wiring standards.
c. The strapping machine can only be operated with polypropylene (P.P.) strapping; do not use polyester (PET) strapping or polyethylene (PE) cord strap.

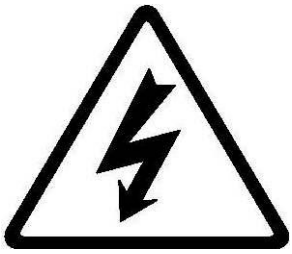
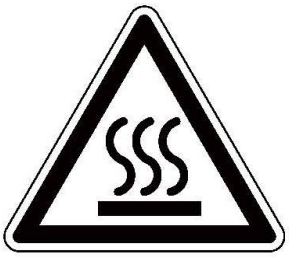
(2) During Operation

a. The lowest strapping position of the package should not be less than 175mm (6.88”).
b. Check if the machine emits any smokes or unusual sound when it is running.

(3) After operating

a. Remove dust and dirt from the unit.
b. Turn off the power when the machine is not in use.

(4) Signs and Symbols

Symbol	Meaning
	**Warning for dangerous voltage!** Contact with live electrical parts will result in severe injury or death.
	**Warning for hot surface!** Welding area is approximately 270°C(520°F) Allow sufficient time for the heater to cool down before any work in welding area.
	**Warning for danger!** Do not step into the machine below.
	**Warning for danger!** Do not put your hand below the moving unit.

(5) Maintenance

a. Turn off the power before removing either of the covers.
b. Use the correct tools and parts to repair the machine.
c. The heater tongue is very hot; do not touch it.

(6) Storage

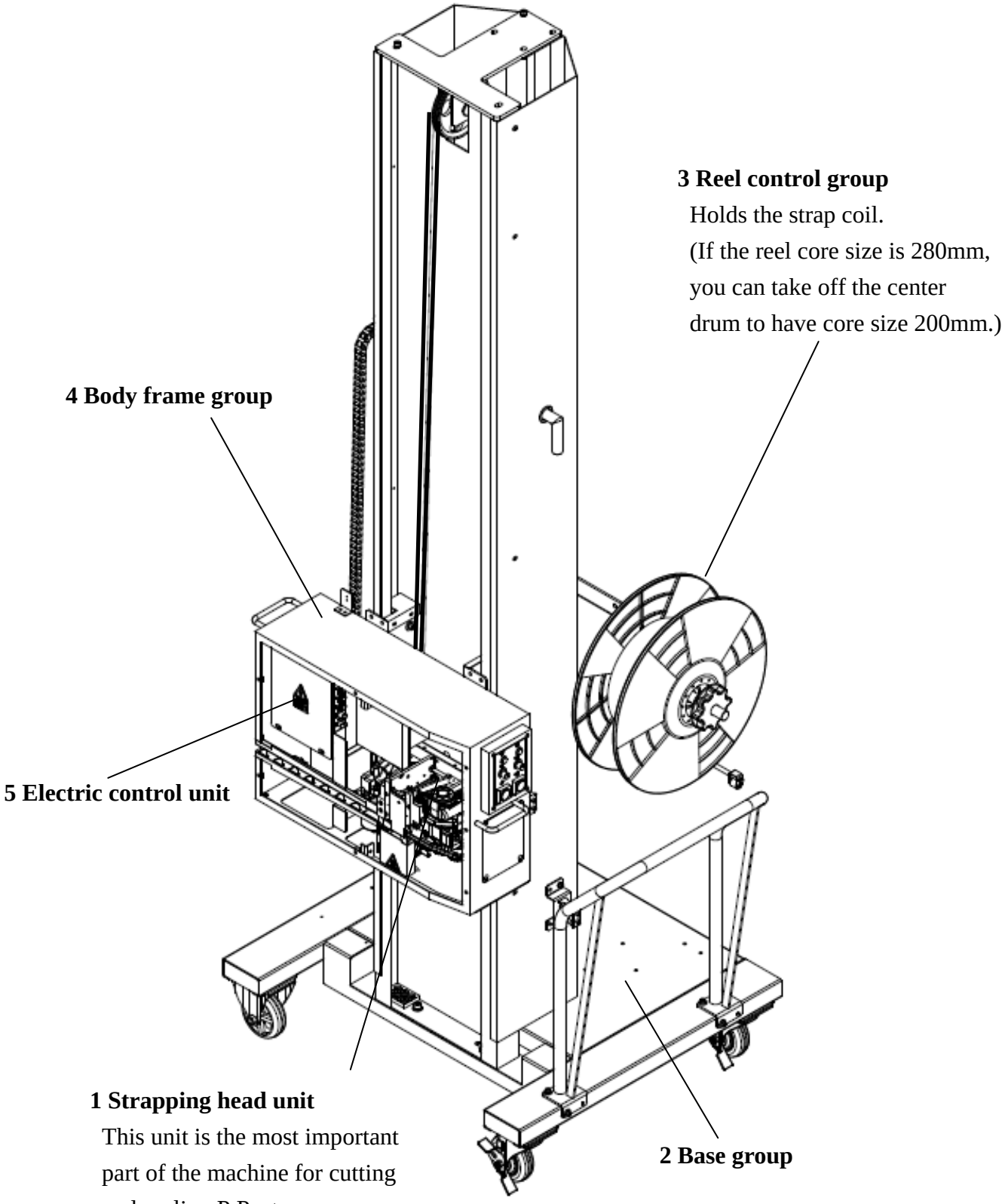
a. The store room must be dry.
b. Do not expose the machine to extreme cold or hot environment.
c. Place the machine on an even floor in order to avoid any distortion.

(7) Other Reminders

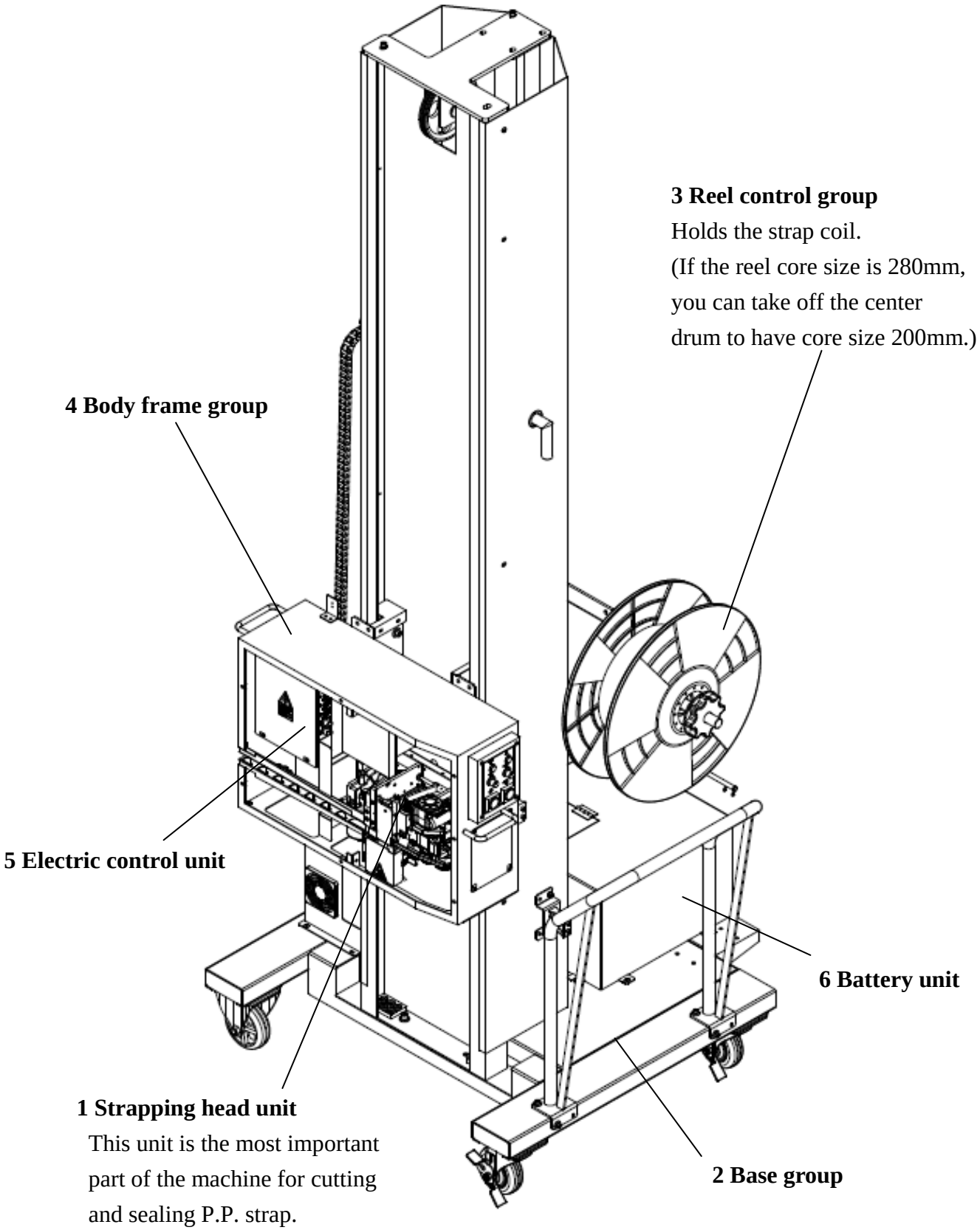
a. An operation manual must remain attached to the machine at all times.
b. Do not alter the equipment or circuitry unless authorized to do so by the manufacturer.
c. Do not operate the machine with the covers removed.
d. Never put any part of your body near, under or into a moving machine.
e. Do not overload the machine by exceeding the performance limitations specified in this manual.

2. Construction and Units

a. TP-502MH



b. TP-502MHB


3 Reel control group
Holds the strap coil.
(If the reel core size is 280mm, you can take off the center drum to have core size 200mm.)
4 Body frame group
5 Electric control unit
6 Battery unit
1 Strapping head unit
This unit is the most important part of the machine for cutting and sealing P.P. strap.
2 Base group

3. General Safety Remarks

(1) Basic Operation

The manual and the safety remarks are to be read before use. The operation manual should be kept with the machine at all times for regular maintenance and inspections.

This machine was built with state of the art technology and rigid adherence to safety standards.

Unless used properly, it can cause injury to operators or persons in close proximity to the machine. In addition, improper use can cause damage to the machine or property around the machine.

(2) Basic Safety Precautions

The user is to be instructed in all other generally applicable legal and other mandatory regulations relevant to accident prevention and environmental protection in addition to the operating instructions.

For safety reasons, long hair must be tied back or otherwise secured, garments must be close fitting and no jewelry may be worn.
Use protective equipment whenever required by circumstances or by law.

Carefully observe all safety instructions and warnings attached to the machine and make sure that they are always complete and perfectly legible.

Always make certain that persons being trained and instructed in working on or with the machine are permanently supervised by an experienced person.

Work on the electrical system and equipment of the machine is only to be carried out by a skilled electrician or by persons under the supervision and guidance of a skilled electrician and in accordance with the rules and regulations of electrical engineering.

(3) Safety Instructions Governing Specific Operational Phases

Avoid any operation mode that might be unsafe.

All necessary precautions to ensure that the machine is only used being in a safe and reliable state are to be taken. The machine is only to be operated if all protective and safety devices, including removable safety devices, emergency shut-off equipment, noise-protection elements and exhaust systems are in right place and fully functional.

The machine is to be checked for damage and defects at least once per work shift. Any changes including the working behavior of the machine are to be reported to competent persons immediately. If necessary, the machine is to be stopped and locked immediately.
In case of any malfunction the machine must be stopped and locked until the defect has been

eliminated.

Generally make sure that nobody is at risk before starting up the machine.
All personnel that will be operating this machine should be thoroughly trained in all phases of operation and safety.

Always tighten unscrewed connections after maintenance and repair.

After completing maintenance and repair, all safety devices removed for setting up or repairing the machine must be reinstalled and checked for functionality prior to putting the machine back into service.

To minimize the environmental impact, all consumables and replaced parts must be disposed of safely.

Before starting the machine, check that the accessories have been stowed away safely.

Do not attempt any operation that may be a risk to the stability of the machine.

(4) Warning of Electrical Dangers

Immediately remove power to the machine in case of trouble in the electrical system. Replace a fuse with one with the same style and ratings; pay particular attention to matching the specified current.

Any electrical work performed on the equipment must be conducted by a skilled electrician or under the supervision of a skilled electrician. All work must be observed good electrical engineering practice and follow safety rules and local wiring standards.

Inspect the electrical equipment of the machine at regular intervals. Tighten any loose connections. Check wiring for scorch marks; replace scorched wiring and determine and correct the reason for the overheating.

When working on live equipment, ensure that a second person is available to cut power in case of an emergency. When appropriate, secure the working area with safety tape and a warning sign. Use insulated tools for electrical work.

Before working on high-voltage assemblies, turn off the power supply. Carefully discharge the supply cable and short-circuit any energy-storage components such as capacitors.

If the equipment was moved, carefully refit and refasten all parts removed for transport before reapplying power.

Before moving the machine, remember to disconnect the power cable. The length of power cord is 10 meter long; take care of power cord when moving the machine if necessary.

(5) Grounding Instructions Shall Include the Following:

This product must be grounded. In the event of an electrical short circuit, grounding reduces the risk of electric shock. This product is equipped with a cord that has a grounding wire and an appropriate grounding plug. The plug must be plugged into an outlet that is properly installed and grounded in accordance with all local codes and ordinances.

If repair or replacement of the cord or plug is necessary, connect the ground wire to the ground terminal of the plug. The wire with green insulation (with or without yellow stripes) is the grounding wire.

Check with a qualified electrician or service person if the grounding instructions are not clear or if in doubt about the proper grounding of the machine. Do not modify the plug provided; if it will not fit the power outlet, have the proper outlet installed by a qualified electrician.

This product is designed for use on a nominal 120 (230) volt AC circuit and has a grounding plug.

DANGER!
Improper installation of the grounding can result in electrocution.

4. Machine Information

(1) Areas of Application and Machine Description

TP-502MH (Genesis Hori) is suitable for fruit & vegetable boxes, concrete blocks, and pallets loaded with cardboard boxes containing any type of products. It can be moved easily beside the pallet you want to strap, no need to move the stacked pallet.

Machine Description

- Semi-automatic plastic strapping machine for use with polypropylene strapping.
- Heavy duty construction.
- Simple, safe and user-friendly operation.
- With high mobility big wheel, it is easy to move around.
- Control Panel on Both Sides.
- The strapping position could be moved up and down between 175mm~2200mm from ground.

Environment Information

The strapping machine shall be installed in the following conditions:

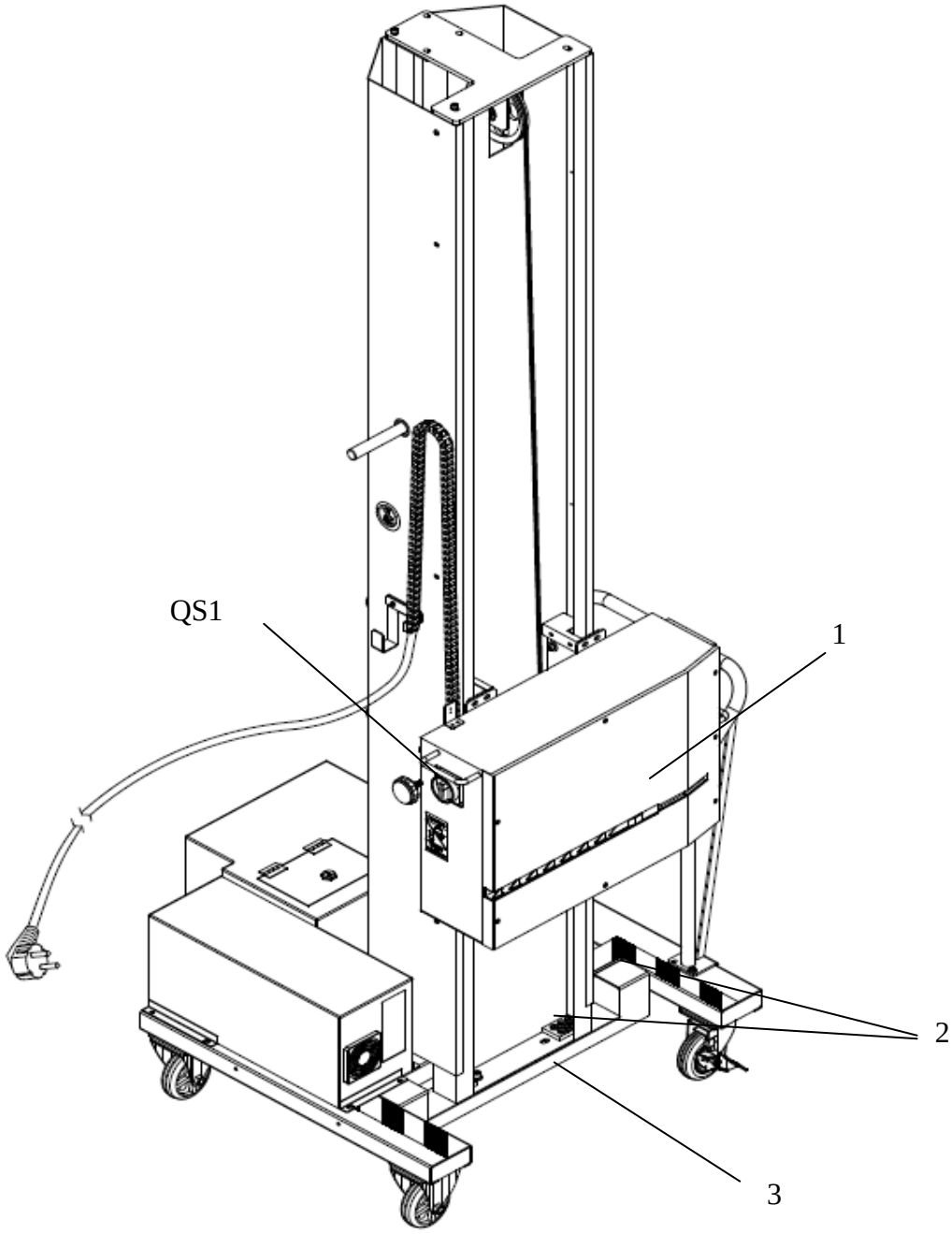
- Supply voltage: 0.9 - 1.1 nominal supply voltage
- Source frequency: 0.99 - 1.01 nominal frequency
- Ambient temperature: 5°C - 40°C (41°F-104°F).
- Relative humidity: not exceed 50% at 40°C.
- Altitude: Shall be used under an elevation of 1000 meters.
- Please provide a suitable illumination around the machine for safety operation.

(2) Electrical Specifications

System configuration：	1L+N+PE (Ground)	1L+N+PE (Ground)
Nominal power：	0.33 kW	0.33 kW
Rated current：	3A	6.3A
Rated voltage：	220V/230V/240V	110V
Rated frequency：	50Hz /60Hz	
Type of current：	AC - single phase	

(3) The Safety Devices

This machine must only be operated with polypropylene strapping. The use of other synthetic straps may produce hazardous substances to health.



Caution!

Power Switch (QS1)

This switch is lockable for safety

Danger of burns near the heating unit! (1)

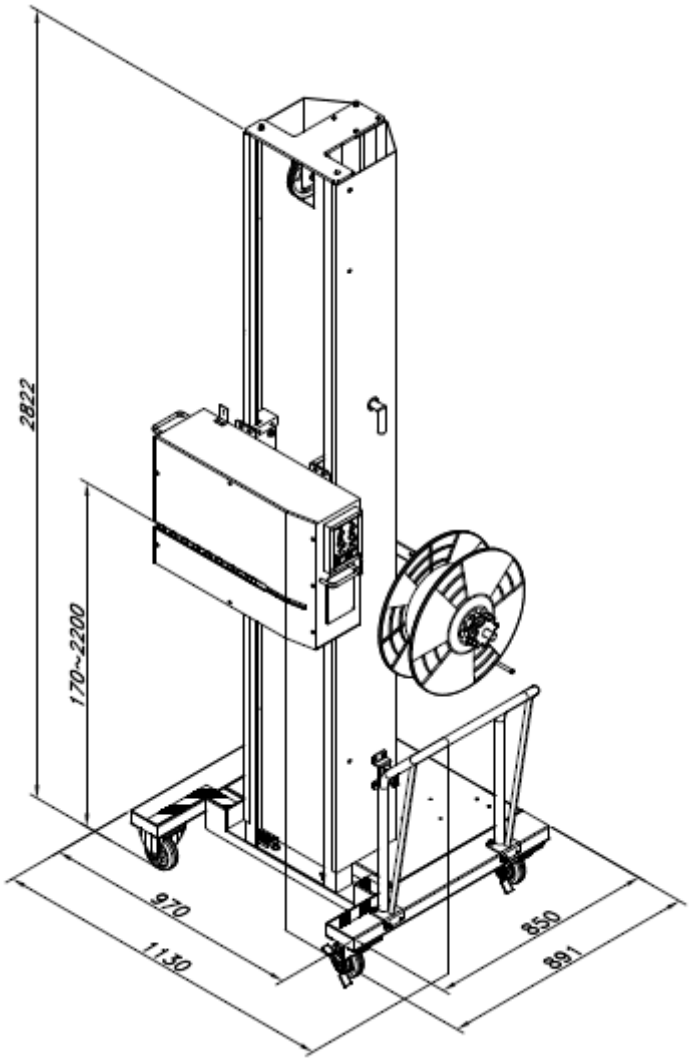
Dangerous points in the machine are covered by the screwed table top.

Please keep hands away from this danger areas (2) when Strapping head unit is moving.

Don't step into area (3). It's necessary to keep safety distance when this Strapping head unit is moving up and down.

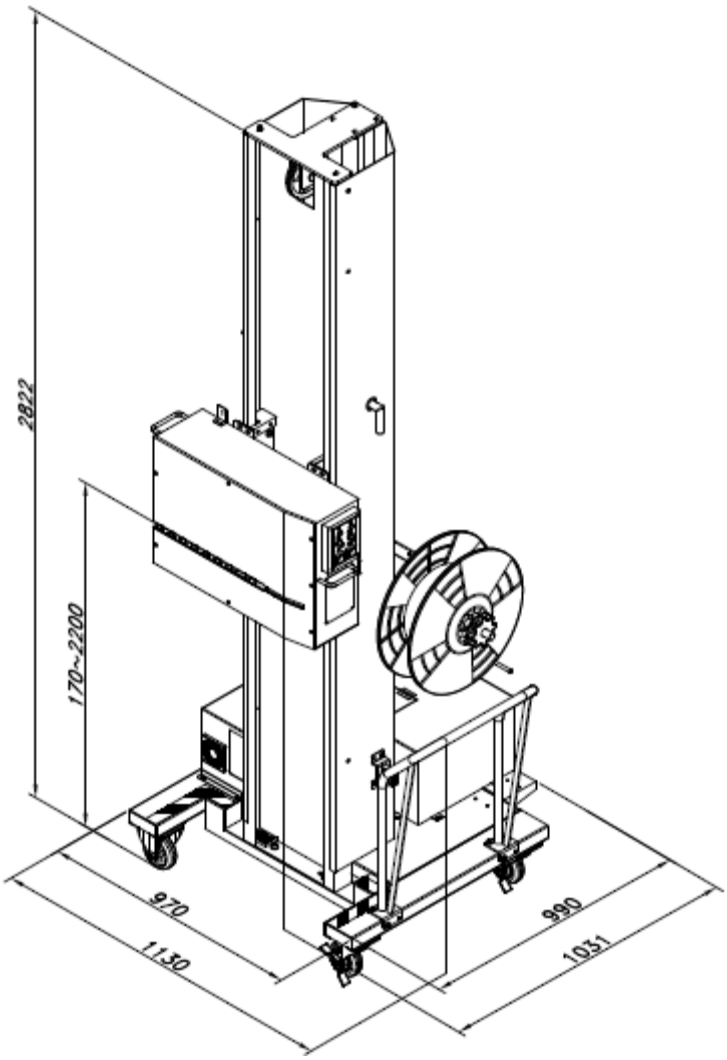
(4) Technical Data

a. TP-502MH



Sealing method	Heat
Strap type	P.P.
Strap Width	9.0 mm to 15.5mm (3/8” to 5/8”)
Strap reel diameter	200 mm (8”)
Width	1130 mm (44.5”)
Depth	891 mm (35.1”)
Height	2822 mm (111.1”)
Electrical Requirement	AC110V,220V/230V/240V (50/60Hz), Single phase
Weight :	242 kg (535.5 lbs)
Noise emission	72dB (A)
Minimum strap height	175 mm (6.88”)
Maximum strap height	2200 mm (86.6”)
Ambient temp	$5^{\circ}C \sim 40^{\circ}C$ $(41^{\circ}F \sim 104^{\circ}F)$

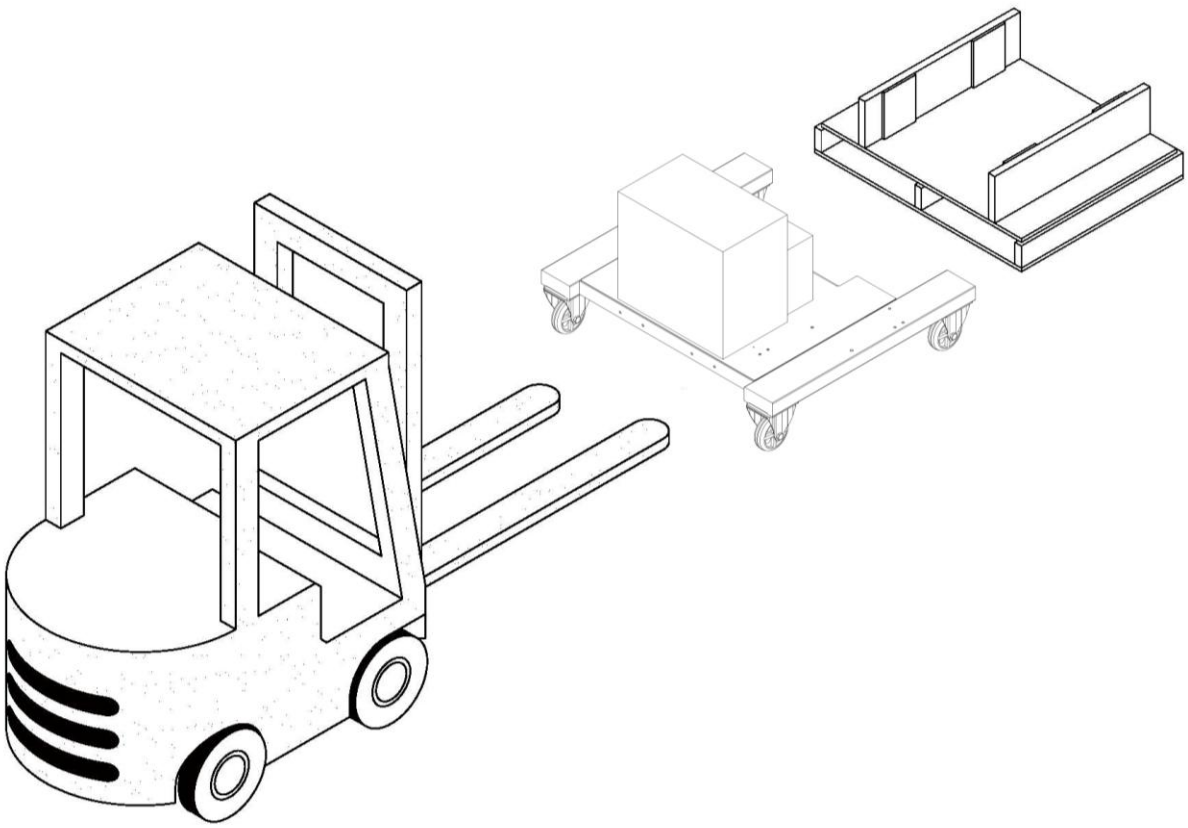
b. TP-502MHB



Sealing method	Heat
Strap type	P.P.
Strap Width	9.0 mm to 15.5mm (3/8” to 5/8”)
Strap reel diameter	200 mm (8”)
Width	1130 mm (44.5”)
Depth	1031 mm (40.6”)
Height	2822 mm (111.1”)
Electrical Requirement	AC110V/220V/230V/240V (50/60Hz), Single phase
Weight :	342 kg (917.1 lbs)
Noise emission	72dB (A)
Minimum strap height	175 mm (6.88”)
Maximum strap height	2200 mm (86.6”)
Ambient temp	$5^{\circ}C \sim 40^{\circ}C$ $(41^{\circ}F \sim 104^{\circ}F)$

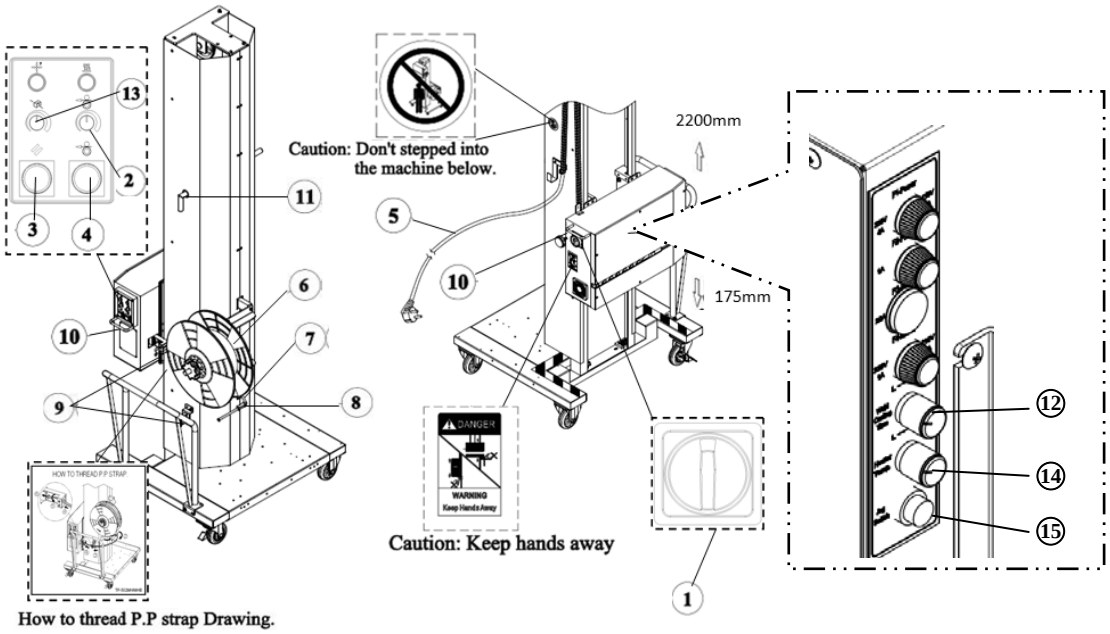
(5) How to Remove/Handle the Machine from the Pallet

Safely remove the machine with a forklift.



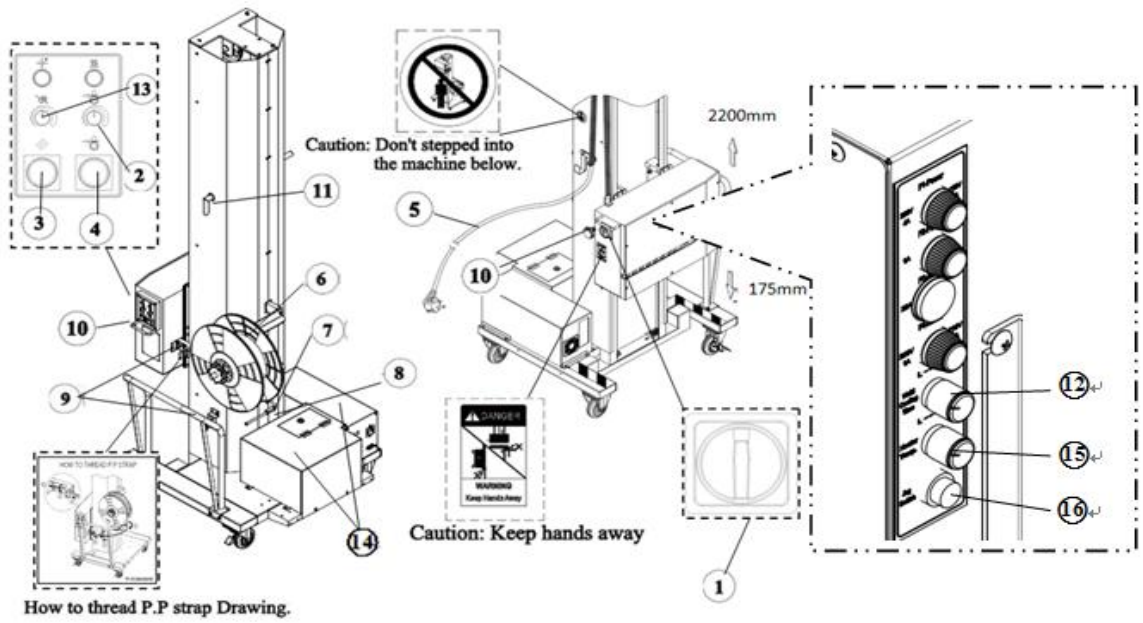
(6) Machine and Operating Elements

a. TP-502MH



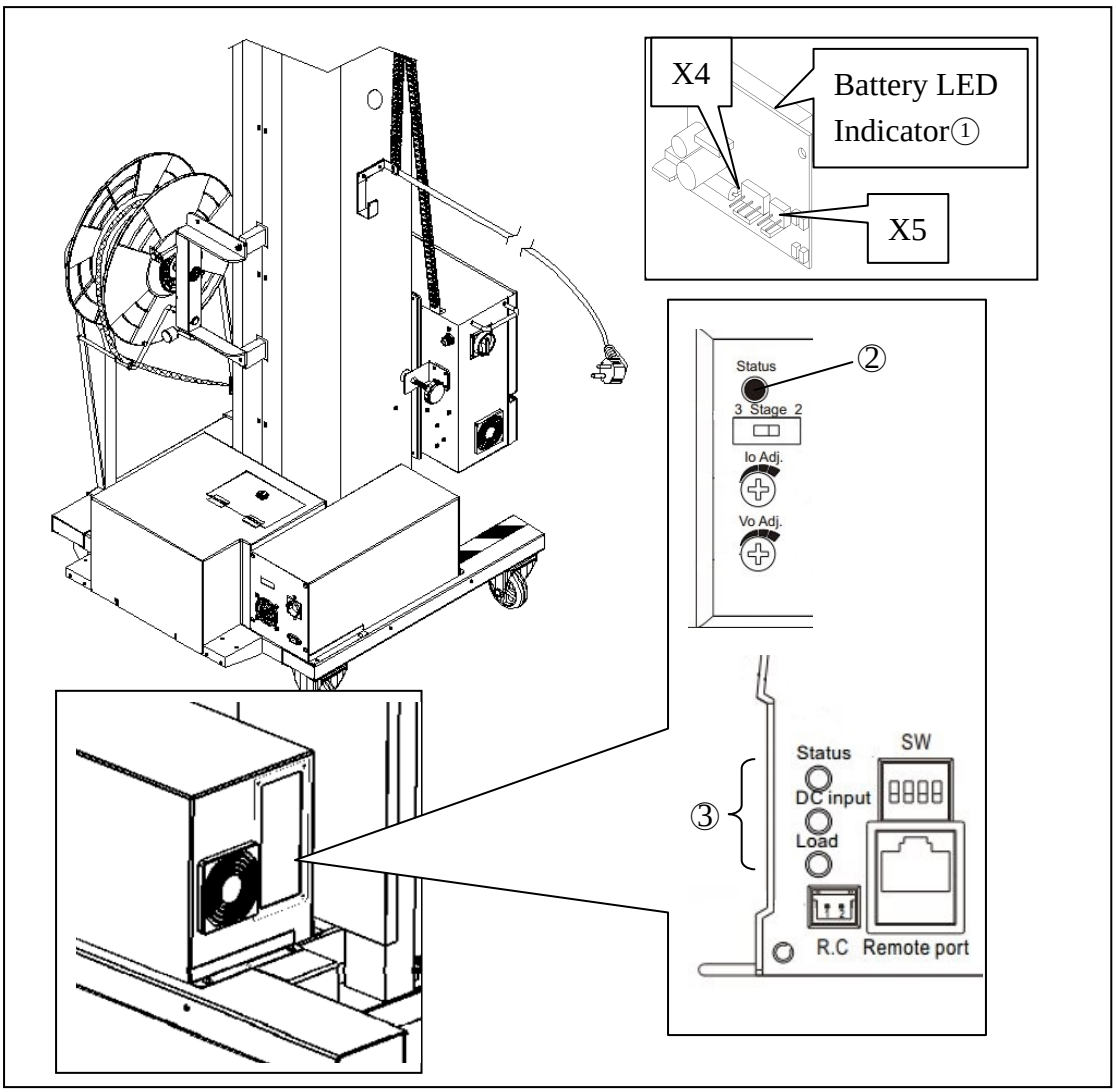
①	**Power Switch**	Supply the power when switch is ON.
②	**Feeding Length Knob**	Strap is automatically fed according to the time preset by the knob.
③	**Reset Button**	Restart the machine and/or to pull strap back into machine and/or to cut off strap.
④	**Strap Feed Button**	To feed strap out of machine in manual.
⑤	**Power Plug**	To be connected to a 110V or 220V/230V/240V source.
⑥	**Strap Reel**	Slide on strap coil here. (If Reel core is 280mm, you can take off the center drum to have core size 200mm.)
⑦	**Brake**	Stops the over-rotation of the strap reel.
⑧	**Strap Guide for Brake**	To place strap on brake ⑦.
⑨	**Strap Bypass Guide**	The strap is passed through this guide.
⑩	**Movement Handle**	Strap position can be changed by both side handles. The operator can use this handle to lift and pull down the strapping height between 175mm~2200mm from ground easily.
⑪	**Support Handle**	This Support Handle is used when the strapping head is moved to the bottom. Please insert this Handle as per above drawing to avoid the loading weight and counter weight losing balance, especially when change some parts.
⑫	**Weld cooling timer**	To ensure good efficiency under higher tension.
⑬	**Tension Adjust Knob**	To Adjust the tension.
⑭	**Heater Temp. Knob**	To Adjust the Temperature of Heater.
⑮	**Jog Switch**	Pushing down this switch, you can get any cycling stage you need for maintenance. If the machine does not stop in home position after you have pushed the jog switch, you only need to switch off the power and turn on again.

b. TP-502MHB



①	**Power Switch**	Supply the power when switch is ON.
②	**Feeding Length Knob**	Strap is automatically fed according to the time preset by the knob.
③	**Reset Button**	Restart the machine and to pull strap back into machine and/or to cut off strap.
④	**Strap Feed Button**	To feed strap out of machine in manual.
⑤	**Power Plug**	To be connected to a 110V or 220V/230V/240V source.
⑥	**Strap Reel**	Slide on strap coil here. (If Reel core is 280mm, you can take off the center drum to have core size 200mm.)
⑦	**Brake**	Stops the over-rotation of the strap reel.
⑧	**Strap Guide for Brake**	To place strap on brake ⑦.
⑨	**Strap Bypass Guide**	The strap is passed through this guide.
⑩	**Movement Handle**	Strap position can be changed by both side handles. The operator can use this handle to lift and pull down the strapping height between 175mm~2200mm from ground easily.
⑪	**Support Handle**	This Support Handle is used when the control head is moved to the bottom. Please insert this Handle as per above drawing to avoid the loading weight and counter weight losing balance, especially when change some parts.
⑫	**Weld cooling timer**	To ensure good efficiency under higher tension.
⑬	**Tension Adjust Knob**	To Adjust the tension.
⑭	**Battery Unit**	Supply the power through battery.
⑮	**Heater Temp. Knob**	To Adjust the Temperature of Heater.
⑯	**Jog Switch**	Pushing down this switch, you can get any cycling stage you need for maintenance. If the machine does not stop in home position after you have pushed the jog switch, you only need to switch off the power and turn on again.

c. Battery Group Panel for TP-502MHB



① Battery LED Indicator: It shows the Voltage of Battery. (Function when X5 bridged and X4 is connected)

② Indicator on Power supply: Red when Charge, Green when Float or battery full.

③ LED Indicator on Inverter：It shows Operating status, battery status, load condition, and all kinds of warnings will be displayed on this panel.

Status LED：Represents current operating status

Color	Green	Orange	Red
Status	☼ system check ● Inverter OK	☼ Saving mode ● Remote off	● Abnormal

DC input LED：Represents the Voltage of external batteries

Green	Orange	Red
25-31Vdc	22-25Vdc	> 31Vdc or < 22Vdc

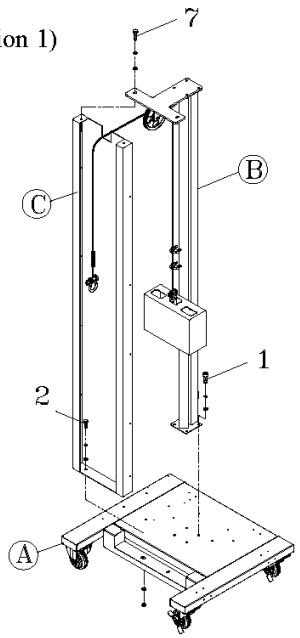
Load LED: Represents the magnitude of output load

LED Color	Green	Orange	Red
Load percentage	<40%	40~80%	>80%

(7) Installation

a. Assembling Machine Body

(illustration 1)



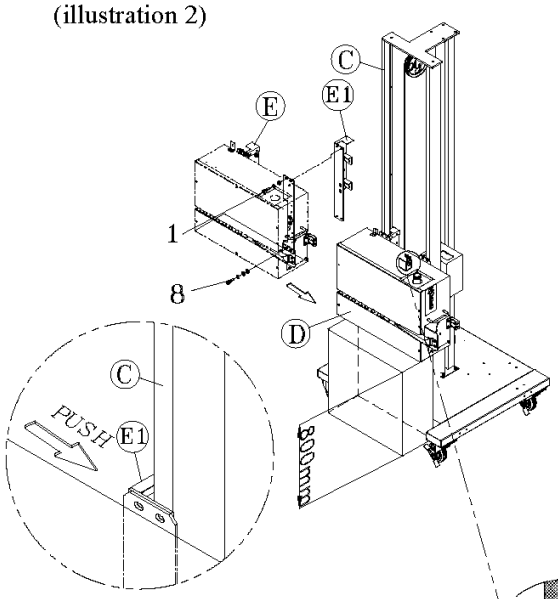
Step 1

1. Take Part Ⓑ on top of Part Ⓐ and fix them by 4 sets of No.1 screws.
2. Take Part Ⓒ on top of Part Ⓐ and fix them by 2 sets of No.2 screws.
3. Hold Part Ⓑ and Part Ⓒ together by 2 sets of No.7 screws.

Attention:

1. Make sure Part Ⓑ positioned parallel to part Ⓒ.
2. Make sure screws firmly tightened.

(illustration 2)



Step 2

1. Place Part Ⓓ close to part Ⓒ and get an 800mm tall object to keep Part Ⓓ stays 800mm from the ground.
2. Push Part Ⓓ into Part Ⓒ and place Ⓔ (secured) into the Left track. Push Ⓔ left to make it hug the track (refer to the illustration 2).
3. Slide Part Ⓔ1 into the right track of Part Ⓒ. Push Part Ⓔ1 to the right so it is adjacent to the track and fix Part Ⓔ1 on Part Ⓓ by 4 sets of No.1 screws (refer to the illustration below).
4. Place the cable hook in position.

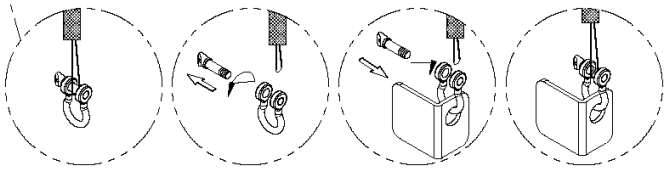
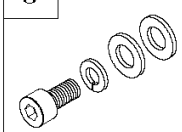
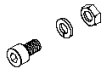
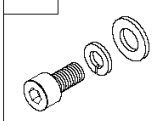
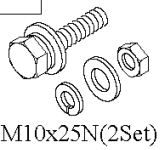
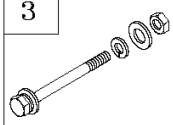
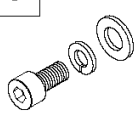
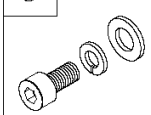
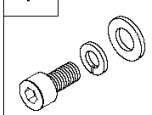
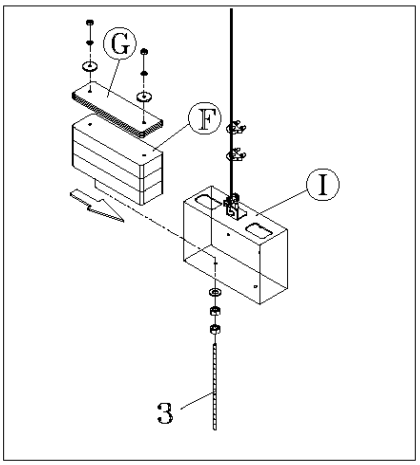


fig.1 fig.2 fig.3 fig.4

8	9
	
M8x25N(4Set)	M3x08N(2Set)

1	2	3	4	5	6	7
						
M8x20N(8Set)	M10x25N(2Set)	M6x270(2Set)	M5x08N(20PCS)	M6x20(8Set)	M8x20N(2Set)	M8x20N(2Set)

(illustration 3)



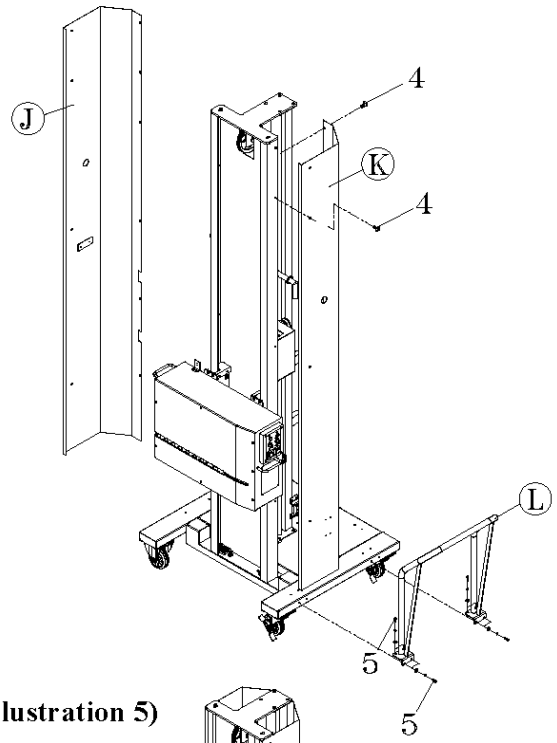
Step 3

Place 3 pieces of Part Ⓕ and 2 pieces of part Ⓖ into Part I. Fix them by 2 sets of No. 3 screws (refer to illustration 3)

Attention:

1. Move Part Ⓓ up and take the 800mm tall object away.
2. Is Part Ⓓ moving up and down smoothly? If not, please go back to the step 2 for adjustments.

(illustration 4)



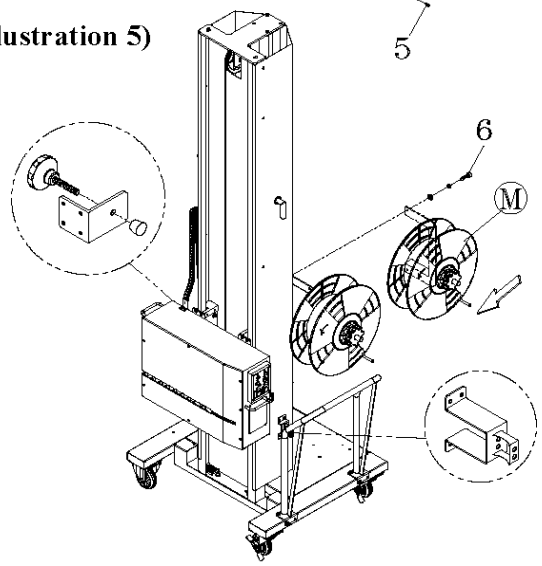
Step 4

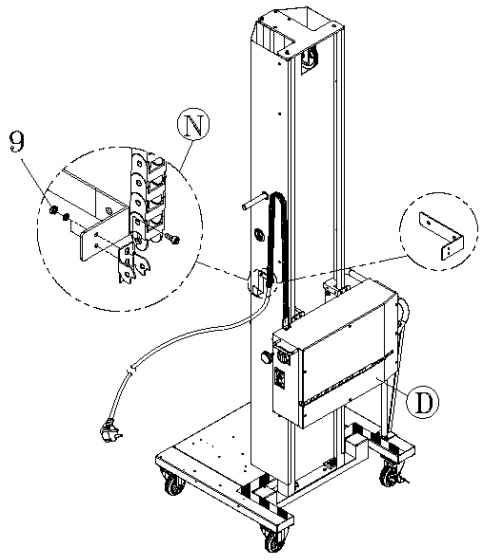
1. Place Part Ⓙ and Part Ⓚ onto the main body from both side and fix them by 20 sets of No. 4 screws.
2. Slide Part Ⓛ onto the main body and fix it by 8 sets of No. 5 screws (refer to illustration 4)

Step 5

1. Fix blank Part Ⓜ (without PP straps) into place by 2 sets of No. 6 screws (refer to illustration 5).
2. Hook up the train by 2sets of No. 9 screws to where it belongs as illustrated Ⓝ below.

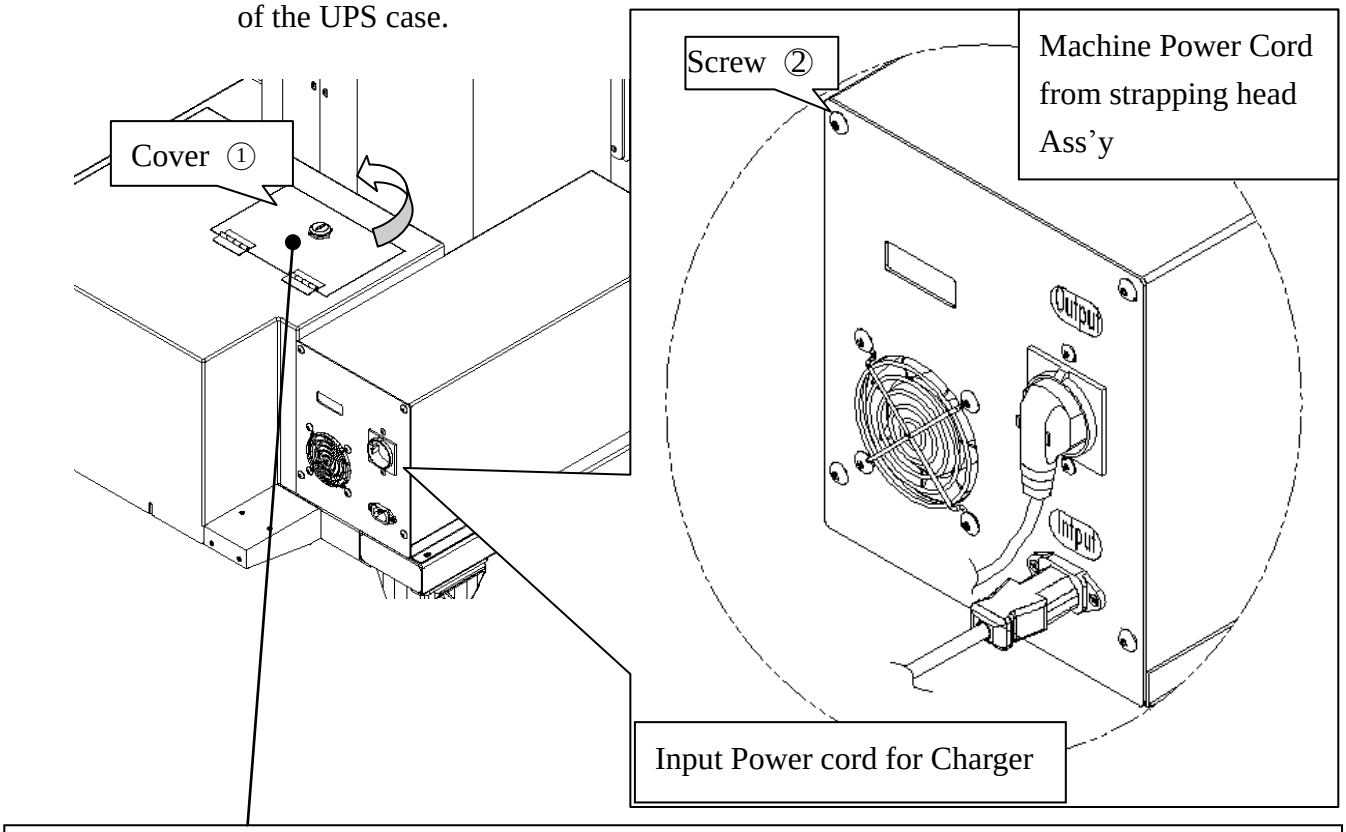
(illustration 5)

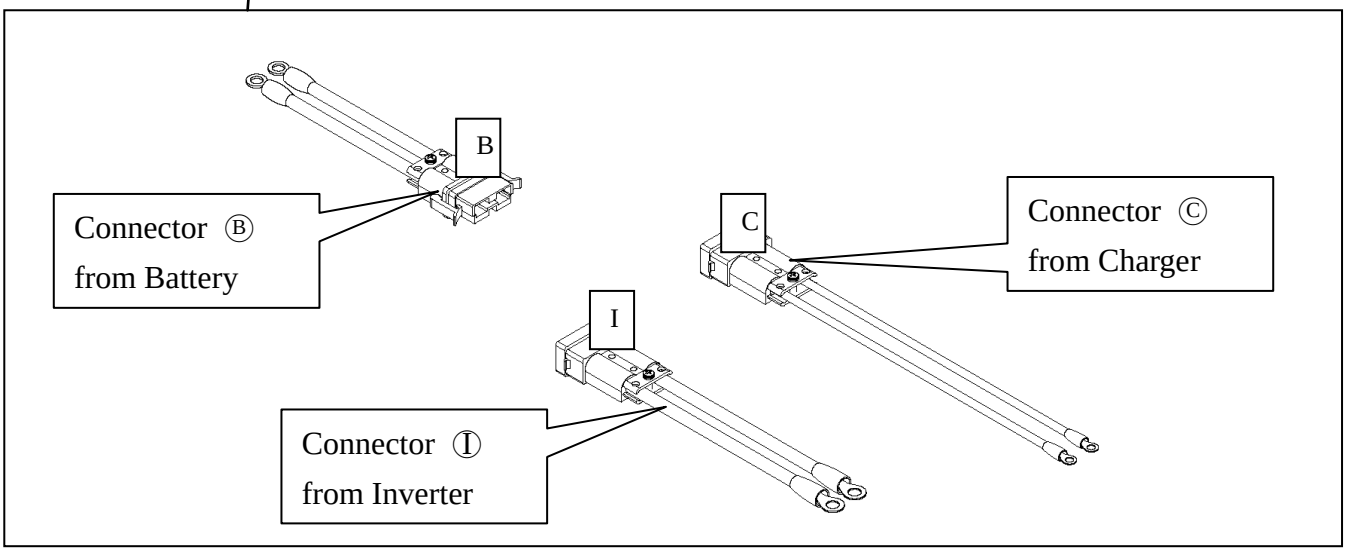




b. Plug the connector from battery to UPS (only TP-502MHB)

1. Use the Key we attached with the manual to open the cover ① of Battery case.
2. Check inside of case, there are 3 connectors inside, please plug the Battery connector Ⓑ to the connector Ⓒ of UPS if you would like to use machine with battery power.
3. Close the cover of the Battery and fix it by Key.
4. Use screw driver to lose 4 screws ② to open the UPS panel.
5. Plug in the power wire X4 inside of UPS for Battery power LED indicator. (We unplug this wire (X4) before we ship the machine to prevent battery power loose.)
6. Put UPS panel back and fixed by 4 screws ②.
7. Plug the Power Cord (MV-6-10060/MV-6-10061) in the Output socket on the back of the UPS case.





5. Operating the Machine

(1) How to Load P.P Strap

Step 1

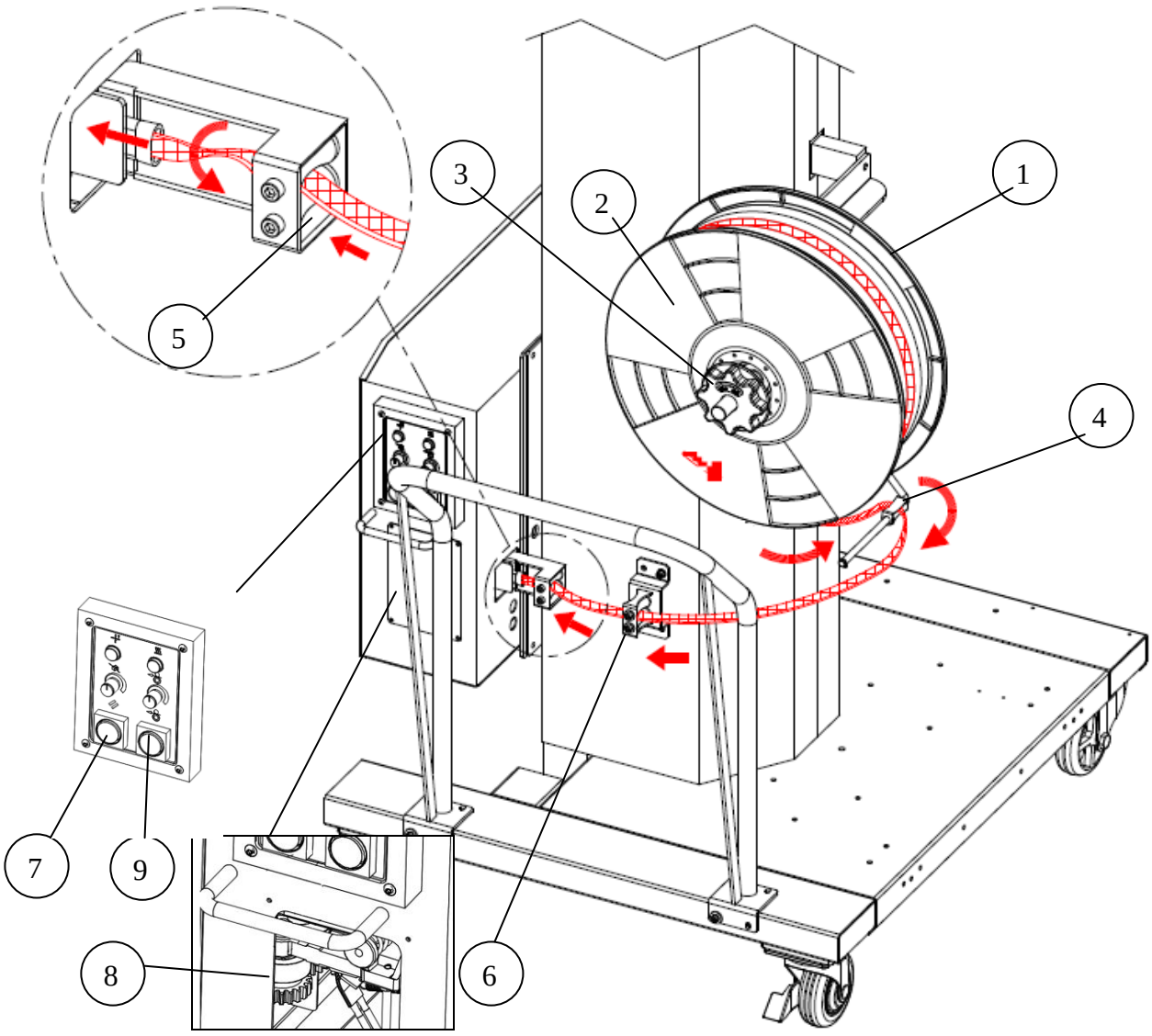
Please pay attention to the direction mark on the Outer Flange ②. Put a coil of strap into the Inner Flange ① according to the direction mark. Then install the Outer Flange ② and tighten the reel nut handle ③. (refer to following drawing B)

Step 2

Pull out some strap to thread it through the roller ④ on the Break Arm. Also thread strap through two rollers ⑤ ⑥.

Step 3

Turn on the power switch. Then push reset button⑦ to start up the machine and turning the strap a little and let strap tip can feed smoothly into roller ⑧ about 10cm or longer. (refer to following drawing B) Then push feed button ⑨ to feed the strap.

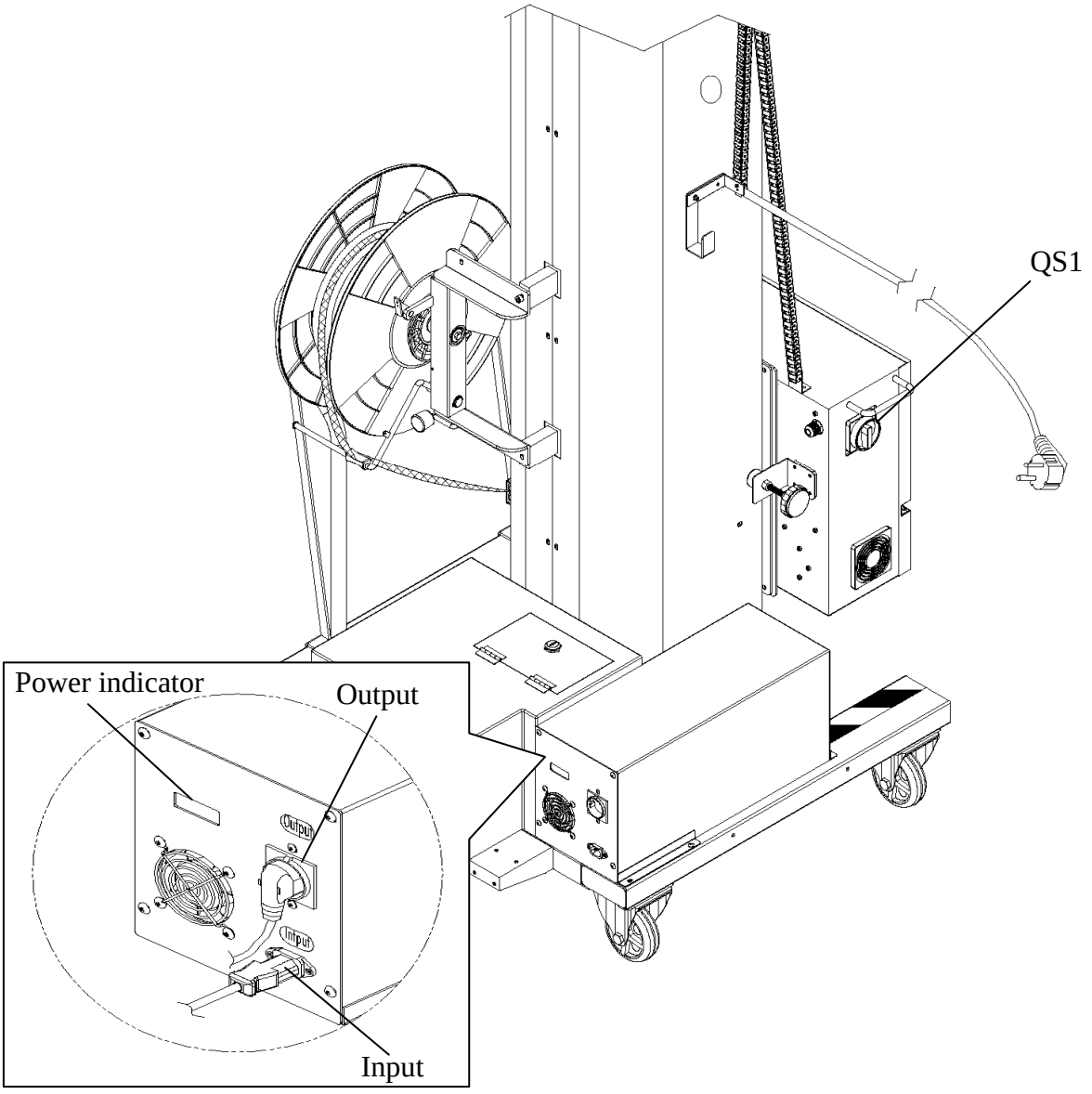


(Drawing B)

(2) How to Operate

a. TP-502MH

1. Turn main switch QS1 to ON. The heating element will reach the working temperature at approximately 40 second. Green Lamp flash when heating element under heating, Green lamp will keep on when temperature reach.
2. Press reset button to start up the machine.
3. Move the machine to close to the package, the strapping head should be close to the corner of the package (or will cause not easy to threading the strap into the strap inlet), pull strap and pass the strap around the package and insert the leading edge of the strap into the strap inlet to activate the strapping cycle. Then the strapping cycle is completed.
4. Move the strapping head up and down to the next strapping position and repeat the strapping process until the last strapping is finished.
5. Move machine away from the package.



b. TP-502MHB

1. When operate the machine with battery power, Check the plug connection inside of Battery Case should be Ⓑ and Ⓘ (Power from battery to Inverter).
2. Turn main switch QS1 to ON. The heating element will reach the working temperature in approximately 40 second. Green Lamp flash when heating element under heating, Green lamp will keep on when temperature reach.
3. Press reset button to start up the machine.
4. Move the machine to close to the package, the strapping head should be close to the corner of the package (or will cause not easy to threading the strap into the strap inlet), pull strap around the package and insert the leading edge of the strap into the strap inlet to activate the strapping cycle. Then the strapping cycle is completed.
5. Move the strapping head up and down to the next strapping position and repeat the strapping process until the last strapping is finished.
6. Move the machine away from the package.
7. After operation, please turn off switch QS1 before Unplug the wire connection Ⓑ & Ⓘ.

c. The meaning of Lamp blinking：

1. Normal Situation:

	Switch on the power of the machine	Under heating	Strapping cycle start (SQ1 ON)	Machine ready to use	Sleep mode (10 minute without using)	Sleep mode (Deep) (1hour without using)
Amber Lamp	Both lamp are blinking 3 times at same time	OFF	ON	OFF	OFF	OFF
Green Lamp		blinking	Continue ON	Continue ON	Blinking (two quick and one slow blinking)	Blinking (One quick and one slow blinking)

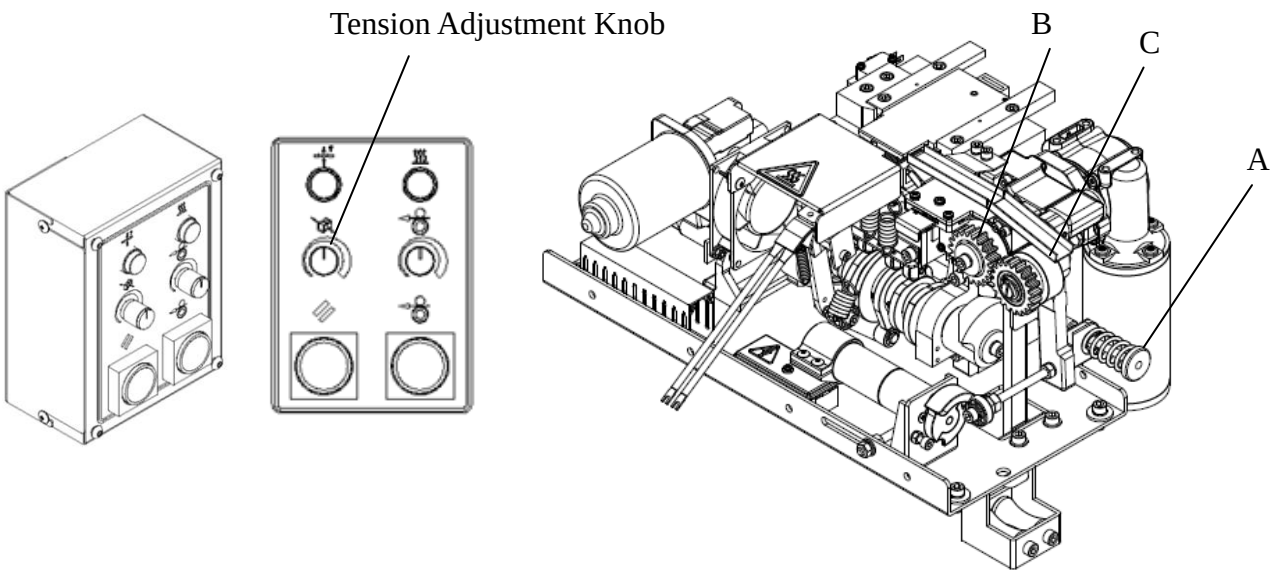
If the machine goes into sleep mode, you have to push reset button to start up the machine if you would likes to use the machine again.

6. Adjustment

(1) Adjustment on Tensioning Rollers

The machine is already well set for enough high tension. However, according to different strap characteristics (such as smoother surface or different thickness), some adjustments for higher tension might be necessary.

When insufficient strapping tension occurs while tension adjustment knob is on MAX position, please turn Nut A clockwise.
This can solve the problem of insufficient strapping tension at high tension and strap slipping between B & C due to this.



(2) Strap Width

a. Adjust the position of Strap Guide B (5MV-1-100400) according to the strap width. (refer to fig. 5)

b. Loosen the 5 screws outside the Strap Guide B (T5-1-24132) and adjust its position according to the scale indicated. (refer to fig. 6)

c. Change RH Strap Guide (5MH-1-100100 / 5MH-1-100110 / 5MH-1-100120) according to the strap width. (refer to fig. 7.)

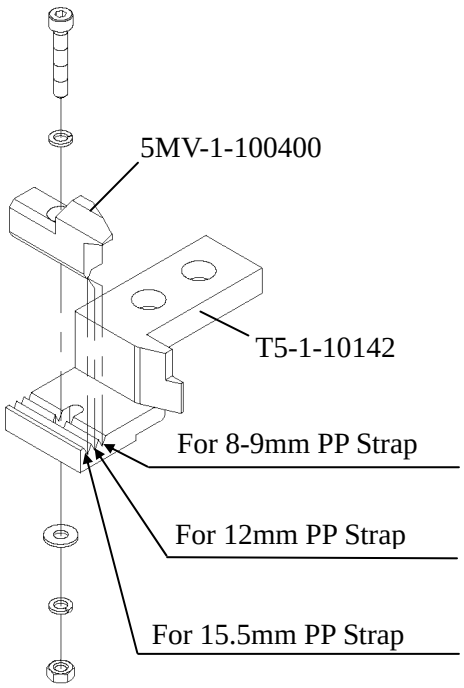


Fig.5.

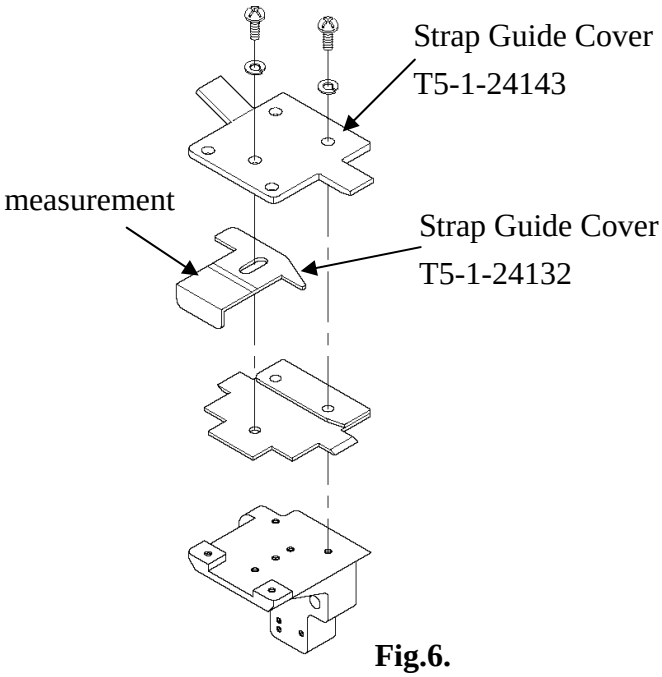


Fig.6.

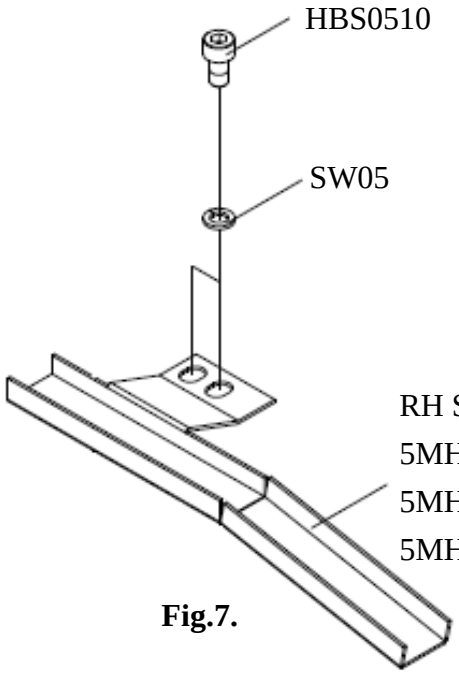


Fig.7.

7. Maintenance

(1) Maintenance of the Battery

a. The temperature of the battery shouldn't be higher than 50℃ whenever it is.

b. Keep the terminal of the battery and the environment clean and dry. Be sure to mop the dust or liquid on the battery whenever there is any. (Note: it's necessary to keep the top of the battery clean and dry because dust or humidity could be electric conduction).

c. Be sure to check the connection between the charger and the battery before charging. Check the condition of the poles and the wires. Make sure the terminal brackets at the battery side are installed correctly.

d. Fully charge (charge battery over 12 Hours) the battery when battery isn't used exceed 3 months.

e. Note whether the battery is too old (can not charge the single battery over 13.5 Voltage) or dead (the capacity of the battery drop dramatically). It will be dangerous if doing the charging process on an old/dead battery because the temperature of the battery will rise while charging.

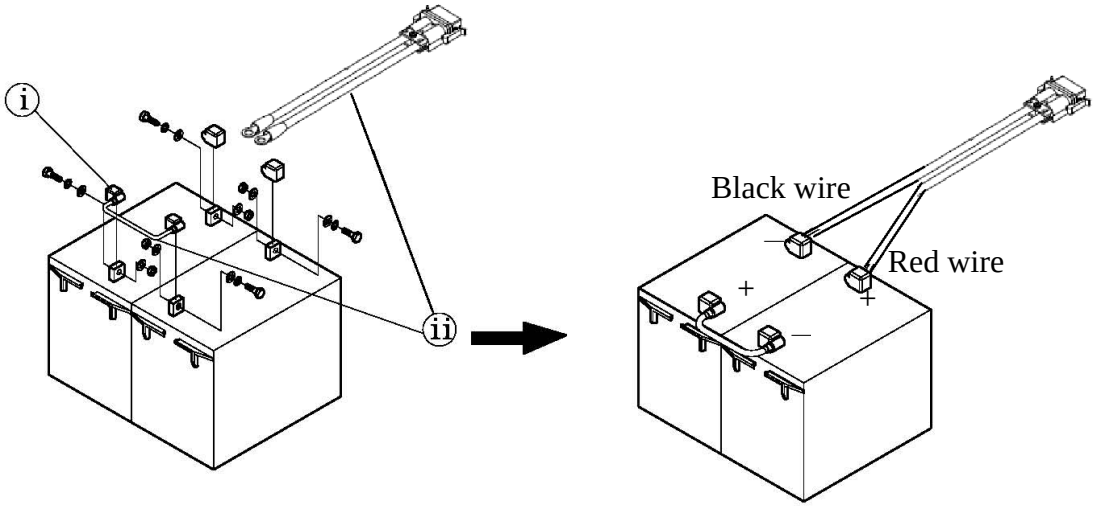
f. When the battery is dead, both batteries need to be changed at the same time.

g. How to replace the battery:

Note: Take care about the procedure when changing battery or will caused short circuit easily.

(i) Connect the Battery wire connection. The longer wire (with black and red wires), connect the black wire to the negative pole of the battery, and the red wire to the positive pole of other battery. Make sure each part is connected correctly and firmly. (refer to the illustration). As to the shorter wire is to connect the positive and negative pole of the battery (when loosing the wire from battery should be reverse-loose short wire before longer wire).

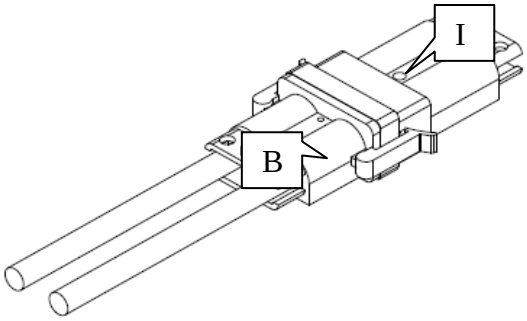
(ii) Put grease on each and every pole to avoid pitting. The pitting will influence the charging/discharging efficiency, and also dangerous.



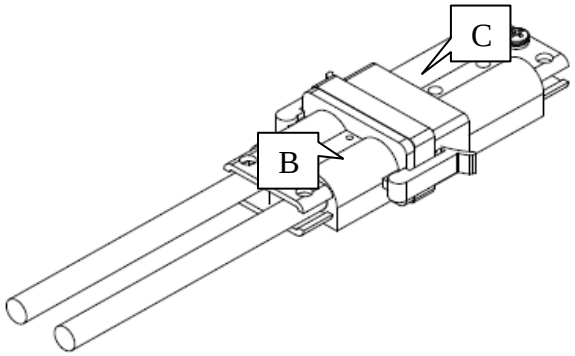
(2) How to Charge the Battery

a. Turn off power from the machine or unplug machine power cord from UPS socket。

b. Unplug the wire connector B and I。



c. Plug wire connector C with B firmly



d. Plug the input power cord of UPS to the socket.

e. LED in charger indicates battery status when charging.

   i. When LED indicates Red, which means battery is under charging.

   ii. When LED indicates Green, which means battery charge is completed and it is under floating charge mode. Please unplug power cord, and the machine is ready for use.

f. It takes around 5-7 hours for charging.

Note the following points while charging:

i. Avoid water and direct sun light.
ii. Make sure it's situated somewhere ventilating.
iii. Stay away from fire.
iv. Avoid high-temperature environment. The temperature of the battery shouldn't be higher than 50℃.
v. Charging at flat surface. Avoid positing it on slope.
vi. Avoid shock and dust.
vii. Prevent short between positive pole and negative pole of the battery.

(3) Maintenance of the Machine

Before any maintenance or repairs on the machine, set the Main Power Switch to "O" (OFF). Wait about 5 minutes for cooling down the heater to avoid burns with this area.

1. Cleaning and Lubrication

The high reliability and long service life of the strapping machine will depend on regular cleaning and maintenance.

ATTENTION!

All the important strap transport components, such as the tension rollers and the strap guides, must be kept free from oil and grease. (lubricant)

The lubricant has to be non-resinous.

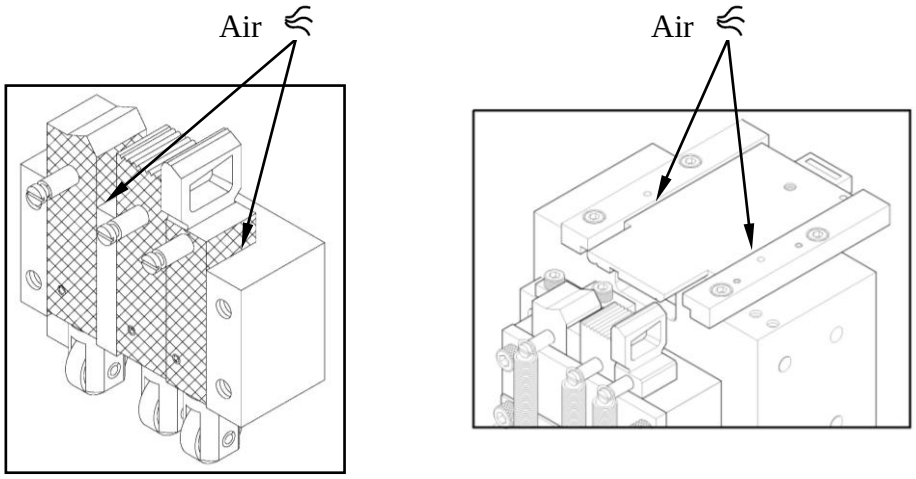
The lubricant is SAE 30

2. Maintenance

Only use original spare parts supplied by manufacturer.

Daily:

- Use air gun to clean the circled positions (nearby the cutters, strap guide daily Remove plastic residue in the machine.



Weekly:

- Lubricate front bar, press bar and rear bar weekly.
- Please refer to the above mesh areas for instruction
- Before lubricating, be sure to clean the parts first to avoid mixing oil and debris which might have a bad effect on machine's function
- Check the wire rope of suspension bracket Ass'y, replace it if necessary.

Monthly :(or 3,000 strapping cycles)

- Clean both sides of heater plate and polish with fine sandpaper if necessary
  ATTENTION: Make sure the welding plate is cool first!!
- Check cam rollers of seal head for easy movement.
- Slide table back to home position automatically by the spring tension.
- Be sure to clean any debris in the tension roller

6 Months:（or 18,000 strapping cycles）

- Check heater plate, replace and readjust it if necessary.
- Check strap cutter in seal head, replace it if necessary.
- Check that connector at wiring loom to printed circuit board is firmly fixed.
- Make machine ready for operation. Strap one bundle manually several times, paying attention to mal-functions, repeat procedure.

1 year: (or 36,000 strapping)

- Replace deflection roller if it shows visible changes.
- In case of loud noise at bearings: locate them, replace the bearings.
- Get machine ready for operation again, strap one bundle manually several times, paying attention to malfunctions.

8. Troubleshooting Guide

(1) Strap doesn't joint after sealing

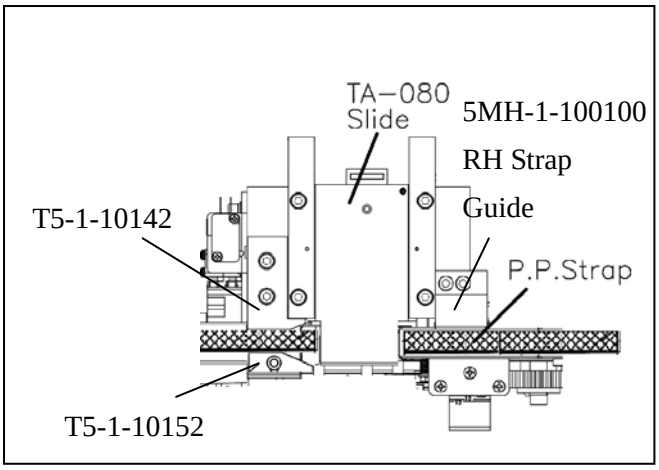
a. Check if Heater TB-113 has too much carbonized debris resided on both sides. Too much debris will cause Heater incapable of melting straps. Clean the surfaces of Heater from carbonized debris.

b. The temperature of Heater is whether too high or too low. When the temperature is too high, there might be not enough cooling time for cooling down. When the temperature is too low, Heater will be unable to melt the straps.

c. Increase welding cooling time (T5-4-10231) behind the control box so to produce longer cooling time.

d. Return Spring (TB-114) for Heater Arm (TB-102) is either broken, coming off or worn which makes Heater unable to enter the correct melting position.

e. If you find the jointed surface is smaller than the standard size, check if the position of the Strap Guide (B) (T5-1-10152) is according to your requested strapping width. Or you can Change Upper Strap Guide as illustrated in the following drawing for positioning PP straps equal to each other.



(2) Insufficient strapping tension

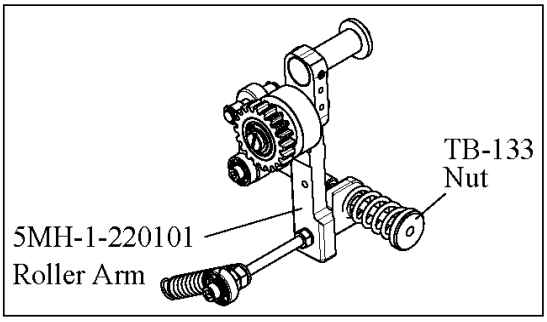
a. Turn VR T5-4-10231 clockwise to increase the tension.

b. The package is too small (The width of package is smaller than 80mm).

c. The Bearing (BR635ZZ) for Rear Bar (TA-074) is broken or the tip of Rear Bar (TA-074) is worn which makes Rear Bar unable to hold the straps after tensioning. This produces bad quality tension.

d. Replace PC Board.

e. Turn Tension Adjustment Nut (TB-133) clockwise for an increase in the tension pressure as illustrated in the following drawing.



(3) Failure Messages of Inverter

abnormal status (● Light ON ，○ Light OFF ，☼ Flash) Troubleshooting Refer to page

Status LED	●	●	●	☼
DC input LED	○	☼	☼	○
Load LED	☼	○	☼	○
Abnormal Indication	Over Load or short circuit	Abnormal DC input	Over temperature	Inverter Fail

Failure Correction Notes

INVERTER should be serviced by a professional technician. Any improper usage or modification may damage the unit or result in shock hazard.

Status	Possible Reasons	Ways to Eliminate
No AC output voltage	Abnormal DC input	Check the DC input sources. Make sure the voltage is within the required range.
	Over temperature	Make sure that the ventilation is not blocked or whether the ambient temperature is too high. Please de-rating the output usage or reduce the ambient temperature.
	Overload or short circuit	Make sure the output load does not exceed the rated value or the instantaneous start up current is not too high. (for inductive or capacitive loads)
	Inverter fail	Replace the Inverter
Discharging period of batteries is too short	Batteries are aged or broken	Replace the batteries
	Battery capacity is too small	Reconfirm the specification and enlarge the battery capacity as suggested
Fan does not spin	Clog with foreign bodies	Remove the foreign objects
	Malfunction of the fan	Repair required. Please send it back to us or any of our distributors

(4) Failure Messages on Control Panel

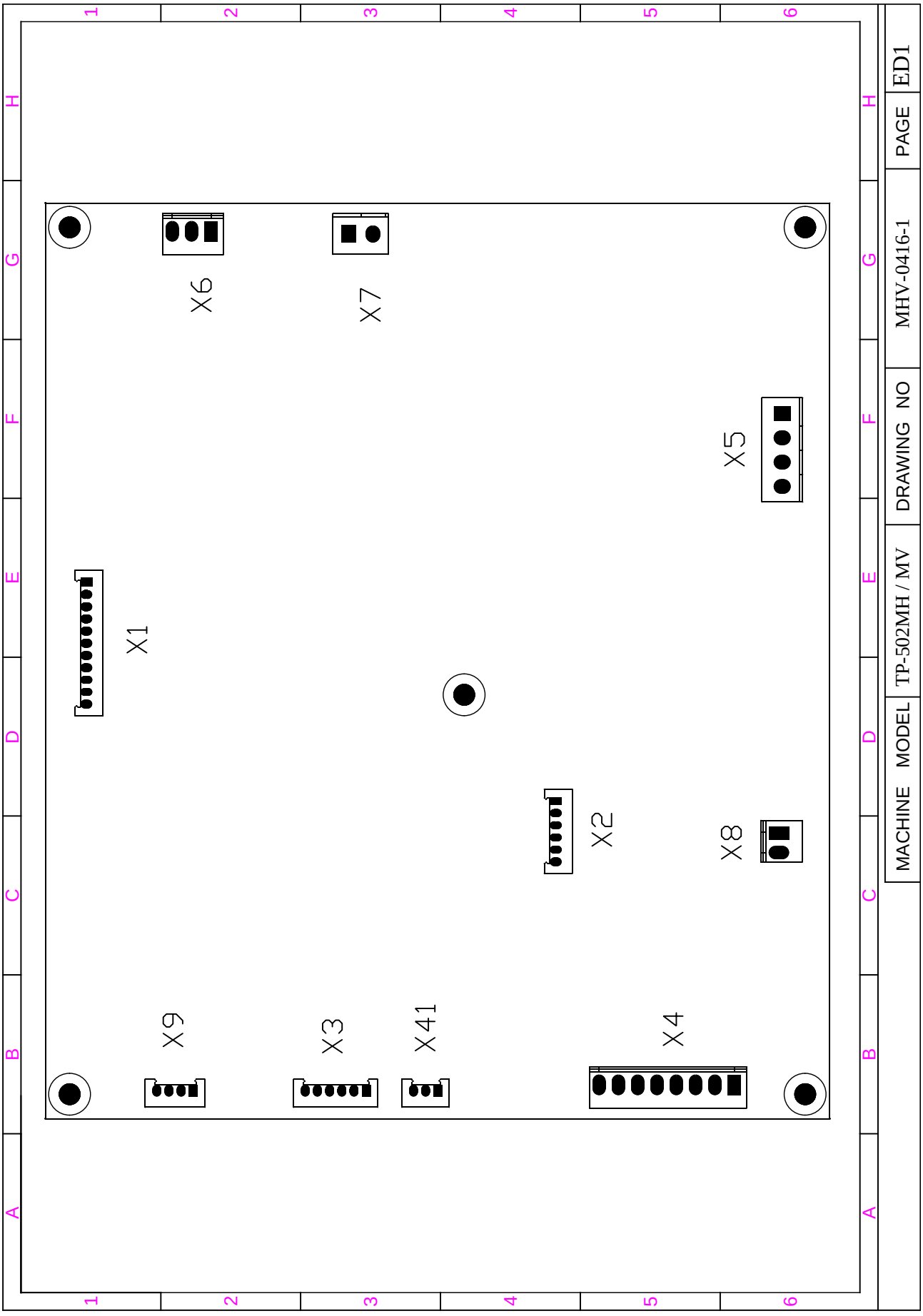
Signal	Status(The speed of lamp blinking)	Possible Reasons	Ways to Eliminate
Amber Lamp on control panel	Two shorter with one longer	PCB can't received signal form SQ2	Check wire connection and function of SQ2. Make sure the SQ2 is not broken and wire is connecting well.
	One shorter with one longer	PCB can't received signal form SQ3	Check wire connection and function of SQ3. Make sure the SQ3 is not broken and wire is connecting well.

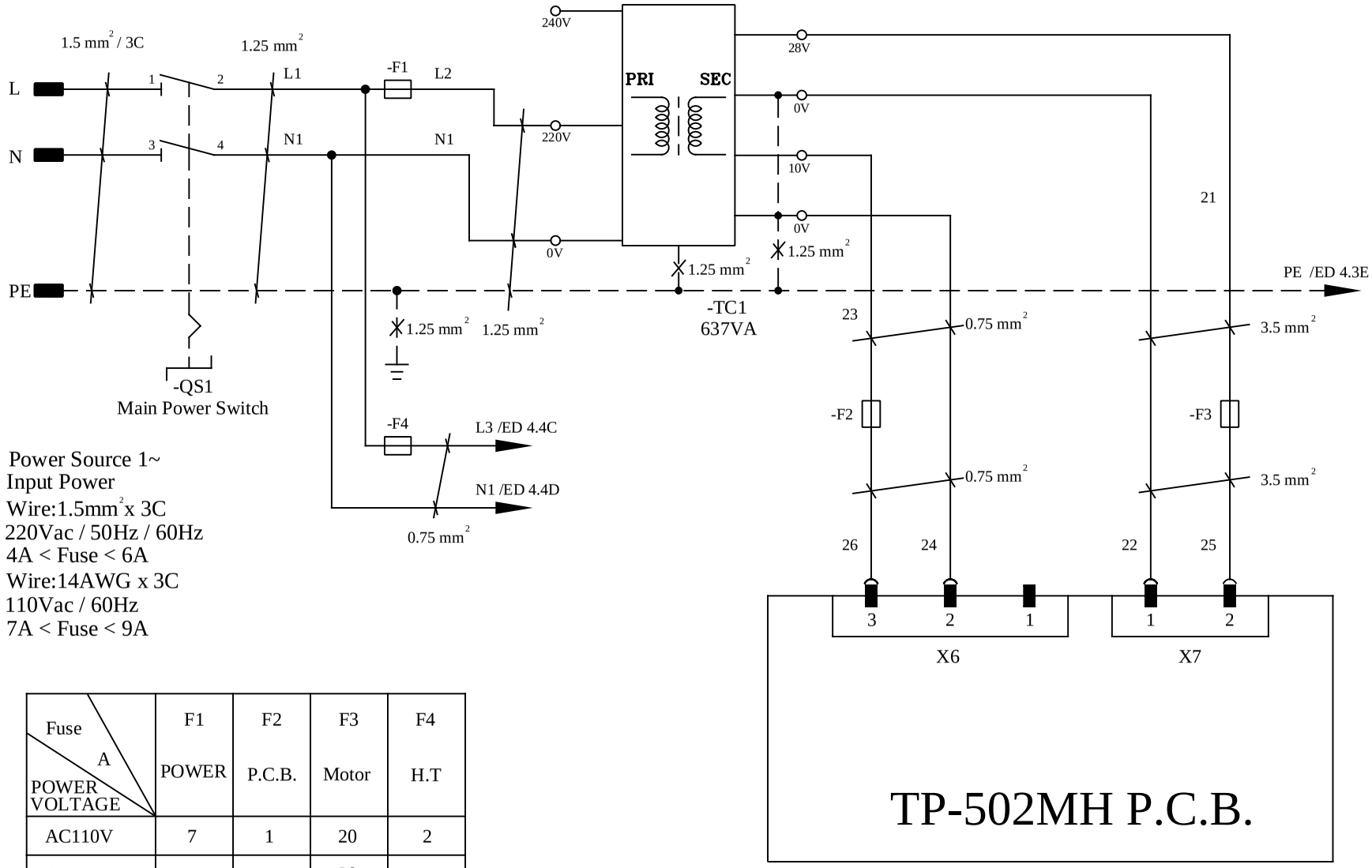
***More trouble shooting guide is on request.**

PART II

1. Wiring Diagram

a. TP-502MH





Fuse / A / POWER VOLTAGE	F1 POWER	F2 P.C.B.	F3 Motor	F4 H.T
AC110V	7	1	20	2
AC220V	4	1	20	1

MACHINE MODEL	TP-502MH / MV	DRAWING NO	MHV-0416-1	PAGE	ED2

-B2-

-R4 Tension adj

-S1 Reset P.B

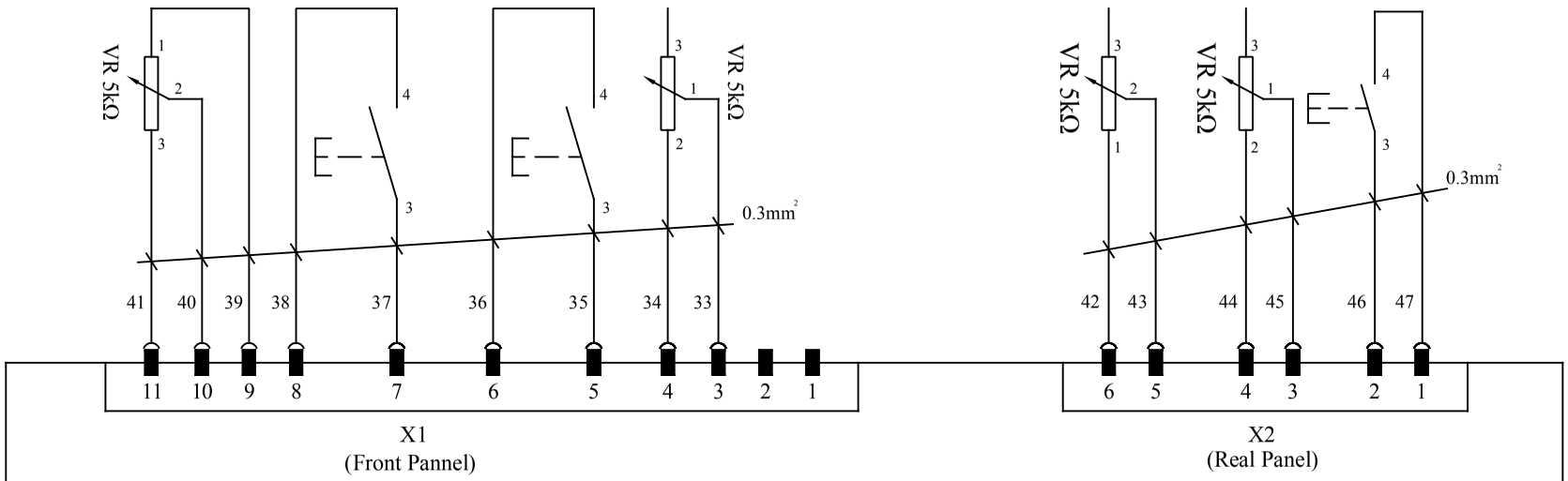
-S2 Feed P.B

-R3 Length adj

-R1 Weld Cooling Time adj

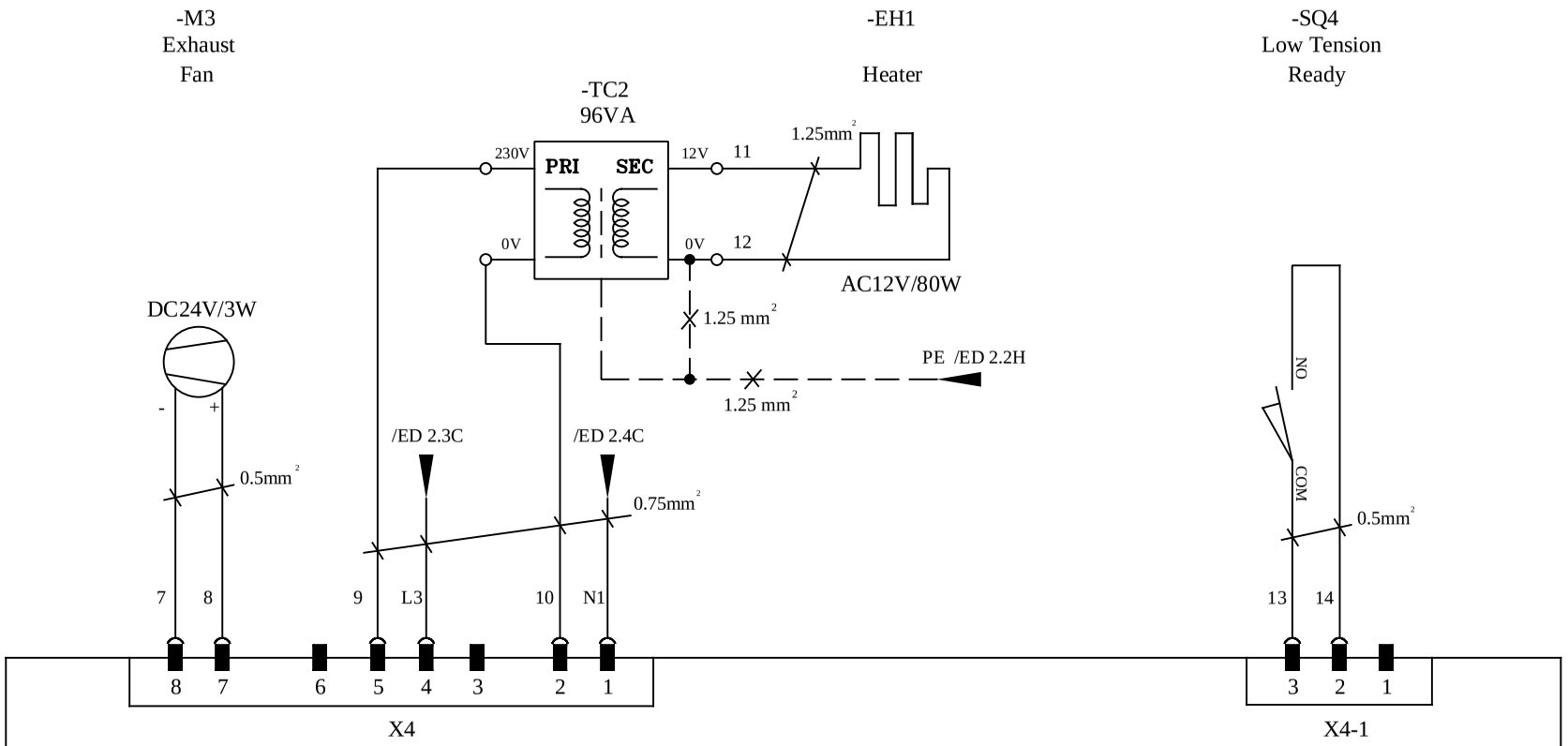
-R2 Heater Temp adj

-S3 JOG SW



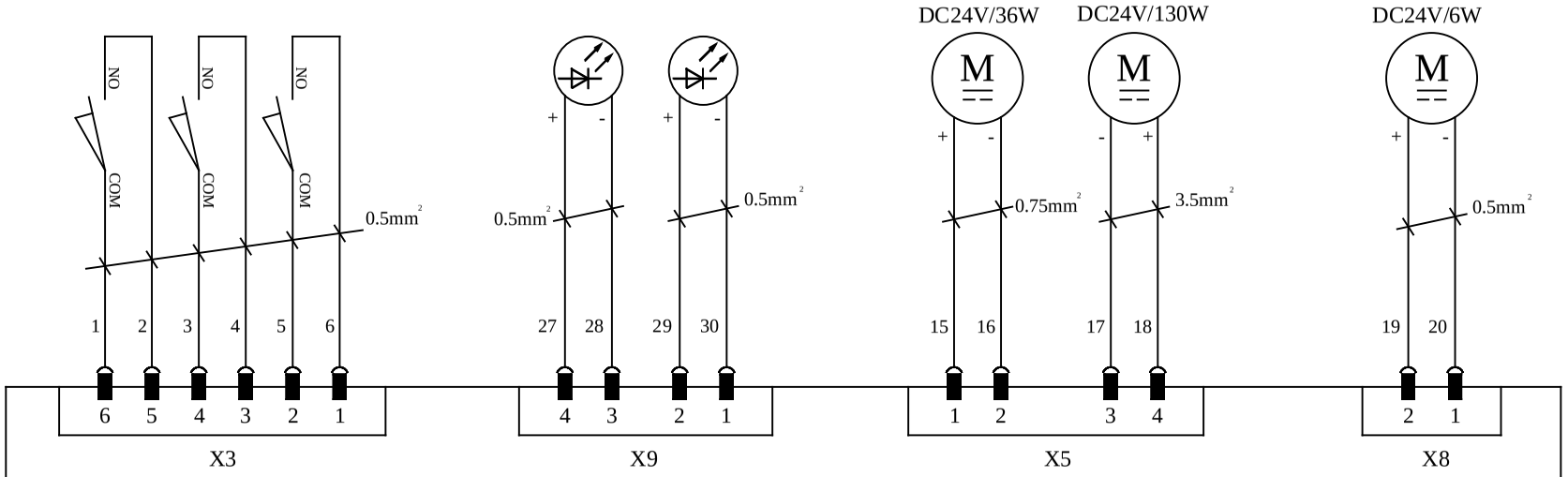
TP-502MH P.C.B.

MACHINE MODEL	TP-502MH / MV	DRAWING NO	MHV-0416-1	PAGE	ED3



TP-502MH P.C.B.

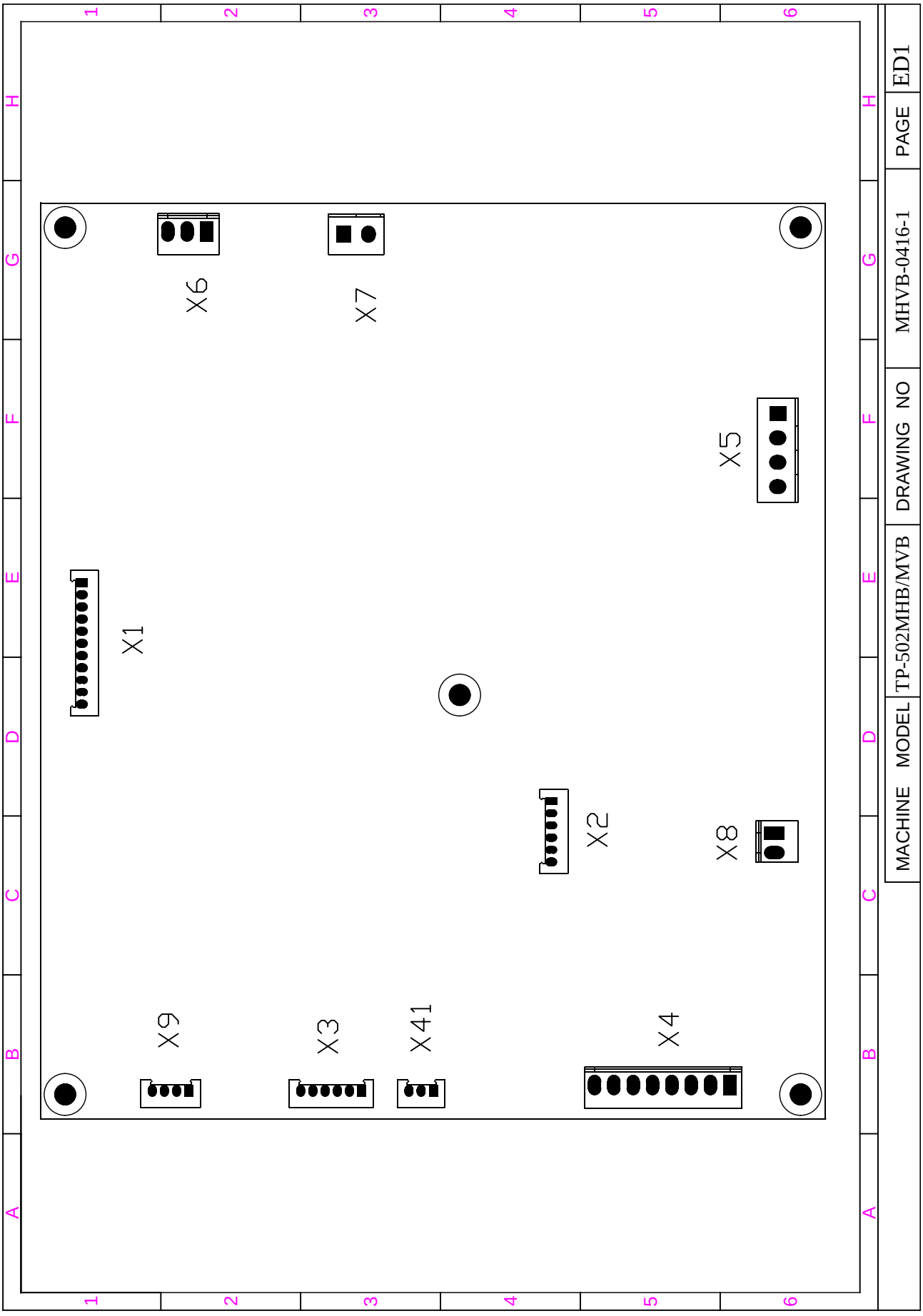
MACHINE MODEL	TP-502MH / MV	DRAWING NO	MHV-0416-1	PAGE	ED4

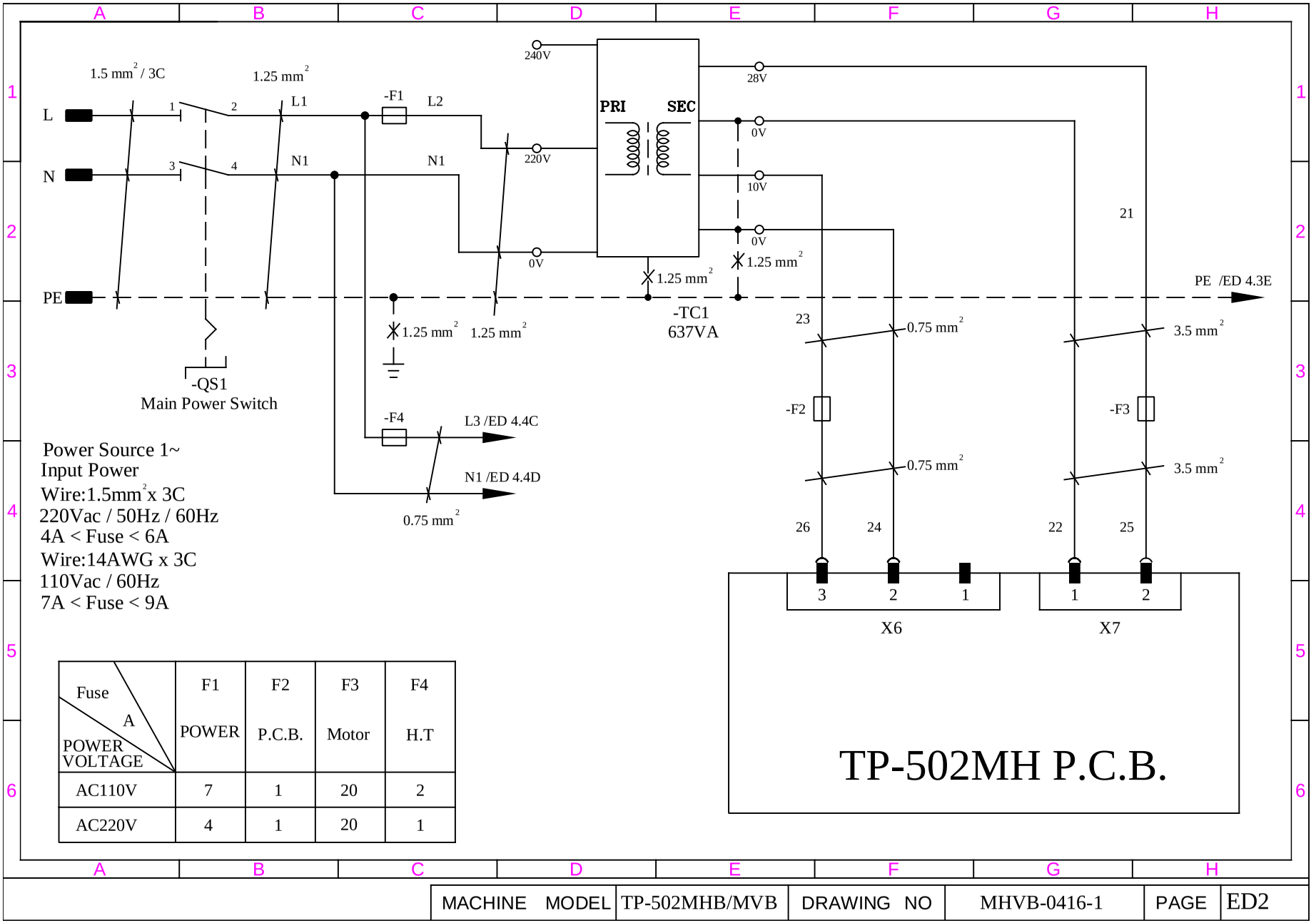


TP-502MH P.C.B.

MACHINE MODEL	TP-502MH / MV	DRAWING NO	MHV-0416-1	PAGE	ED5

b.TP-502MHB


X6
X7
X5
X1
X2
X8
X9
X3
X41
X4
MACHINE MODEL
TP-502MHB/MVB
DRAWING NO
MHVB-0416-1
PAGE
ED1



Fuse / A / POWER VOLTAGE	F1 POWER	F2 P.C.B.	F3 Motor	F4 H.T
AC110V	7	1	20	2
AC220V	4	1	20	1

MACHINE MODEL	TP-502MHB/MVB	DRAWING NO	MHVB-0416-1	PAGE	ED2

-R4 Tension adj

-S1 Reset P.B

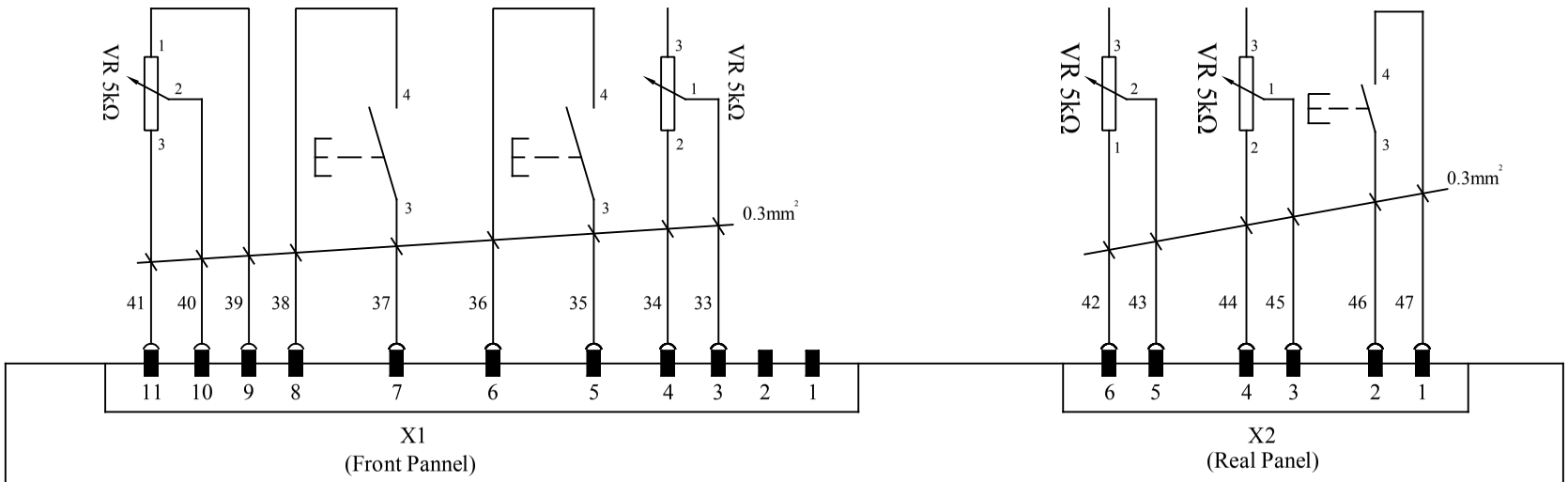
-S2 Feed P.B

-R3 Length adj

-R1 Weld Cooling Time adj

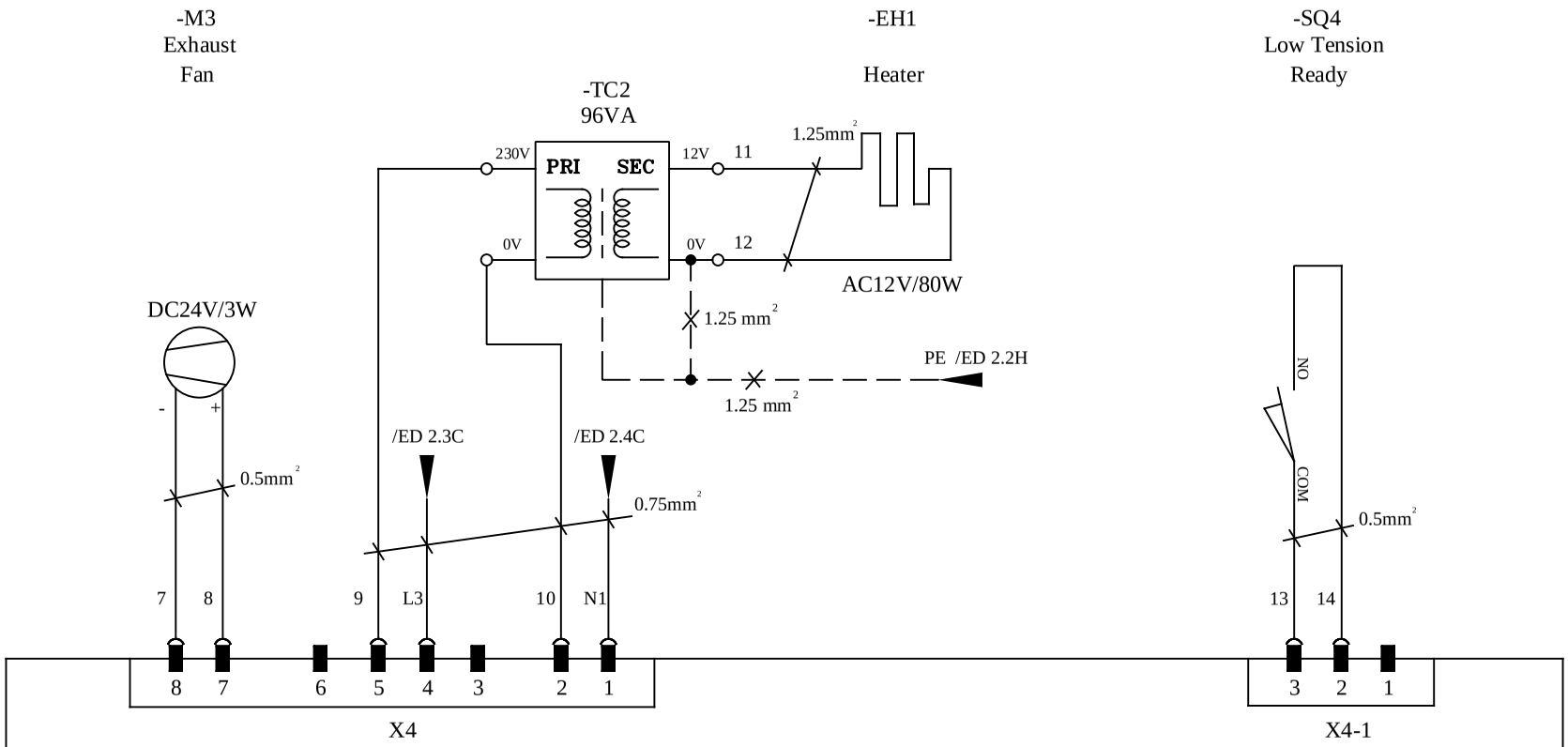
-R2 Heater Temp adj

-S3 JOG SW



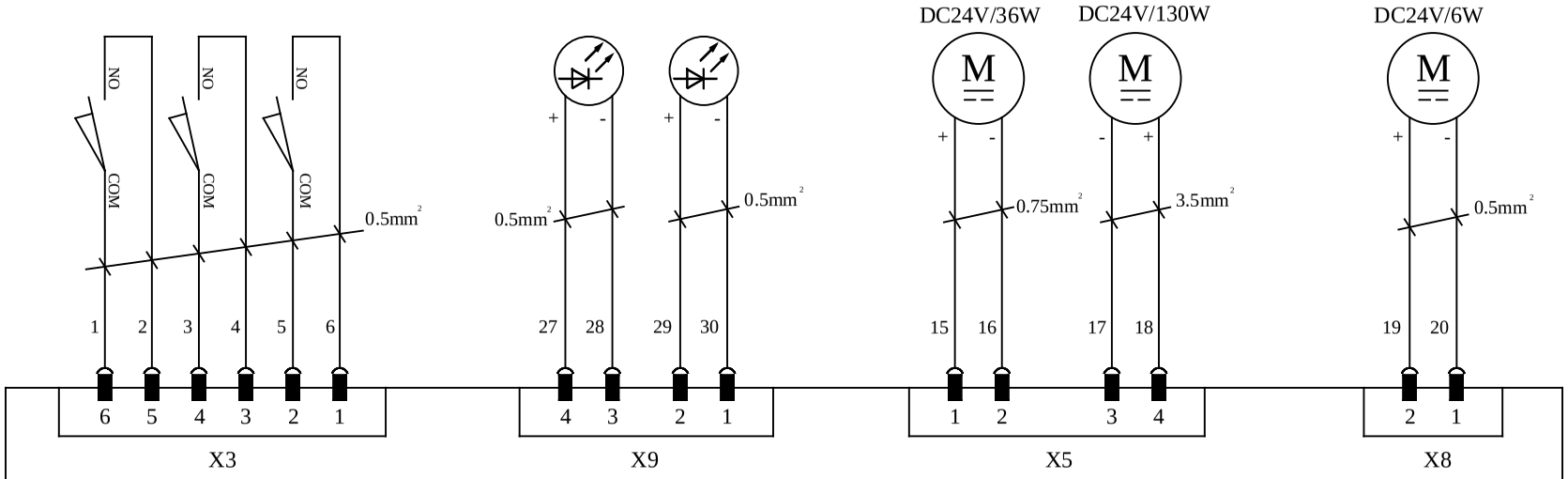
TP-502MH P.C.B.

MACHINE MODEL	TP-502MHB/MVB	DRAWING NO	MHVB-0416-1	PAGE	ED3



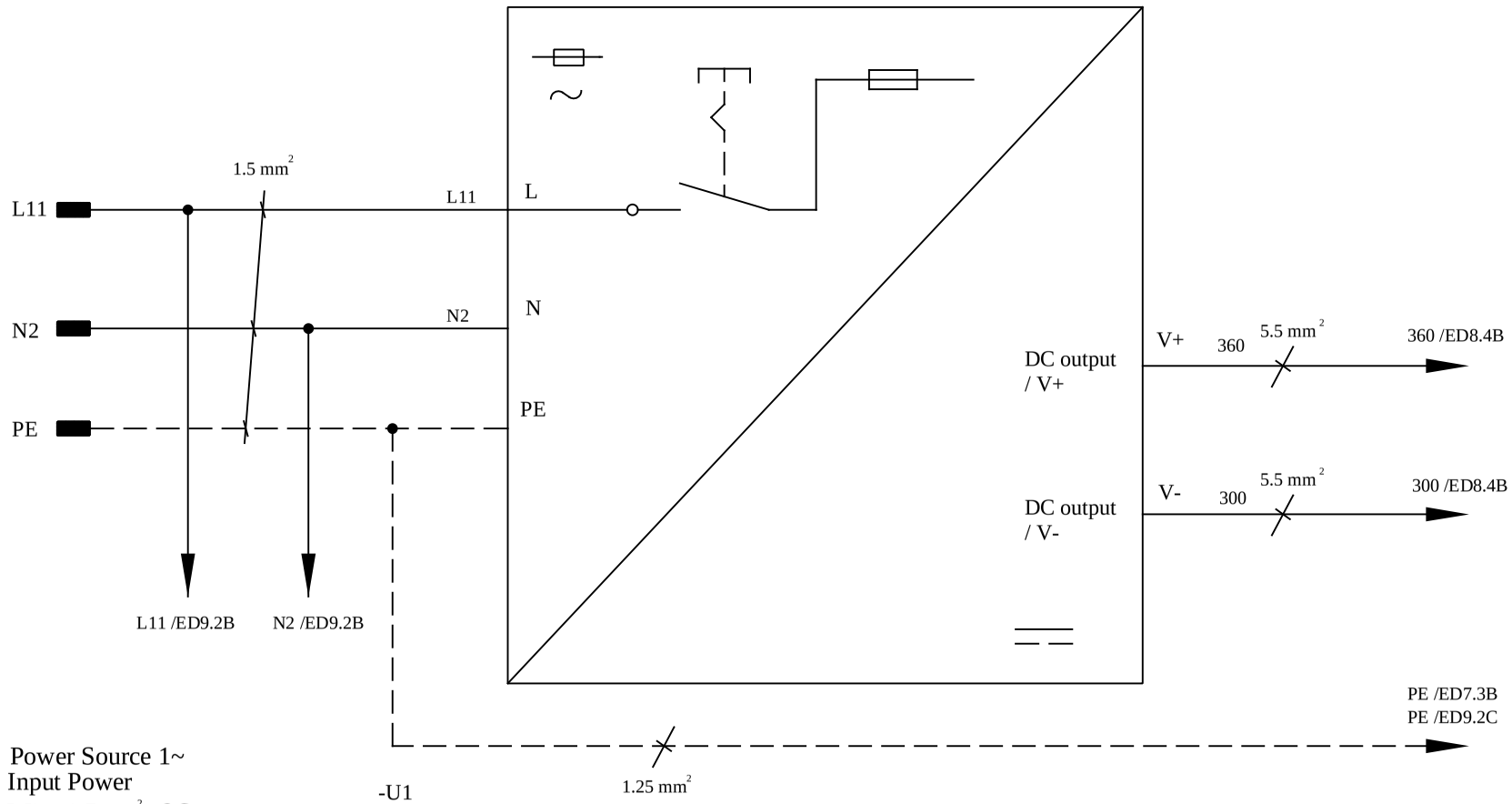
TP-502MH P.C.B.

MACHINE MODEL	TP-502MHB/MVB	DRAWING NO	MHVB-0416-1	PAGE	ED4



TP-502MH P.C.B.

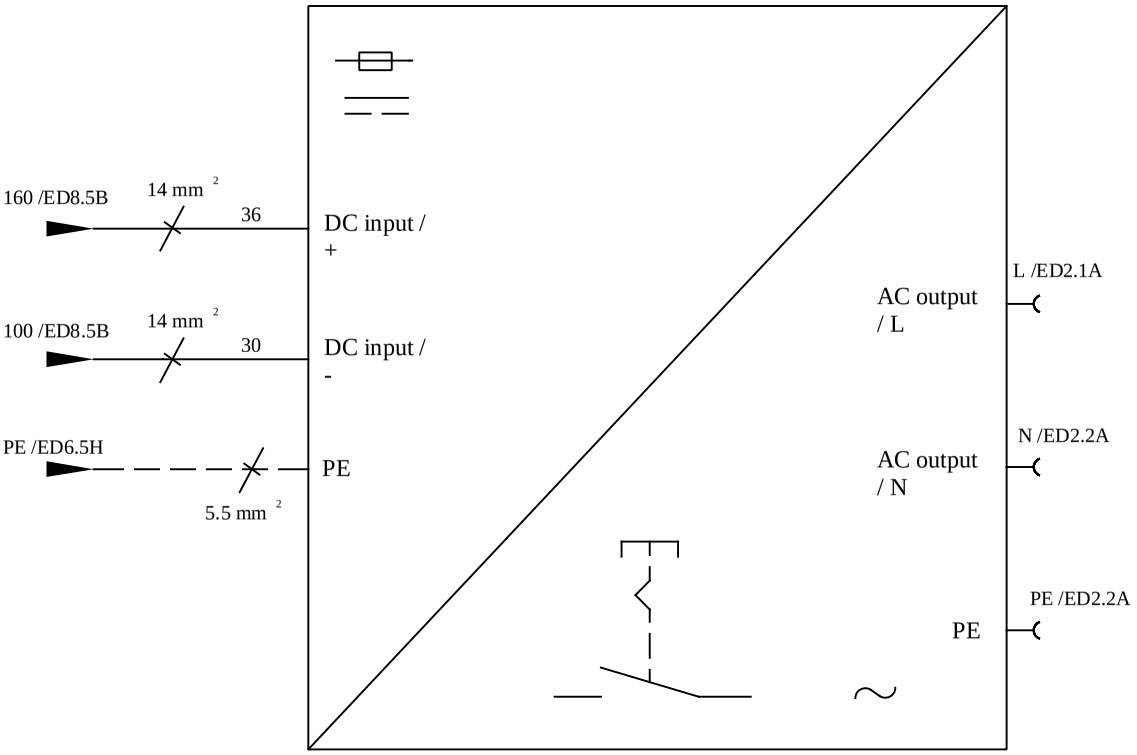
MACHINE MODEL	TP-502MHB/MVB	DRAWING NO	MHVB-0416-1	PAGE	ED5



Power Source 1~
Input Power
Wire:1.5mm²x 3C
220Vac / 50Hz / 60Hz
4A < Fuse < 6A
Wire:14AWG x 3C
110Vac / 60Hz
7A < Fuse < 9A

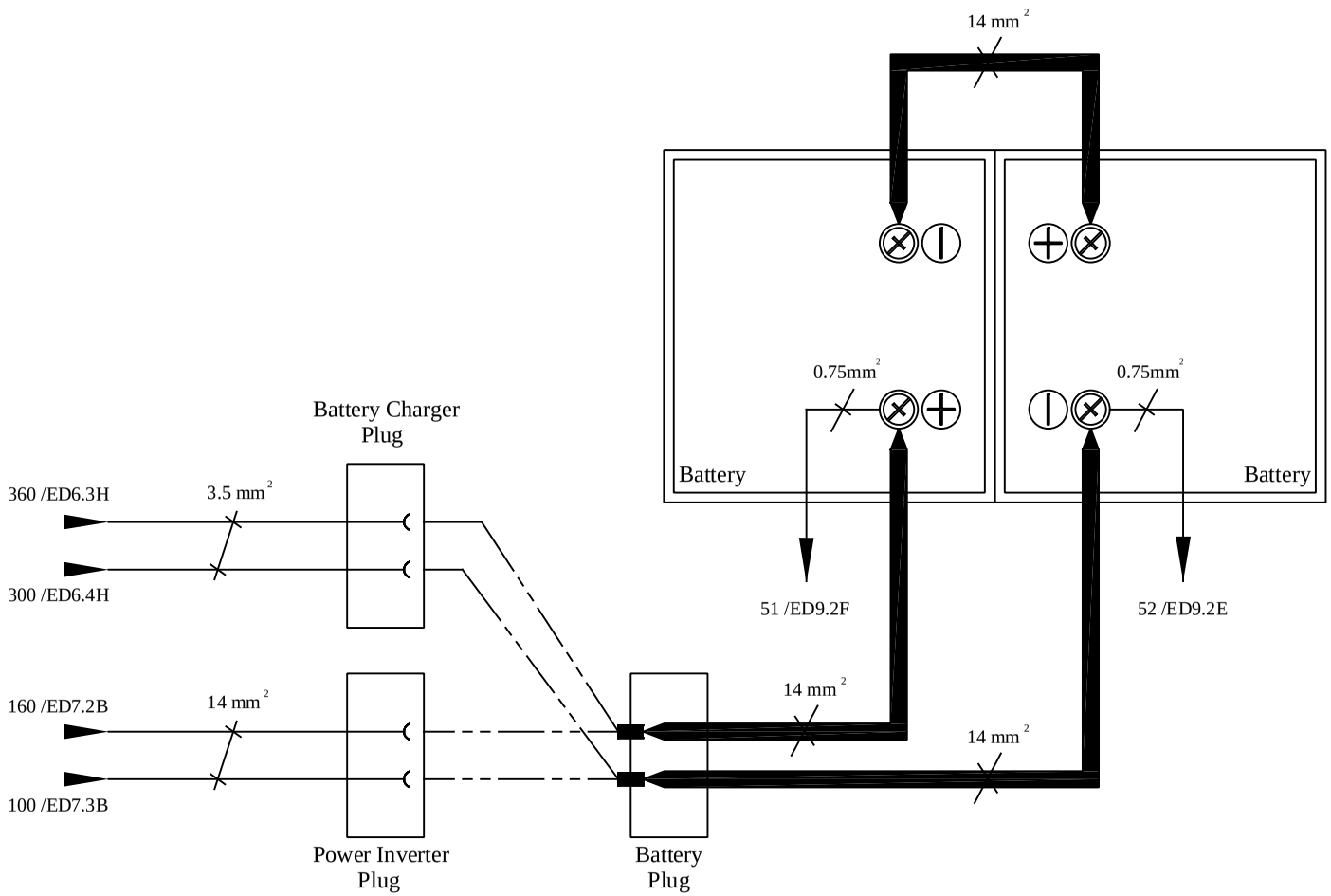
-U1
Battery Charger
INPUT: 90 - 132 Vac
180 - 264 Vac
OUTPUT: 26 - 28.8 Vdc
360W / 12.5A

MACHINE MODEL	TP-502MHB/MVB	DRAWING NO	MHVB-0416-1	PAGE	ED6

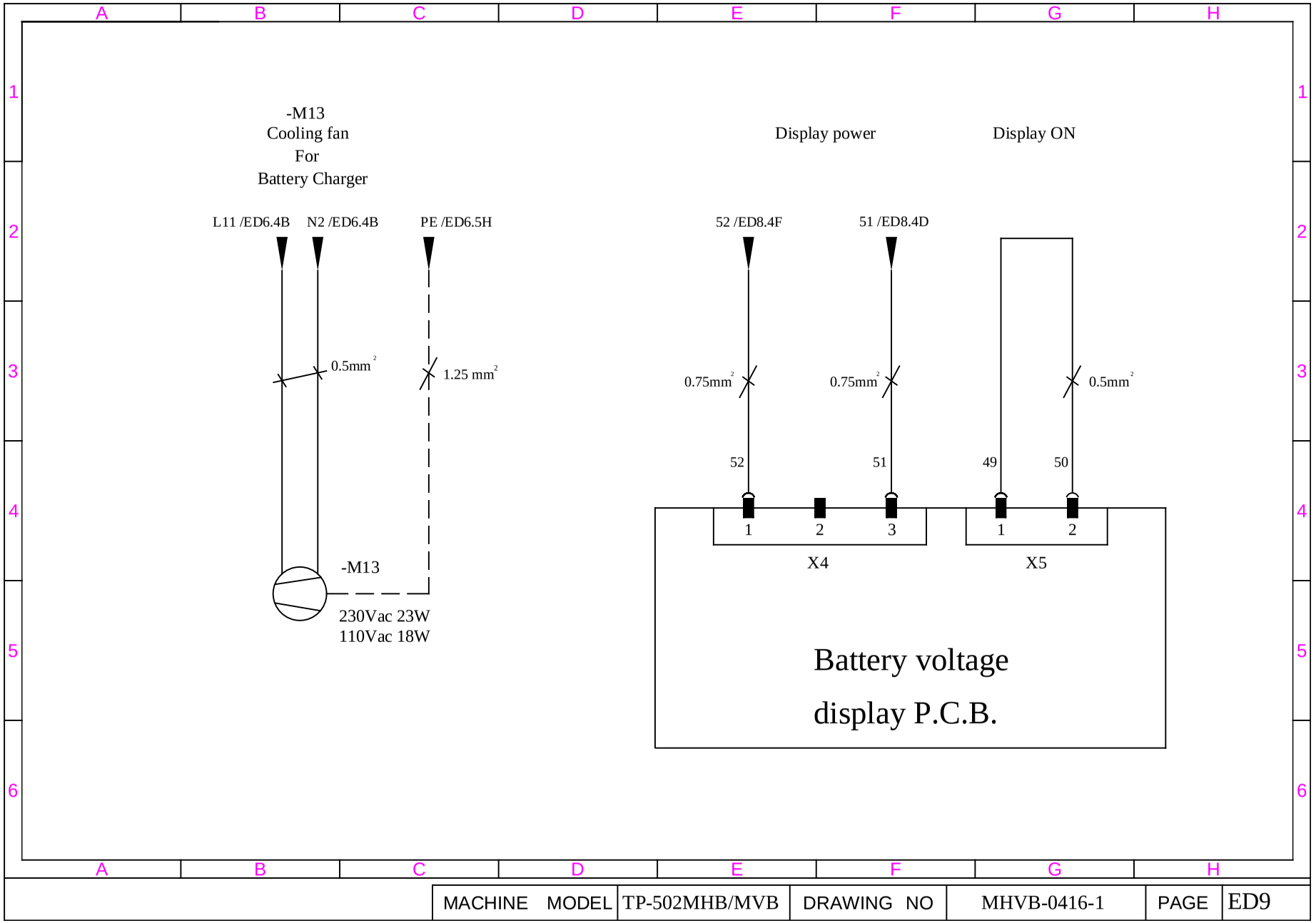


-U2
Power Inverter
INPUT: 21 - 30 Vdc 38A
OUTPUT: 200 - 240 Vac
700W / 3.5A
OUTPUT: 100 - 120 Vac
700W / 7A

MACHINE MODEL	TP-502MHB/MVB	DRAWING NO	MHVB-0416-1	PAGE	ED7

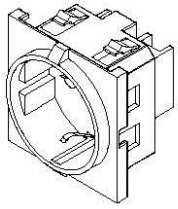
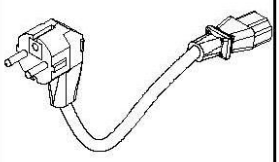
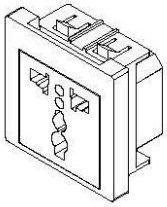
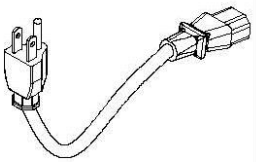


MACHINE MODEL	TP-502MHB/MVB	DRAWING NO	MHVB-0416-1	PAGE	ED8



MACHINE MODEL	TP-502MHB/MVB	DRAWING NO	MHVB-0416-1	PAGE	ED9

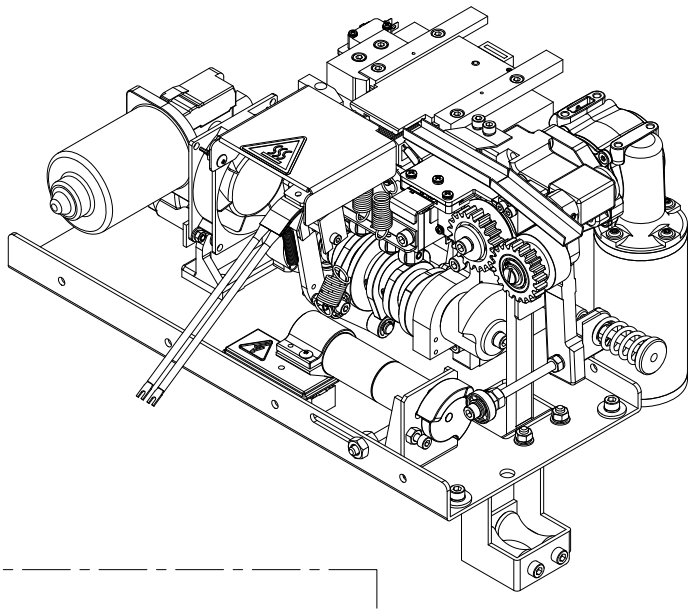
shape	classification	shape	classification
	HBS		ER
	TMS		RR
	PMS		SR
	FMS		SP
	HB		BR
	THS		MB
	HSS		KYA
	CAP		KYB
	HN		KYC
	WN		HBW
	FLG		PWA ϕ 8x ϕ 12~ ϕ 16x0.8~1.2t ϕ 6x ϕ 13~ ϕ 14x0.8~1.2t
	NTE		PWB ϕ 8x ϕ 14~ ϕ 16x1.2~1.5t ϕ 6x ϕ 15~ ϕ 16x1.2~1.5t
	PN		PWC ϕ 8x ϕ 20~ ϕ 23x2.0t ϕ 6x ϕ 16~ ϕ 19x2.0t
	PW		PWD
	SW		DS
	TW		TTP
	BWW		FTP

shape	classification	shape	classification
	T2-6-30230 UPS Outlet (Europe)		T2-6-30240 UPS Cable (Europe)
	T2-6-30231 UPS Outlet (America)		T2-6-30240 UPS Cable (America)

PART III

1 STRAPPING HEAD UNIT

5MH-1-900000
5MH-1-900010



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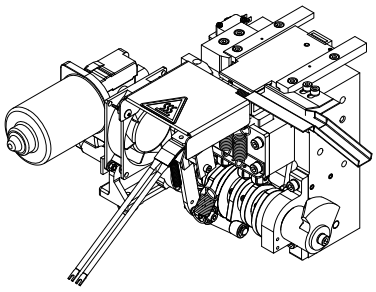

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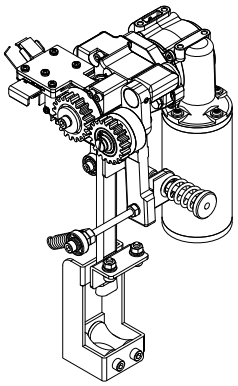

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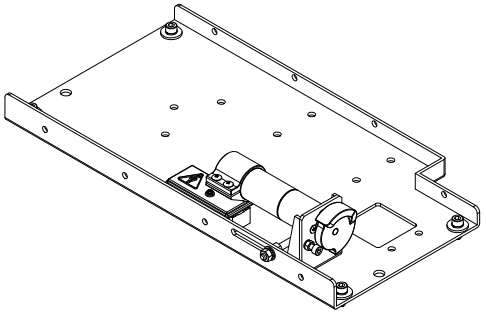
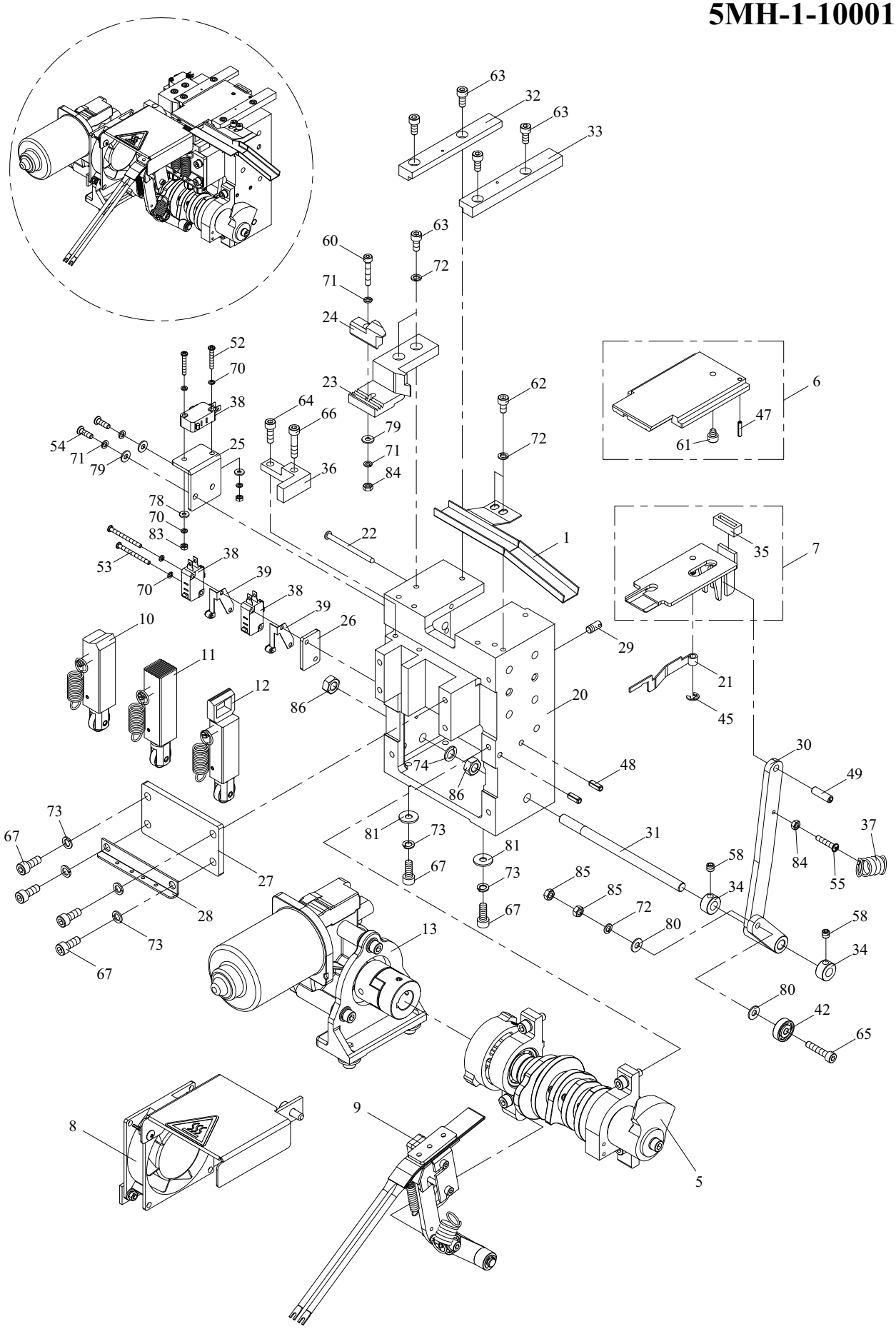


1 STRAPPING HEAD UNIT 5MH-1-900000 5MH-1-900010

REF. NO.	PART NO.	DESCRIPTION	Q'TY	REMARKS
	5MH-1-900000	Strapping Head Unit (For 9mm)	1	
	5MH-1-900010	Strapping Head Unit (For 12mm)	1	
	5MH-1-900020	Strapping Head Unit (For 15.5mm)	1	
1	5MH-1-100000	Cam Group (For 9mm)	1	SEE PAGE C3
	5MH-1-100010	Cam Group (For 12mm)	1	
	5MH-1-100020	Cam Group (For 15.5mm)	1	
2	5MH-1-200000	Feed Group	1	SEE PAGE C21
3	5MH-1-300000	Base Plate Group	1	SEE PAGE C31

1-1 CAM GROUP

5MH-1-100000
5MH-1-100010



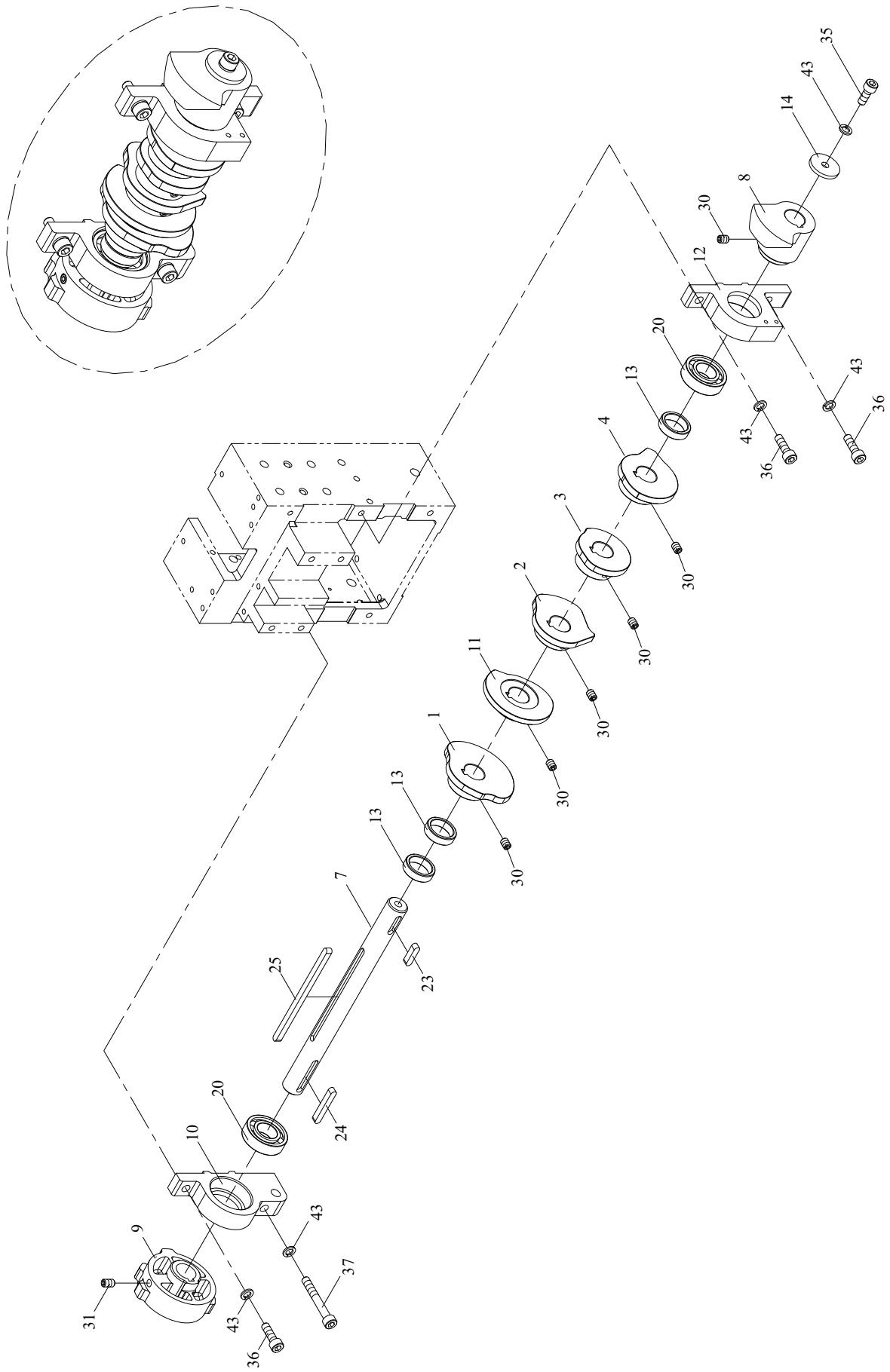
1-1 CAM GROUP 5MH-1-100000 5MH-1-100010

REF. NO.	PART NO.	DESCRIPTION	Q'TY	REMARKS
	5MH-1-100000	Cam Group (For 9mm)	1	
	5MH-1-100010	Cam Group (For 12mm)	1	
	5MH-1-100020	Cam Group (For 15.5mm)	1	
1	5MH-1-100100	RH Strap Guide (For 9mm)	1	
	5MH-1-100110	RH Strap Guide (For 12mm)	1	
	5MH-1-100120	RH Strap Guide (For 15.5mm)	1	
5	5MH-1-110000	Cam Ass'y	1	SEE PAGE C7
6	T2-1-10240	Slide Ass'y	1	
7	T5-1-10250A	Separator Ass'y	1	
8	5MV-1-110000	Fan Ass'y	1	SEE PAGE C9
9	T5-1-12004	Heater Ass'y	1	SEE PAGE C11
10	5MH-1-120000	Rear Bar Ass'y	1	SEE PAGE C13
11	T5-1-14000	Press Bar Ass'y	1	SEE PAGE C15
12	5MH-1-130000	Front Bar Ass'y	1	SEE PAGE C17
13	T5-1-30000	Transmission Group	1	SEE PAGE C19
20	T5-1-10110	Main Body Block	1	
21	T5-1-10120	Switch Lever	1	
22	T5-1-10130	Switch Pin	1	
23	T5-1-10142	Strap Guide (A)	1	
24	5MV-1-100400	Strap Guide (B)	1	
25	T5-1-10160	Switch Bracket	1	
26	T5-1-10770	Plate	1	
27	TA-067	Bar Guide Lid	1	
28	TA-072	Spring Hook	1	
29	TA-089	Spring Hook	1	
30	TA-090	Arm	1	
31	TA-094	Shaft	1	
32	TA-095	Guide (L)	1	
33	TA-226	Guide (R)	1	
34	TA-229	Collar	2	
35	TA-236	Rubber Buffer	1	
36	TA-239	Cutter Holder	1	
37	TB-114	Return Spring	1	
38	TF-006	Micro Switch	3	
39	TF-009	Switch Trigger	2	
42	BR635ZZ	Bearing, 635ZZ	1	
45	ER03	Snap Ring, E-3	1	

1-1 CAM GROUP 5MH-1-100000 5MH-1-100010

REF. NO.	PART NO.	DESCRIPTION	Q'TY	REMARKS
47	SP0314	Spring Pin, 3×14	1	
48	SP0514	Spring Pin, 5×14	2	
49	SP0620	Spring Pin, 6×20	1	
52	PMS0320	PMS, M3×20	2	
53	PMS0335	PMS, M3×35	2	
54	PMS0412	PMS, M4×12	2	
55	PMS0420	PMS, M4×20	1	
58	HSS0606G	HSS, M6×6 (G)	2	
60	HBS0425	HBS, M4×25	1	
61	HBS0505.2	HBS, M5×5.2	1	
62	HBS0510	HBS, M5×10	2	
63	HBS0512	HBS, M5×12	6	
64	HBS0516	HBS, M5×16	1	
65	HBS0525	HBS, M5×25	1	
66	HBS0525H	HBS, M5×25 (H)	1	
67	HBS0616	HBS, M6×16	11	
70	SW03	SW, M3	6	
71	SW04	SW, M4	4	
72	SW05	SW, M5	3	
73	SW06	SW, M6	11	
74	SW08	SW, M8	1	
78	PW03	PW, M3	2	
79	PW04	PW, M4	3	
80	PW05	PW, M5	4	
81	PW06C	PW, M6 (C)	7	
83	HN03	HN, M3	2	
84	HN04	HN, M4	2	
85	HN05	HN, M5	2	
86	HN08	HN, M8	2	

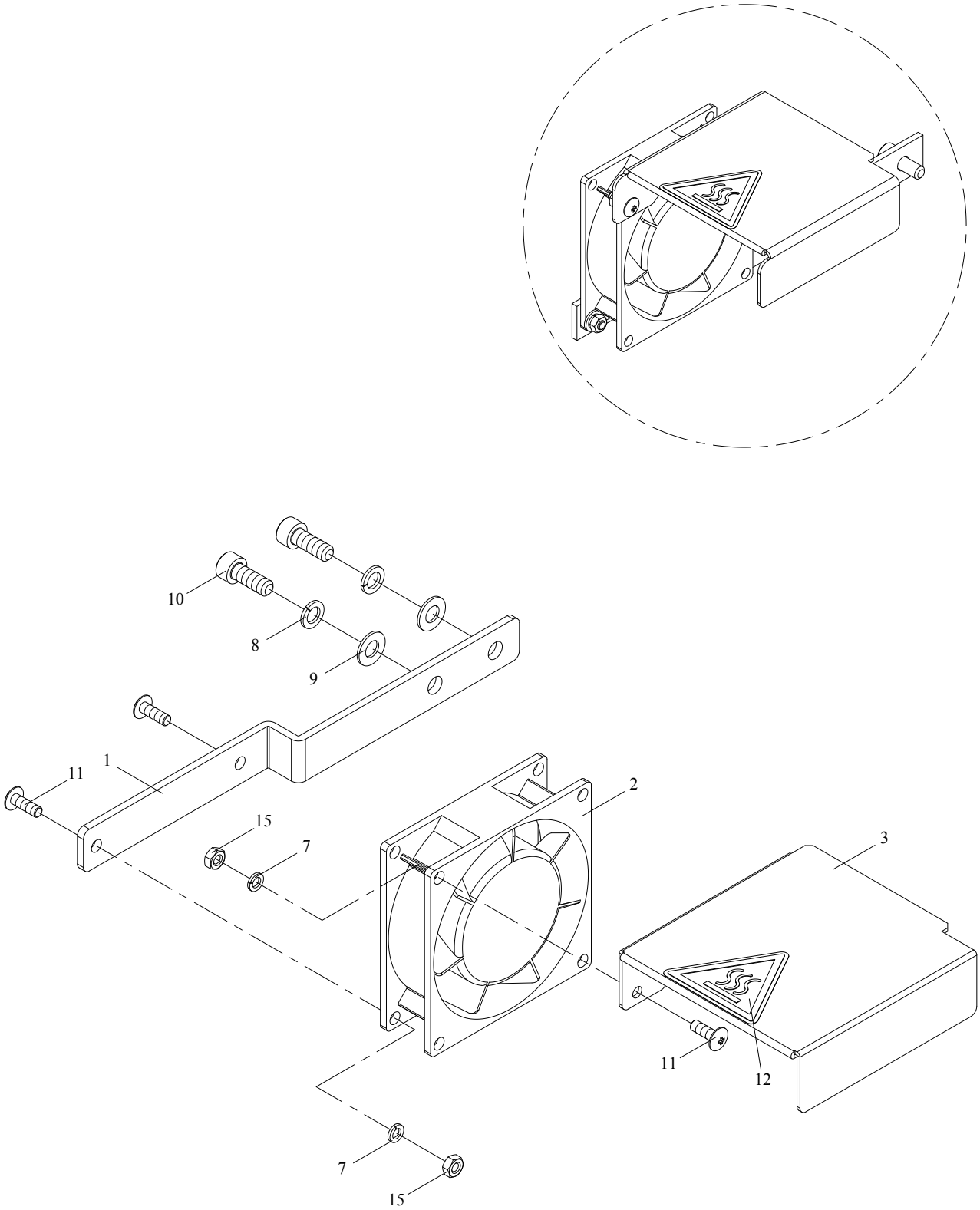
1-1-1 **CAM ASS'Y** **5MH-1-110000**



1-1-1 CAM ASS'Y 5MH-1-110000

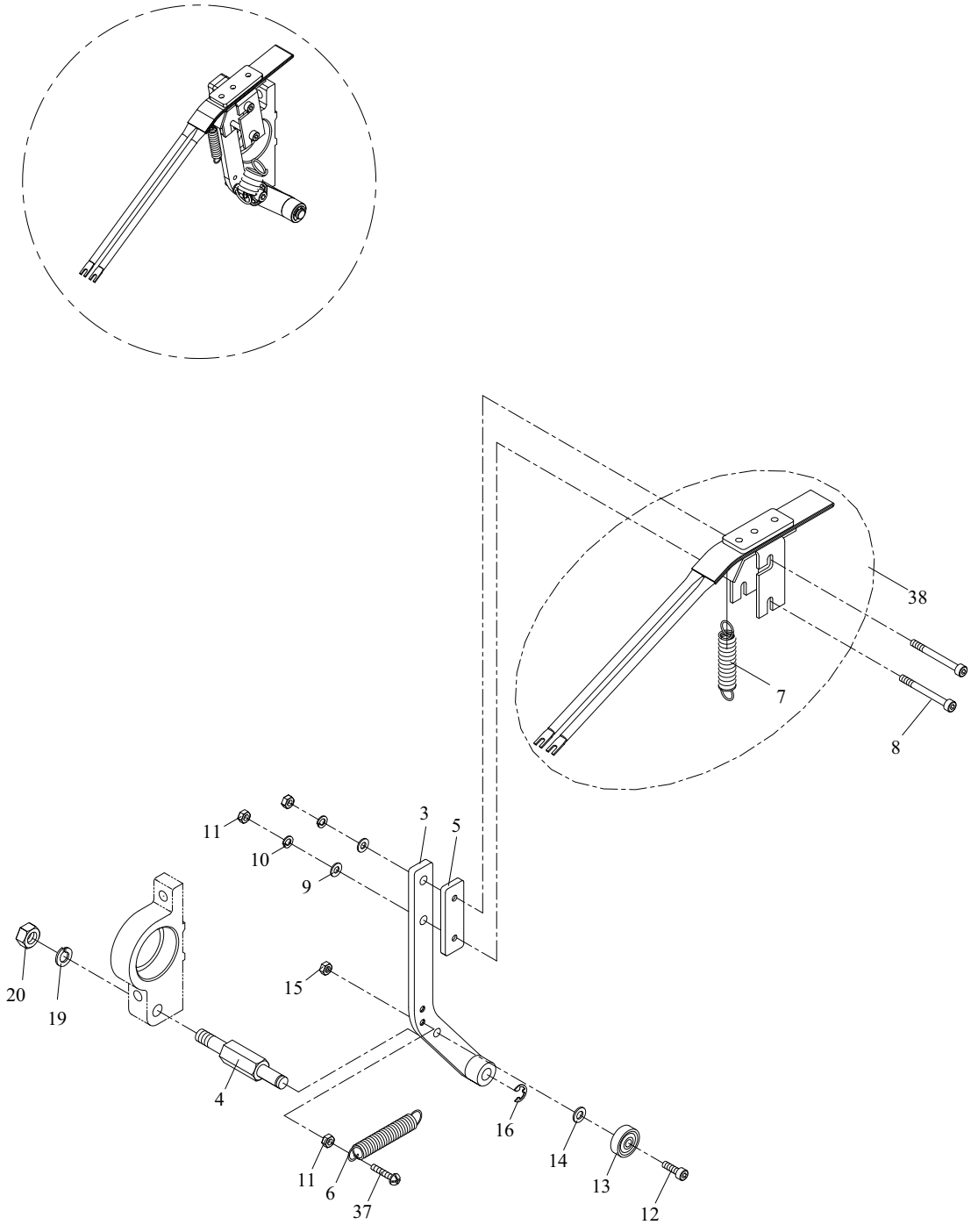
REF. NO.	PART NO.	DESCRIPTION	Q'TY	REMARKS
1	5MH-1-110100	Rear Bar Cam	1	
2	5MH-1-110200	Press Bar Cam	1	
3	5MH-1-110300	Front Bar Cam	1	
4	5MH-1-110400	Slide Plate Cam	1	
7	T5-1-11121	Cam Shaft	1	
8	T5-1-11130	Tension Cam	1	
9	T5-1-11141	Limit Switch Contactor	1	
10	TA-008-2	Bearing Support (L)	1	
11	TA-015B	Heater Cam	1	
12	TA-017-2	Bearing Support (R)	1	
13	TA-241	Spacer	3	
14	TB-223	Washer	1	
20	BR6003ZZ	Bearing, 6003ZZ	2	
23	KYA050520	Key, 5×5×20	1	
24	KYA050535	Key, 5×5×35	1	
25	KYA0505101	Key, 5×5×101	1	
30	HSS0608G	HSS, M6×8 (G)	6	
31	HSS0610G	HSS, M6×10 (G)	1	
35	HBS0616	HBS, M6×16	1	
36	HBS0620	HBS, M6×20	3	
37	HBS0645H	HBS, M6×45 (H)	1	
43	SW06	SW, M6	5	

1-1-2 FAN ASS'Y 5MV-1-110000



1-1-2 FAN ASS'Y 5MV-1-110000

REF. NO.	PART NO.	DESCRIPTION	Q'TY	REMARKS
1	5MV-1-100100	Fan Support	1	
2	T5-1-12370	Fan	1	
3	5MV-1-100300	Fan Cover	1	
7	SW04	SW, M4	4	
8	SW06	SW, M6	2	
9	PW06A	PW, M6 (A)	2	
10	HBS0616	HBS, M6×16	2	
11	TMS0412	TMS, M4×12	4	
12	LA-40002	Label	1	
15	HN04	HN, M4	4	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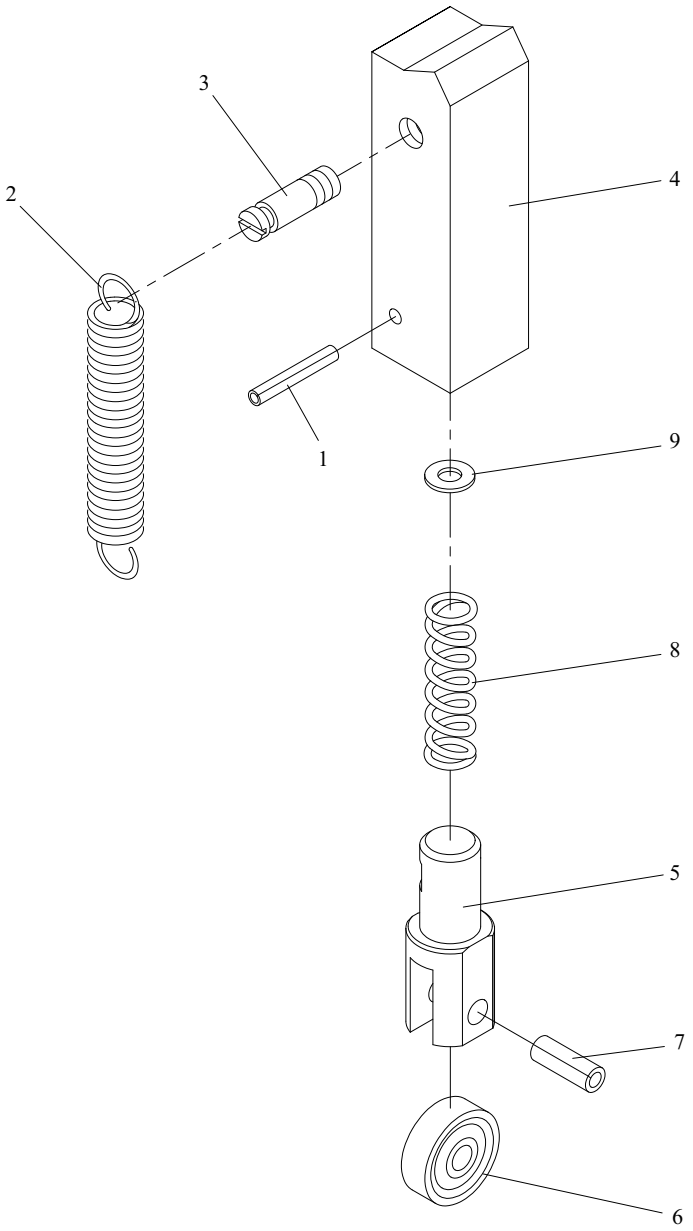
1-1-3 HEATER ASS'Y T5-1-12004

REF. NO.	PART NO.	DESCRIPTION	Q'TY	REMARKS
3	TB-102	Heater Arm	1	
4	TB-103	Pin	1	
5	TB-107	Side Plate	1	
6	TB-114	Return Spring	1	
7	TB-115	Spring	1	
8	HBS0440H	HBS, M4×40 (H)	2	
9	PW04	PW, M4	2	
10	SW04	SW, M4	2	
11	HN04	HN, M4	3	
12	HBS0516	HBS, M5×16	1	
13	BR635ZZ	Bearing, 635ZZ	1	
14	PW05	PW, M5	1	
15	HN05	HN, M5	1	
16	ER06	Snap Ring, E-6	1	
19	SW08	SW, M8	1	
20	HN08	HN, M8	1	
37	PMS0412	PMS, M4×12	1	
38	TB-113	Heater Ass'y	1	

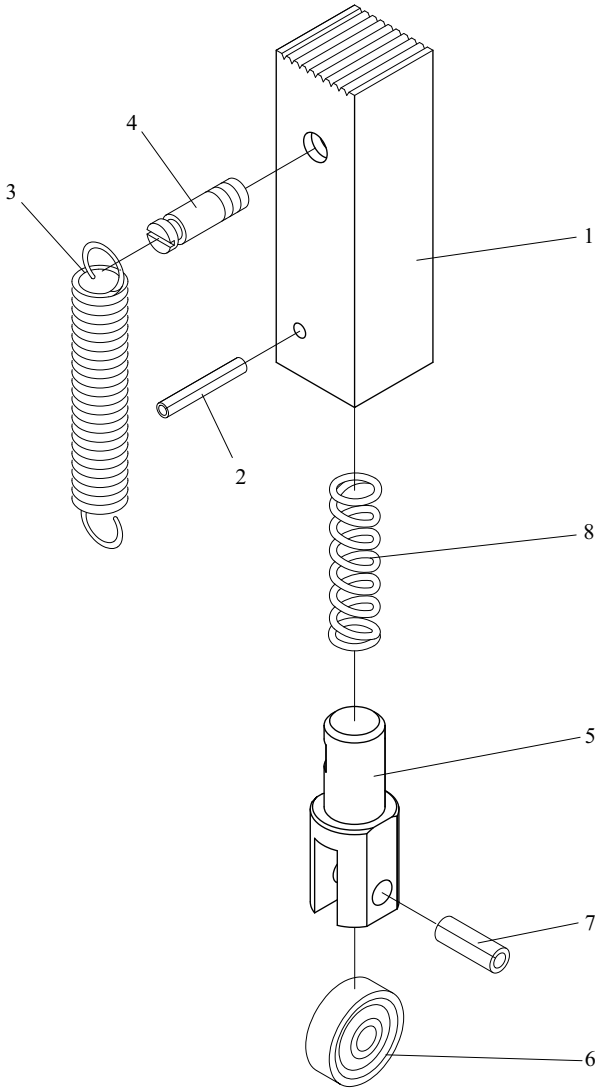
1-1-4 REAR BAR ASS'Y 5MH-1-120000



1-1-4 REAR BAR ASS'Y 5MH-1-120000

REF. NO.	PART NO.	DESCRIPTION	Q'TY	REMARKS
1	SP0318	Spring Pin, 3×18	1	
2	TA-071	Return Spring	1	
3	TA-073	Spring Hook	1	
4	TA-074	Rear Bar	1	
5	TA-075	Plunger	1	
6	BR635ZZ	Bearing, 635ZZ	1	
7	SP0514	Spring Pin, 5×14	1	
8	TA-078	Spring	1	
9	PW04	PW, M4	1	

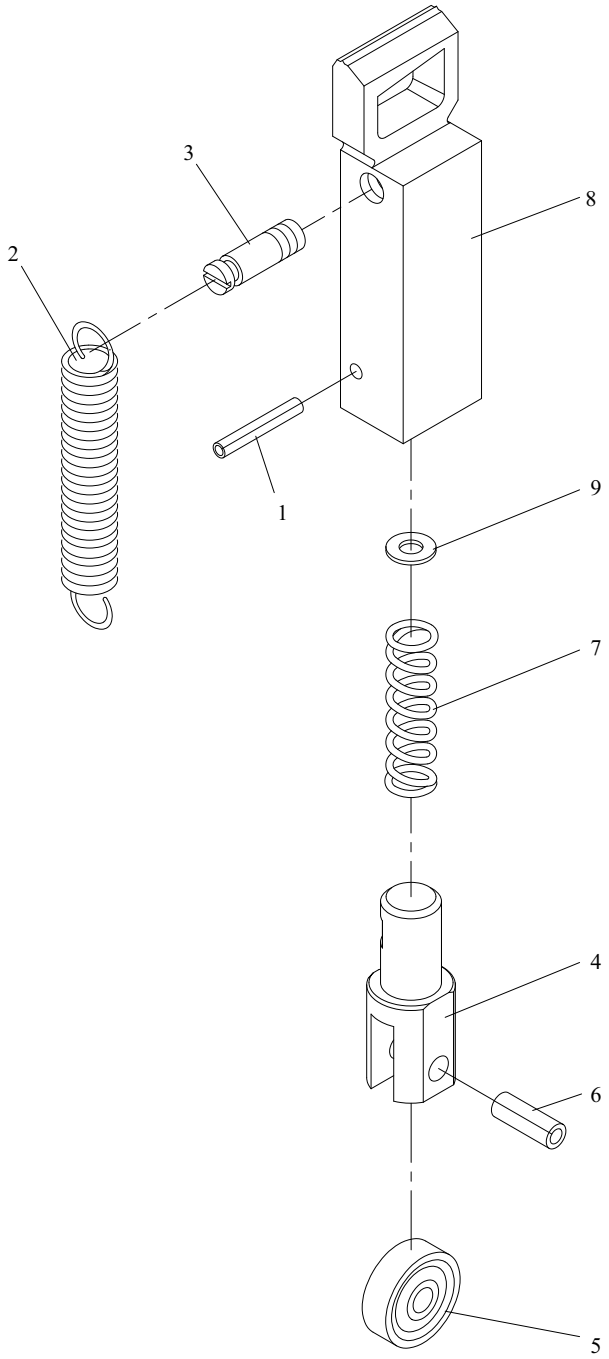
1-1-5 PRESS BAR ASS'Y T5-1-14000



1-1-5 PRESS BAR ASS'Y T5-1-14000

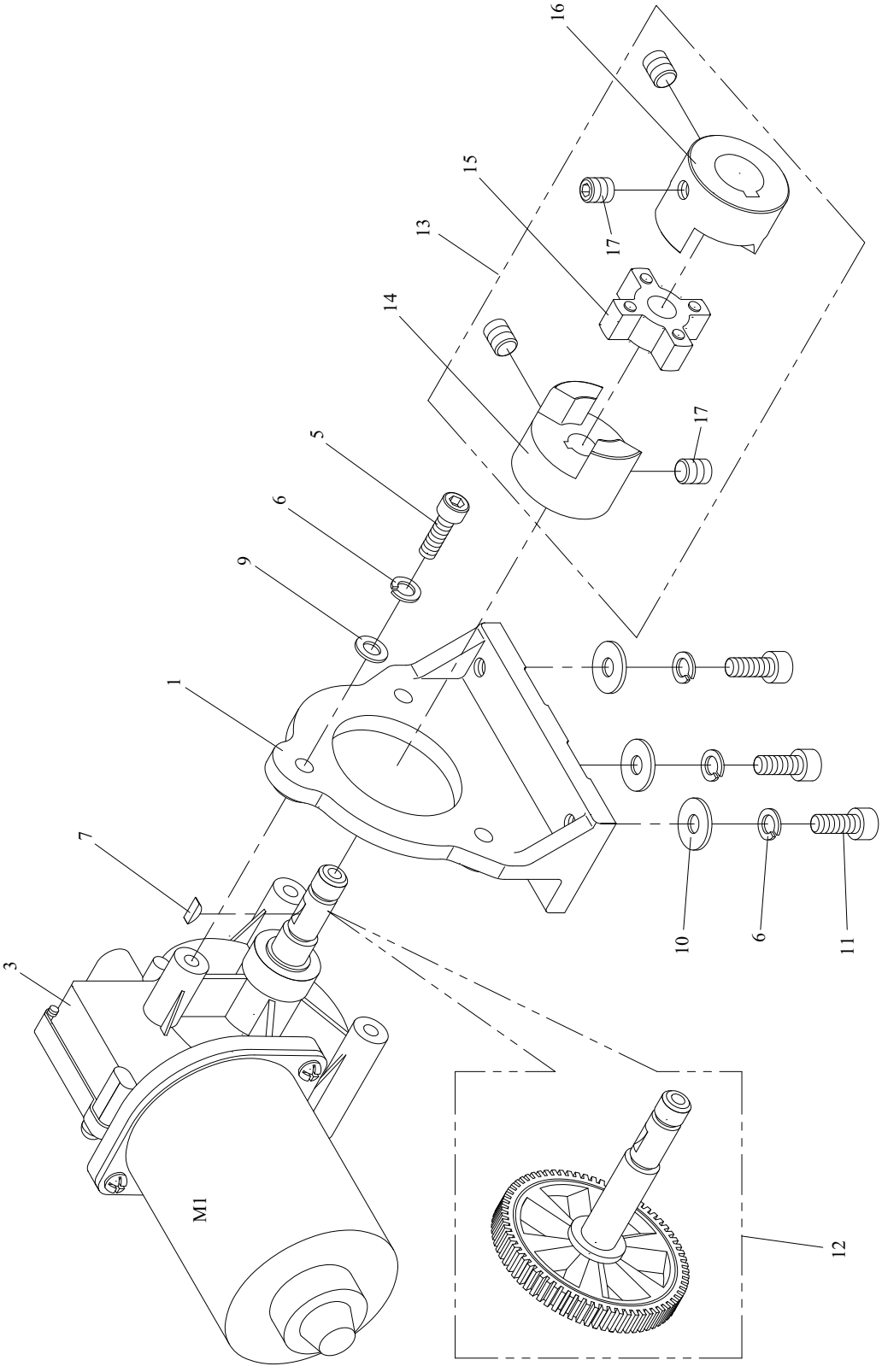
REF. NO.	PART NO.	DESCRIPTION	Q'TY	REMARKS
1	TA-069	Press Par	1	
2	SP0318	Spring Pin, 3×18	1	
3	TA-071	Return Spring	1	
4	TA-073	Spring Hook	1	
5	TA-075	Plunger	1	
6	BR635ZZ	Bearing, 635ZZ	1	
7	SP0514	Spring Pin, 5×14	1	
8	TA-078	Spring	1	

1-1-6 FRONT BAR ASS'Y 5MH-1-130000



1-1-6 FRONT BAR ASS'Y 5MH-1-130000

REF. NO.	PART NO.	DESCRIPTION	Q'TY	REMARKS
1	SP0318	Spring Pin, 3×18	1	
2	TA-071	Return Spring	1	
3	TA-073	Spring Hook	1	
4	TA-075	Plunger	1	
5	BR635ZZ	Bearing, 635ZZ	1	
6	SP0514	Spring Pin, 5×14	1	
7	TA-078	Spring	1	
8	TA-079	Front Bar	1	
9	PW04	PW, M4	1	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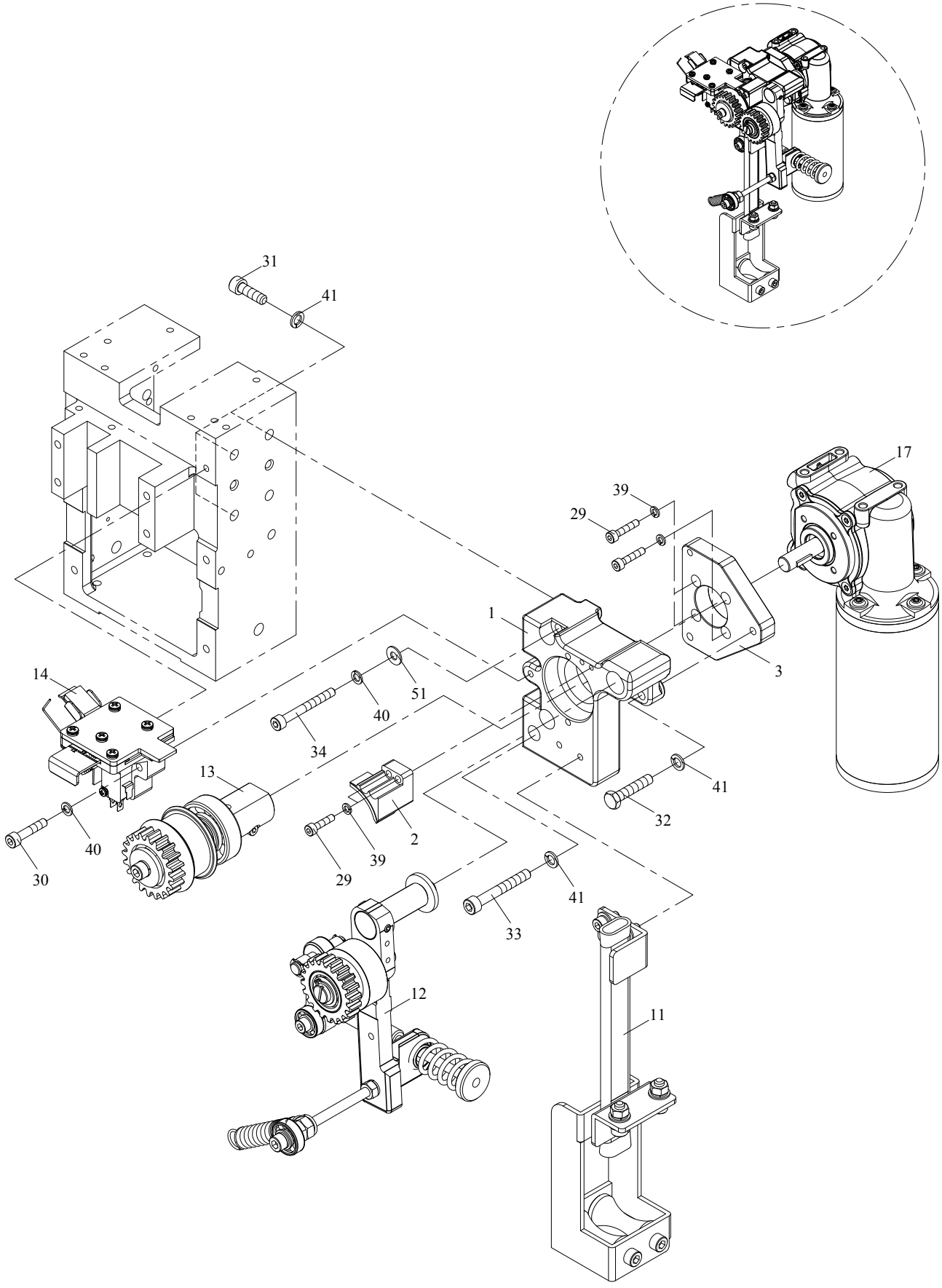
1-1-7 TRANSMISSION GROUP T5-1-30000

REF. NO.	PART NO.	DESCRIPTION	Q'TY	REMARKS
1	T5-1-30110	Main Motor Support	1	
3	T5-1-30130	Motor (M1)	1	
5	HBS0625	HBS, M6×25	3	
6	SW06	SW, M6	6	
7	KYC0310	Key, 3×10	1	
9	PW06A	PW, M6 (A)	3	
10	PW06C	PW, M6 (C)	3	
11	HBS0616	HBS, M6×16	3	
12	T5-1-30220	Worm Gear for M1 Motor	1	
13	T5-1-30230	Flexible Coupling	1	
14	T5-1-30240	Hub (L.H.)	1	
15	T5-1-30250	Flexible Spacer	1	
16	T5-1-30260	Hub (R.H.)	1	
17	HSS0608GN	HSS, M6×8 (G)(N)	4	

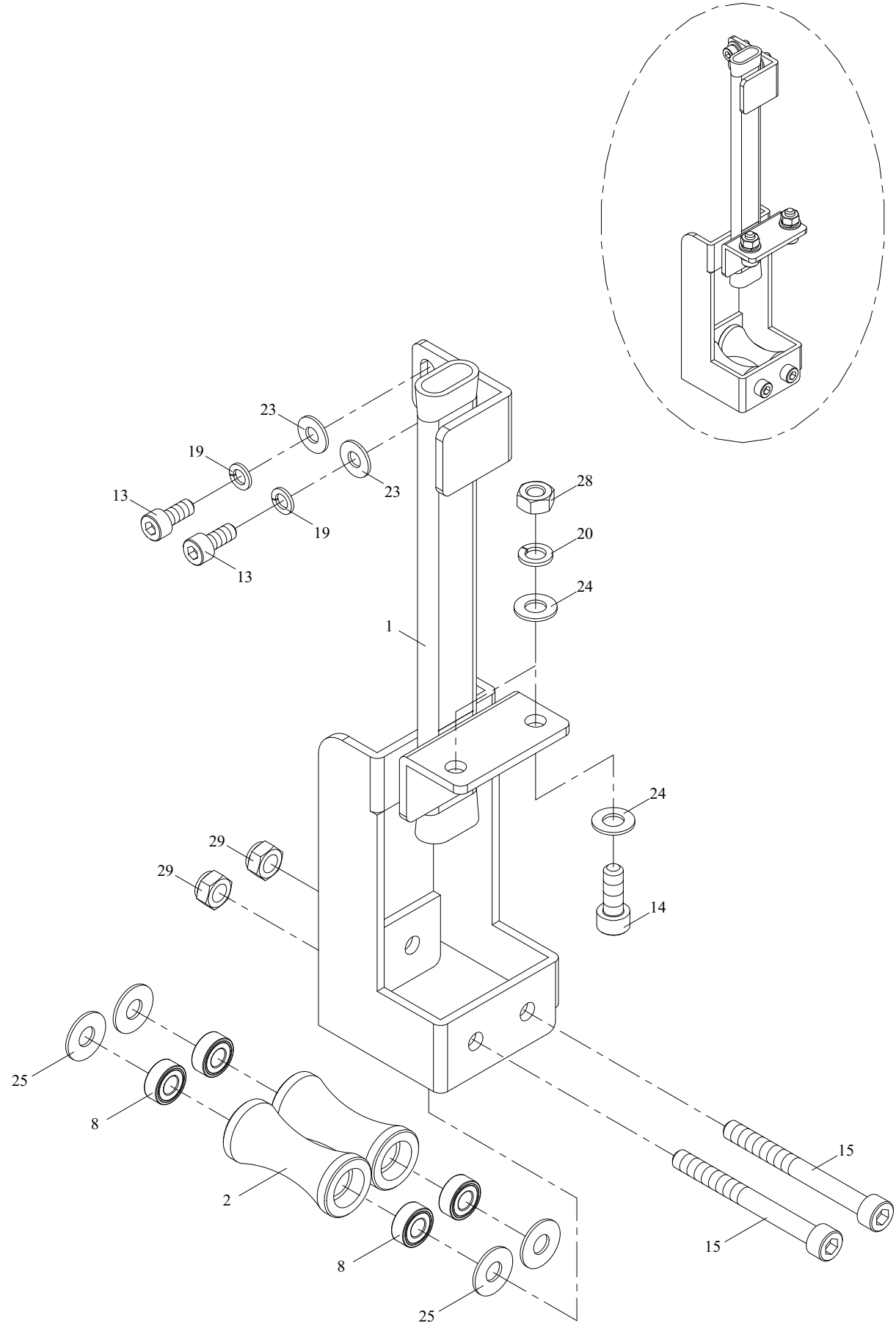
1-2 FEED GROUP 5MH-1-200000



1-2 FEED GROUP 5MH-1-200000

REF. NO.	PART NO.	DESCRIPTION	Q'TY	REMARKS
1	5MH-1-200100	Bracket	1	
2	5MH-1-200200	Guide	1	
3	5MH-1-200300	Motor Bracket	1	
11	5MH-1-210000	Feed Shooter Ass'y	1	SEE PAGE C23
12	5MH-1-220000	Roller Arm Ass'y	1	SEE PAGE C25
13	5MH-1-230000	Main Roller Ass'y	1	SEE PAGE C27
14	5MH-1-240000	Strap Guide Ass'y	1	SEE PAGE C29
17	5MH-1-200400	Motor (M2)	1	
29	HBS0416	HBS, M4×16	6	
30	HBS0525H	HBS, M5×25 (H)	2	
31	HBS0620	HBS, M6×20	3	
32	HB0630	HB, M6×30	1	
33	HBS0645H	HBS, M6×45 (H)	1	
34	HBS0545H	HBS, M5×45 (H)	1	
39	SW04	SW, M4	6	
40	SW05	SW, M5	3	
41	SW06	SW, M6	5	
51	PW05	PW, M5	1	

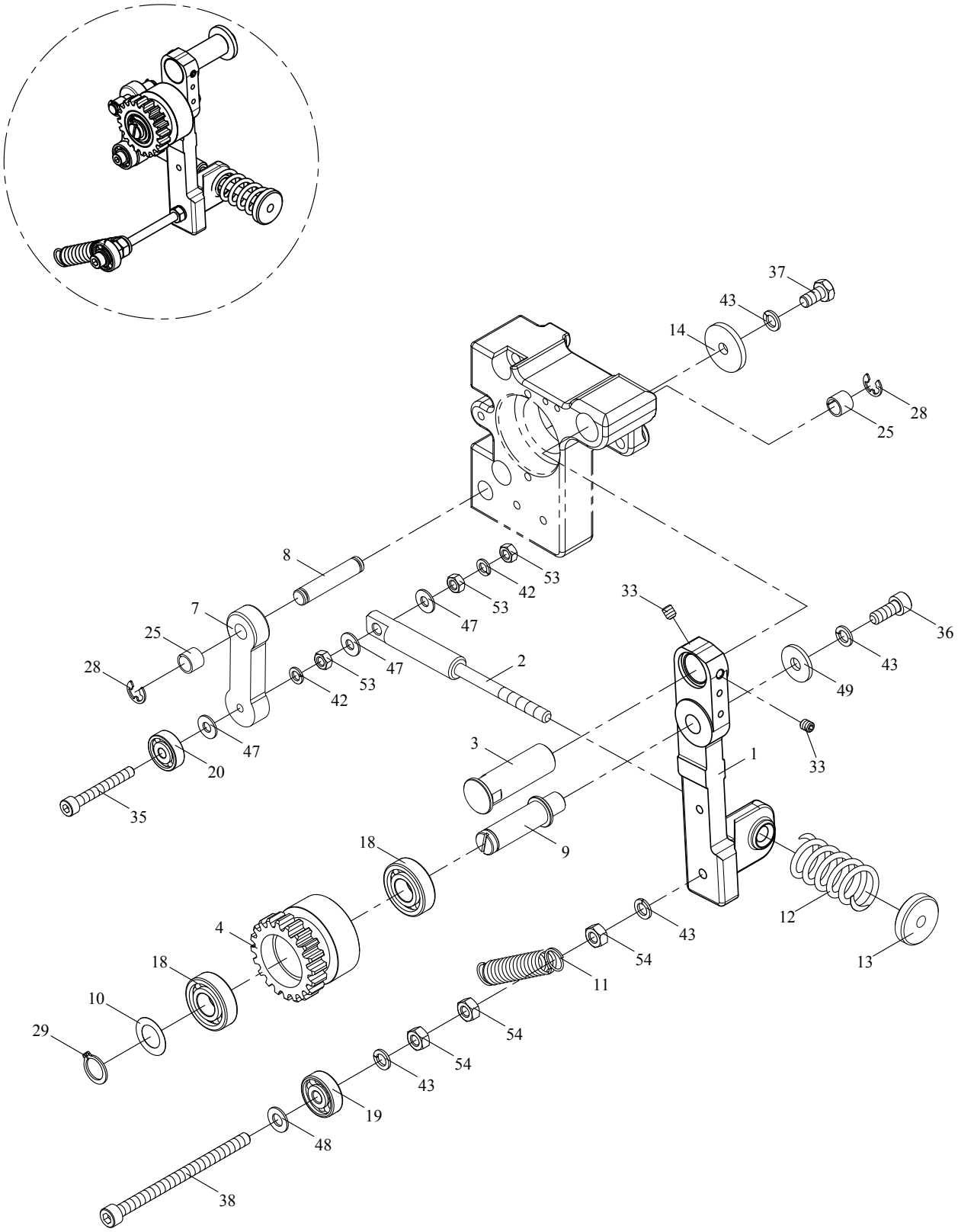
1-2-1 FEED SHOOTER ASS'Y 5MH-1-210000



1-2-1 FEED SHOOTER ASS'Y 5MH-1-210000

REF. NO.	PART NO.	DESCRIPTION	Q'TY	REMARKS
1	5MH-1-210100	Feed Shooter	1	
2	5MH-1-210200	Roller	2	
8	BR686ZZ	Bearing, 686ZZ	4	
13	HBS0512	HBS, M5×12	2	
14	HBS0616	HBS, M6×16	2	
15	HBS0660HN	HBS, M6×60 (H)(N)	2	
19	SW05	SW, M5	2	
20	SW06	SW, M6	2	
23	PW05	PW, M5	2	
24	PW06A	PW, M6 (A)	4	
25	WA-010602	Washer	4	
28	HN06	HN, M6	2	
29	NTE06	NTE, M6	2	

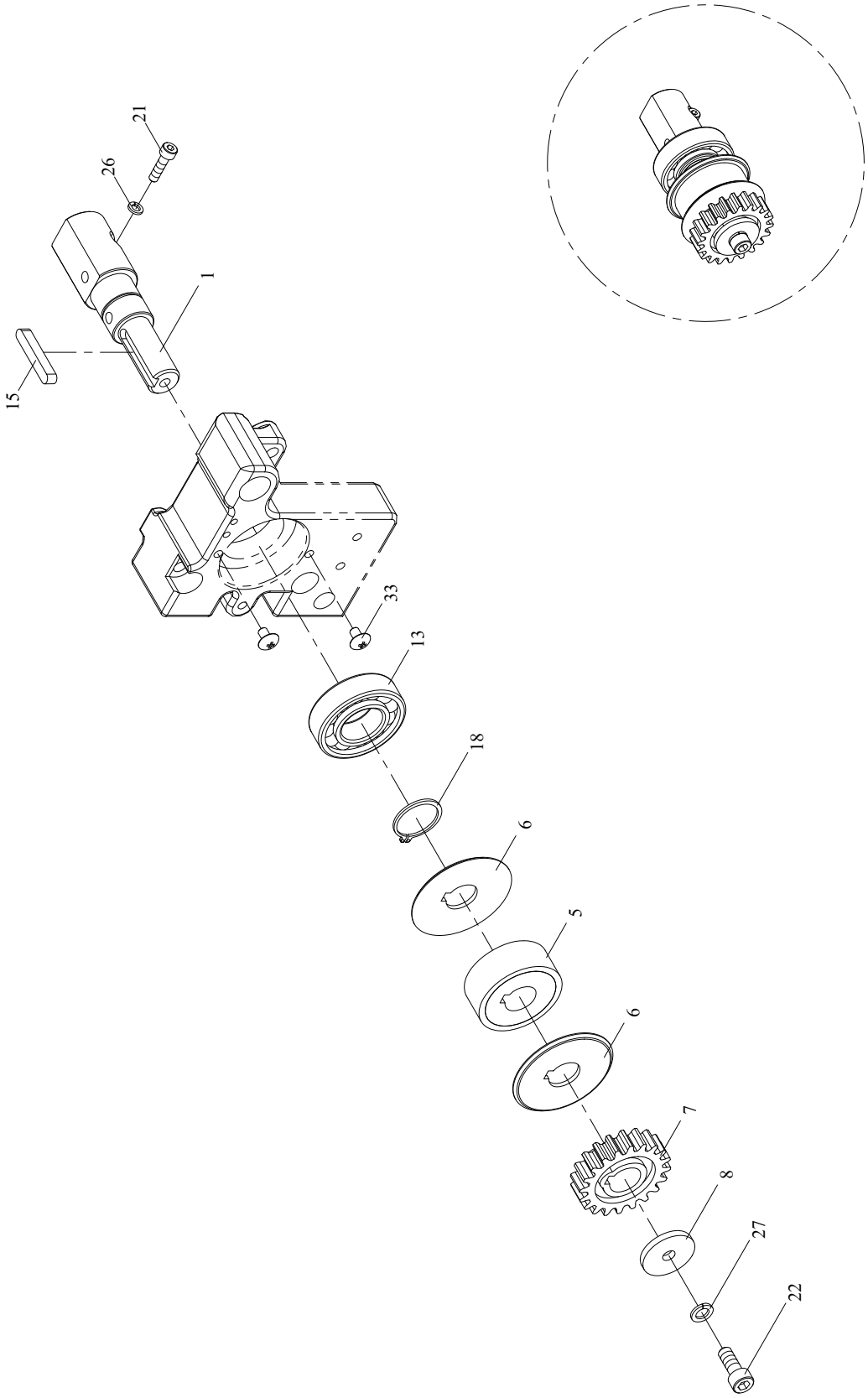
1-2-2 ROLLER ARM ASS'Y 5MH-1-220000



1-2-2 ROLLER ARM ASS'Y 5MH-1-220000

REF. NO.	PART NO.	DESCRIPTION	Q'TY	REMARKS
1	5MH-1-220101	Roller Arm	1	
2	5MH-1-220200	Connect Rod	1	
3	5MH-1-220300	Shaft	1	
4	5MH-1-220400	Roller	1	
7	T5-1-22110	Tension Arm	1	
8	T5-1-22120	Shaft	1	
9	T5-1-22171	Roller Shaft	1	
10	AD-2-20181	Washer	1	
11	TC-025	Spring	1	
12	T7-1-22200	Spring	1	
13	TB-133	Nut	1	
14	TB-223	Washer	1	
18	BR6001ZZ	Bearing, 6001ZZ	2	
19	BR636-2RS	Bearing, 636 2RS	1	
20	BR635ZZ	Bearing, 635ZZ	1	
25	MB0808	Metal Bushing, 0808	2	
28	ER06	Snap Ring, E-6	2	
29	SR12	Snap Ring, S-12	1	
33	HSS0506G	HSS, M5×6 (G)	2	
35	HBS0540	HBS, M5×40	1	
36	HBS0616	HBS, M6×16	1	
37	HB0612	HB, M6×12	1	
38	HBS0690	HBS, M6×90	1	
42	SW05	SW, M5	2	
43	SW06	SW, M6	4	
47	PW05	PW, M5	3	
48	PW06A	PW, M6 (A)	1	
49	PW06C	PW, M6 (C)	1	
53	HN05	HN, M5	3	
54	HN06	HN, M6	3	

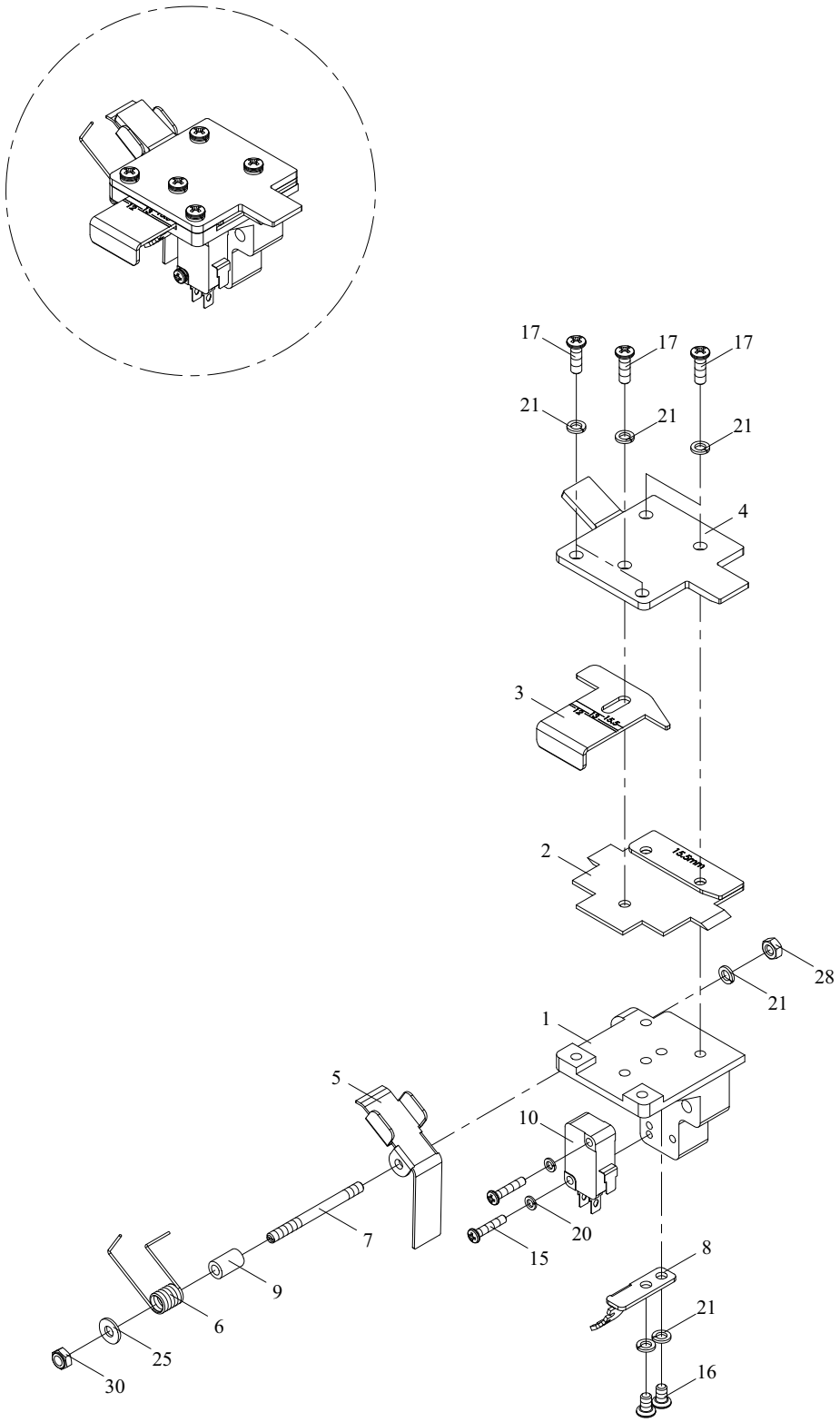
1-2-3 MAIN ROLLER ASS'Y 5MH-1-230000



1-2-3 MAIN ROLLER ASS'Y 5MH-1-230000

REF. NO.	PART NO.	DESCRIPTION	Q'TY	REMARKS
1	5MH-1-230100	Main Roller Shaft	1	
5	T5-1-21122	Main Roller	1	
6	T5-1-21130	Side Plate	2	
7	T5-1-21160	Gear	1	
8	TB-223	Washer	1	
13	BR6004-2RS	Bearing, 6004 2RS	1	
15	KYA050532	Key, 5×5×32	1	
18	SR20	Snap Ring, S-20	1	
21	HBS0516	HBS, M5×16	1	
22	HBS0616	HBS, M6×16	1	
26	SW05	SW, M5	1	
27	SW06	SW, M6	1	
33	TMS0508	TMS, M5×8	2	

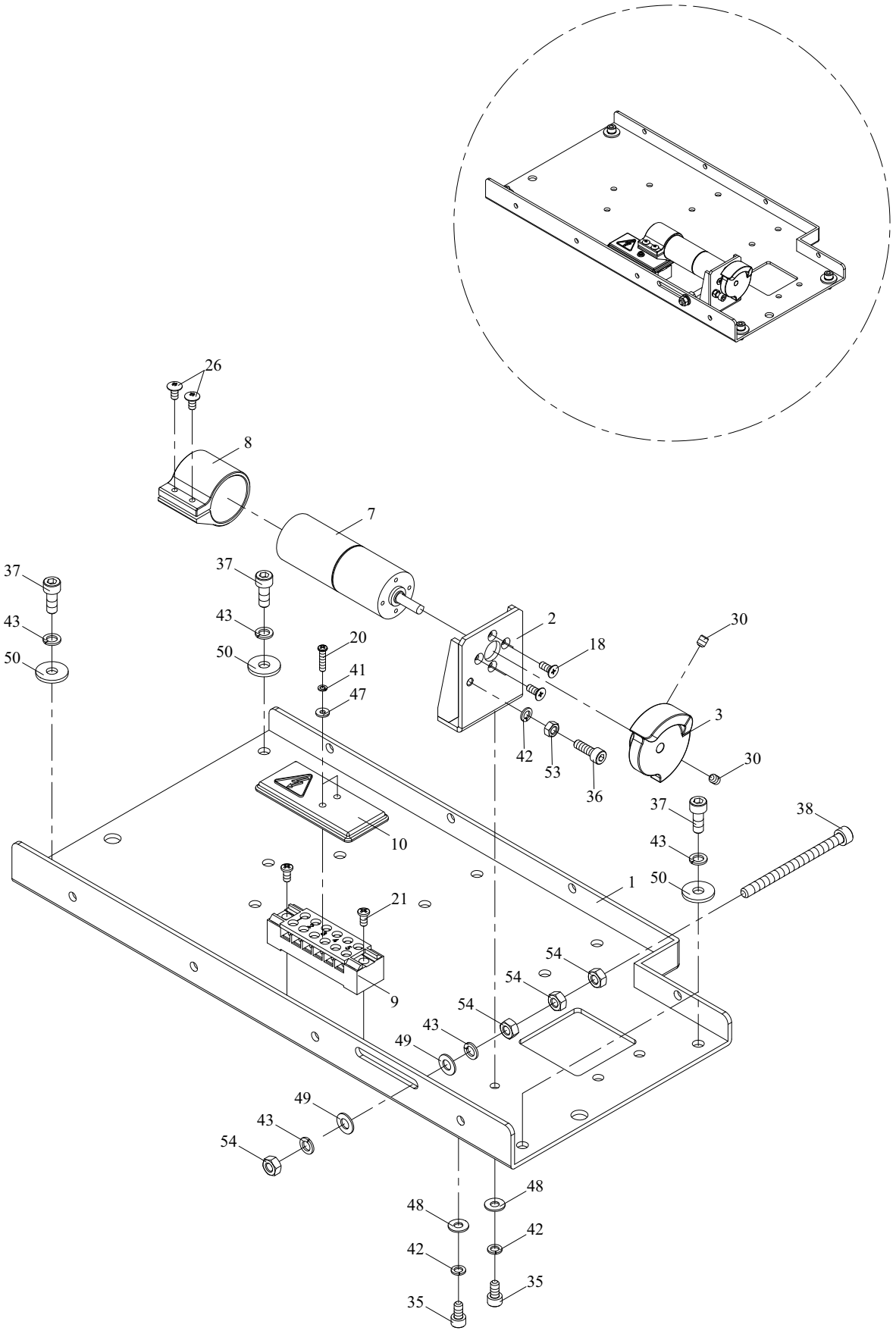
1-2-4 STRAP GUIDE ASS'Y 5MH-1-240000



1-2-4 STRAP GUIDE ASS'Y 5MH-1-240000

REF. NO.	PART NO.	DESCRIPTION	Q'TY	REMARKS
1	T5-1-24110	Strap Guide Support	1	
2	T5-1-24122	Strap Guide (A)	1	
3	T5-1-24132	Strap Guide (B)	1	
4	T5-1-24144	Strap Guide Cover	1	
5	T5-1-24152	Strap Guide (C)	1	
6	T5-1-24183	Spring	1	
7	T5-1-24191	Spring Shaft	1	
8	T5-1-24260	Tension Socket	1	
9	T5-1-24270	Spring Bushing	1	
10	TF-006	Micro Switch	1	
15	PMS0315	PMS, M3×15	2	
16	PMS0406	PMS, M4×6	2	
17	PMS0412	PMS, M4×12	5	
20	SW03	SW, M3	2	
21	SW04	SW, M4	8	
25	PW04	PW, M4	1	
28	HN04	HN, M4	1	
30	NTE04	NTE, M4	1	

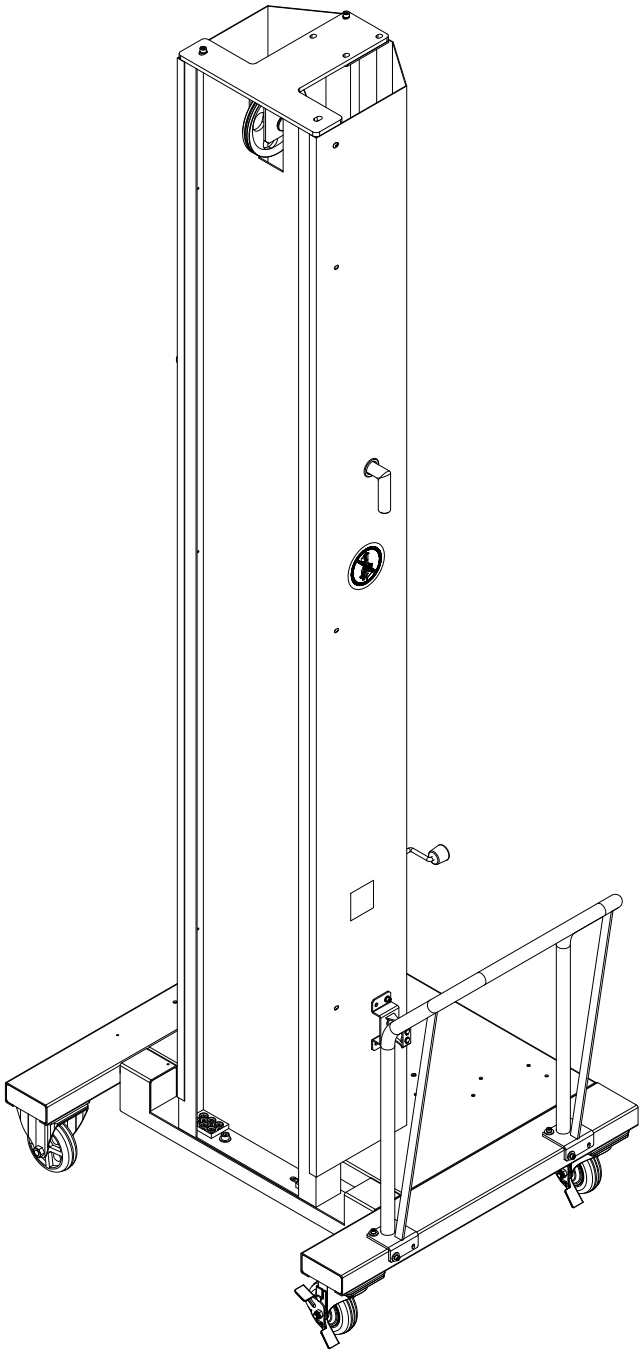
1-3 BASE PLATE GROUP 5MH-1-300000



1-3 BASE PLATE GROUP 5MH-1-300000

REF. NO.	PART NO.	DESCRIPTION	Q'TY	REMARKS
1	5MH-1-300100	Base Plate	1	
2	5MH-1-300200	Motor Bracket	1	
3	5MH-1-300300	Tension Cam	1	
7	T6-1-61211	Motor (M5)	1	
8	T6-8-10410	Motor Cover	1	
9	TF-015	Terminal Bracket	1	
10	TF-016	Cover	1	
18	FMS0410	FMS, M4×10	4	
20	PMS03.515	PMS, M3.5×15	2	
21	PMS0408	PMS, M4×8	2	
26	TMS0408N	TMS, M4×8 (N)	2	
30	HSS0506G	HSS, M5×6 (G)	2	
35	HBS0510	HBS, M5×10	2	
36	HBS0516	HBS, M5×16	1	
37	HBS0616	HBS, M6×16	4	
38	HBS0690	HBS, M6×90	1	
41	SW03	SW, M3	2	
42	SW05	SW, M5	3	
43	SW06	SW, M6	6	
47	PW03	PW, M3	2	
48	PW05	PW, M5	2	
49	PW06A	PW, M6 (A)	2	
50	PW06C	PW, M6 (C)	4	
53	HN05	HN, M5	1	
54	HN06	HN, M6	4	

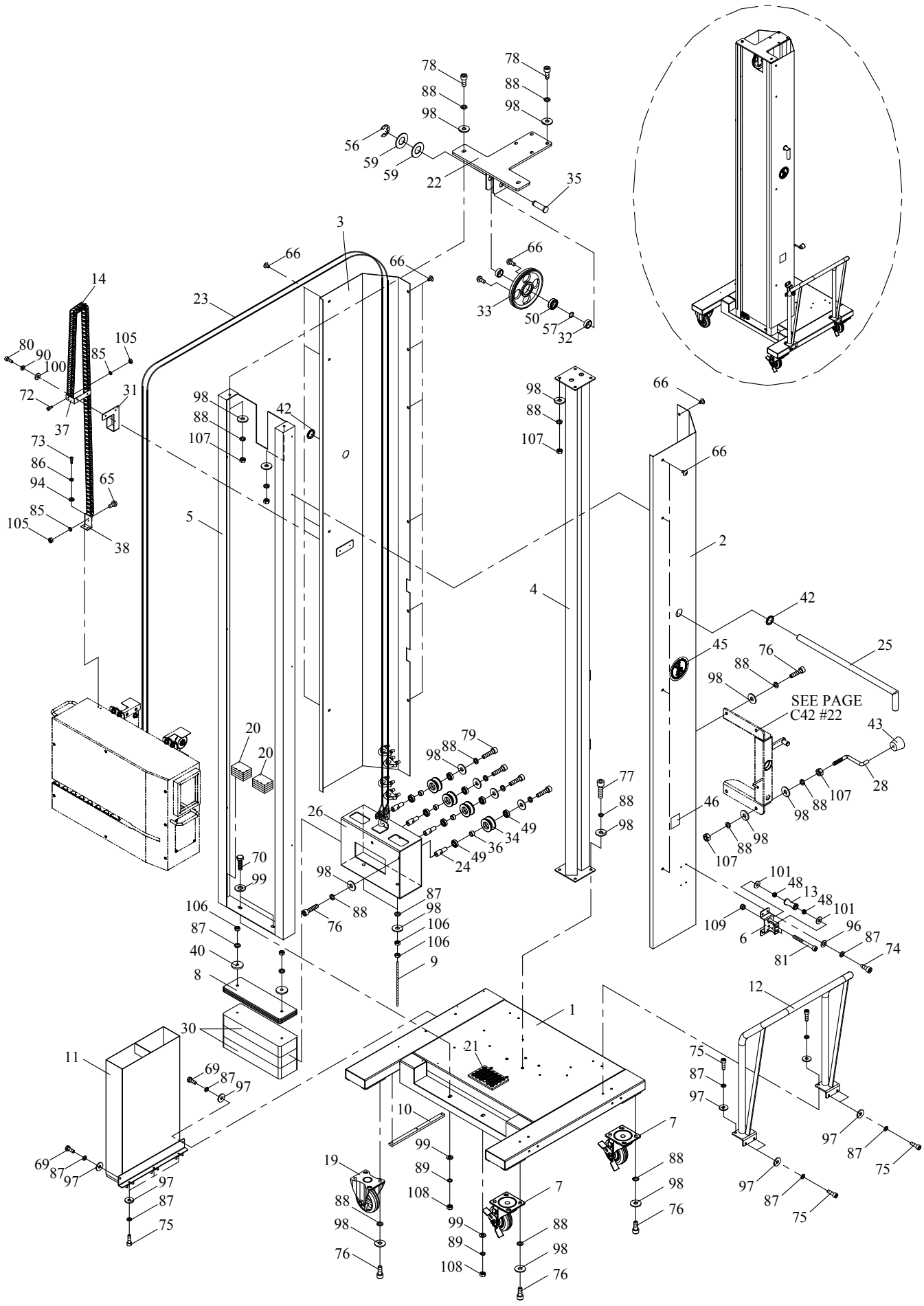
2 BASE GROUP 5MH-2-100000



2 BASE GROUP 5MH-2-100000

REF. NO.	PART NO.	DESCRIPTION	Q'TY	REMARKS
	5MH-2-100000	Base Group	1	

2-1 BASE GROUP 5MH-2-100000

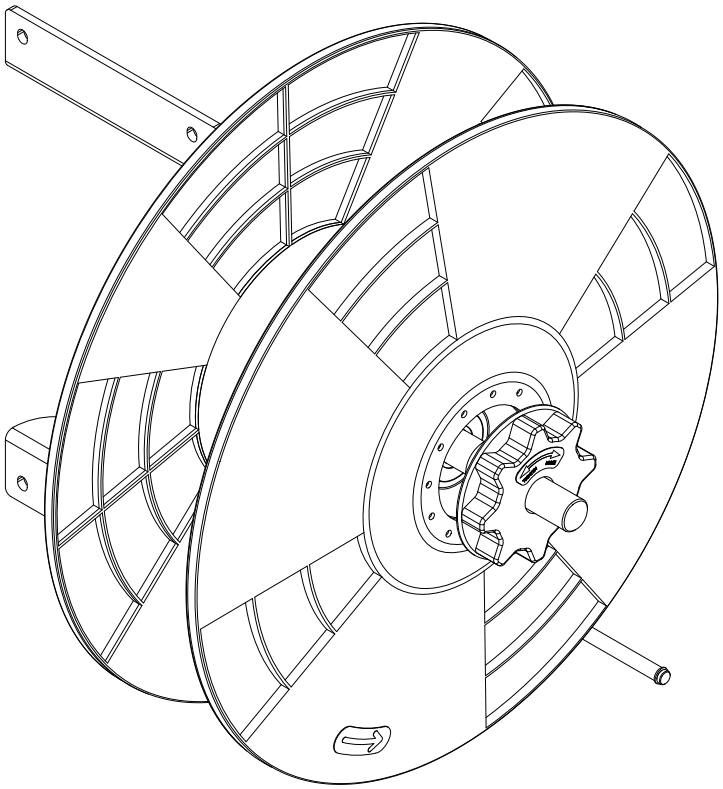


2-1 BASE GROUP 5MH-2-100000

REF. NO.	PART NO.	DESCRIPTION	Q'TY	REMARKS
1	5MH-2-100101	Base	1	
2	5MH-2-100200	Right Plate	1	
3	5MH-2-100300	Left Plate	1	
4	5MH-2-100400	Troy Weight Guide	1	
5	5MH-2-100500	Guide	1	
6	5MH-2-100600	Bracket	1	
7	5MH-2-100700	Caster (Brake)	2	
8	5MH-2-100800	Counter Weight	2	
9	5MH-2-100900	Thread Rod	2	
10	5MH-2-101000	Fixing Plate (Option)	1	
11	5MH-2-101101	Corner Protector Housing (Option)	1	
12	5MV-4-100200	Handle	1	
13	5MH-1-210200	Roller	2	
14	5MH-2-101200	Chain Protect	1	
19	MV-5-10160	Caster	2	
20	TE-079	Rubber	8	
21	T2-2-10170	Rubber	1	
22	T2-3-10111	T Support	1	
23	5MH-2-101300	Suspension Bracket Ass'y	2	
24	T2-3-10210	Troy Weight Roller Pin	4	
25	T2-3-10220	Support Handle	1	
26	T2-3-10230	Loading Case	1	
28	T2-3-10250	Bolt	1	
30	T2-3-10270	Counter Weight	3	
31	T2-3-10280	Suspension (Only TP-502MHB)	1	
32	T2-3-10290	Washer	2	
33	5MH-2-101400	Wire Roller	1	
34	T2-4-10171	Troy Weight Roller	4	
35	T2-4-10181	Wire Roller Pin	1	
36	T2-4-10191	Spacer	4	
37	T2-5-10130	Bracket (L)	1	
38	T2-5-10140	Bracket (S)	1	
40	TB-223	Washer	2	
42	TE-010	Grommet	2	
43	TL-023	Stopper	1	
45	LA-40040	Label	2	
46	LA-30350	Label	1	
48	BR686ZZ	Bearing, 686ZZ	4	
49	BR6002ZZ	Bearing, 6002ZZ	8	
50	BR6005ZZ	Bearing, 6005ZZ	1	

REF. NO.	PART NO.	DESCRIPTION	Q'TY	REMARKS
56	ER19	Snap Ring, E-19	1	
57	RR47	Snap Ring, H-47	1	
59	H44-10131	Washer	2	
65	TMS0308N	TMS, M3×8 (N)	2	
66	TMS0508N	TMS, M5×8 (N)	22	
69	HB0616N	HB, M6×16 (N)(Option)	2	
70	HB1035N	HB, M10×35 (N)	2	
72	HBS0308N	HBS, M3×8 (N)	2	
73	HBS0412N	HBS, M4×12 (N)	2	
74	HBS0616N	HBS, M6×16 (N)	4	
75	HBS0620N	HBS, M6×20 (N)	8	
		HBS, M6×20 (N)(Option)	11	
76	HBS0820N	HBS, M8×20 (N)	22	
77	HBS0825N	HBS, M8×25 (N)	4	
78	HBS0830N	HBS, M8×30 (N)	6	
79	HBS0816N	HBS, M8×16 (N)	4	
80	HBS0512N	HBS, M5×12 (N)	2	
81	HBS0660HN	HBS, M6×60 (H)(N)	2	
85	SW03	SW, M3	4	
86	SW04	SW, M4	2	
87	SW06	SW, M6	16	
		SW, M6 (Option)	21	
88	SW08	SW, M8	44	
89	SW10	SW, M10	2	
90	SW05	SW, M5	2	
94	PW04	PW, M4	2	
96	PW06A	PW, M6 (A)	4	
97	PW06C	PW, M6 (C)	10	
		PW, M6 (C)(Option)	15	
98	PW08C	PW, M8 (C)	44	
99	PW10	PW, M10	4	
100	PW05	PW, M5	2	
101	WA-010602	Washer	4	
105	HN03	HN, M3	4	
106	HN06	HN, M6	6	
107	HN08	HN, M8	8	
108	HN10	HN, M10	2	
109	NTE06	NTE, M6	2	

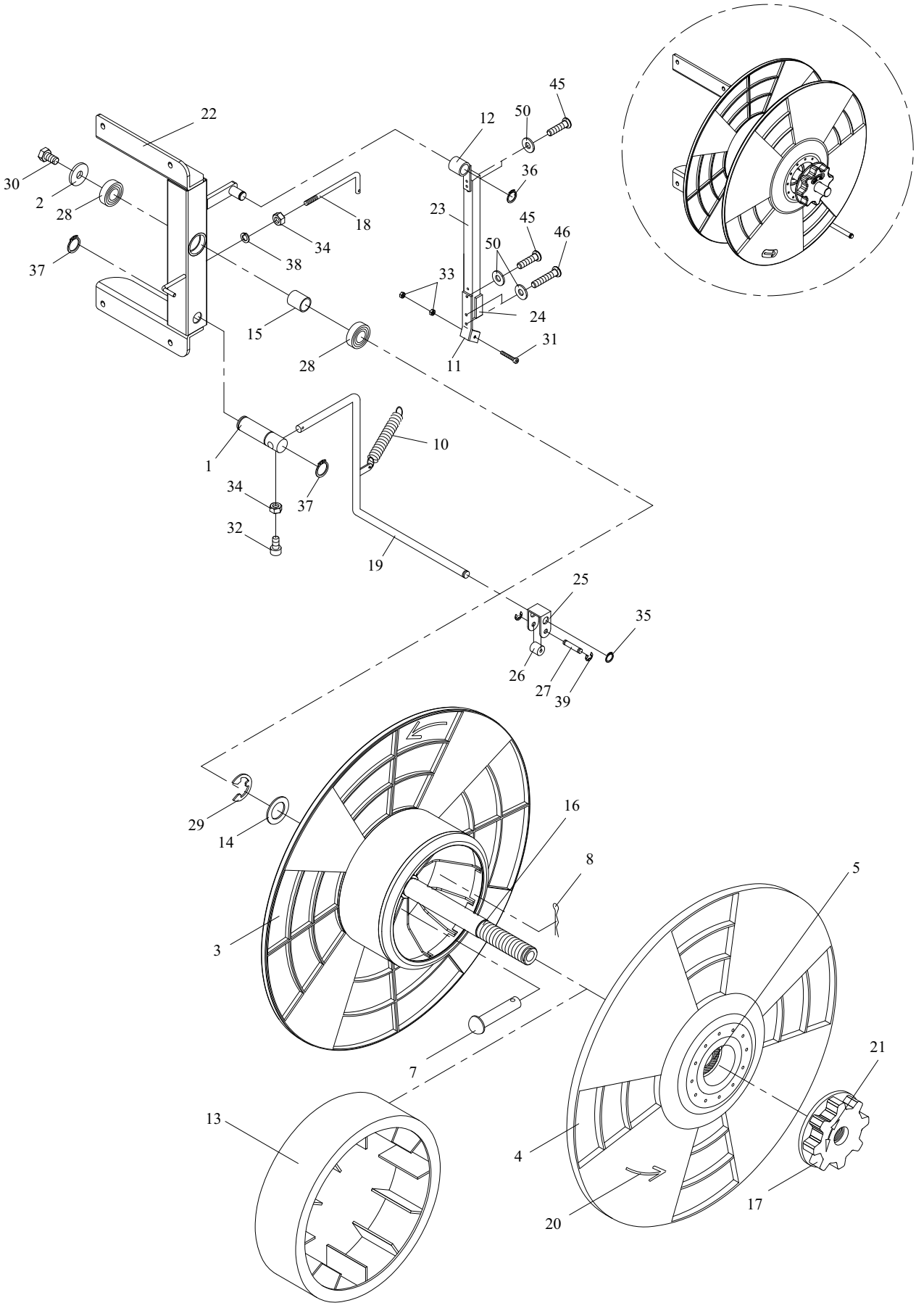
3 REEL CONTROL GROUP 5MH-3-100000



3 REEL CONTROL GROUP 5MH-3-100000

REF. NO.	PART NO.	DESCRIPTION	Q'TY	REMARKS
	5MH-3-100000	Reel Control Group	1	

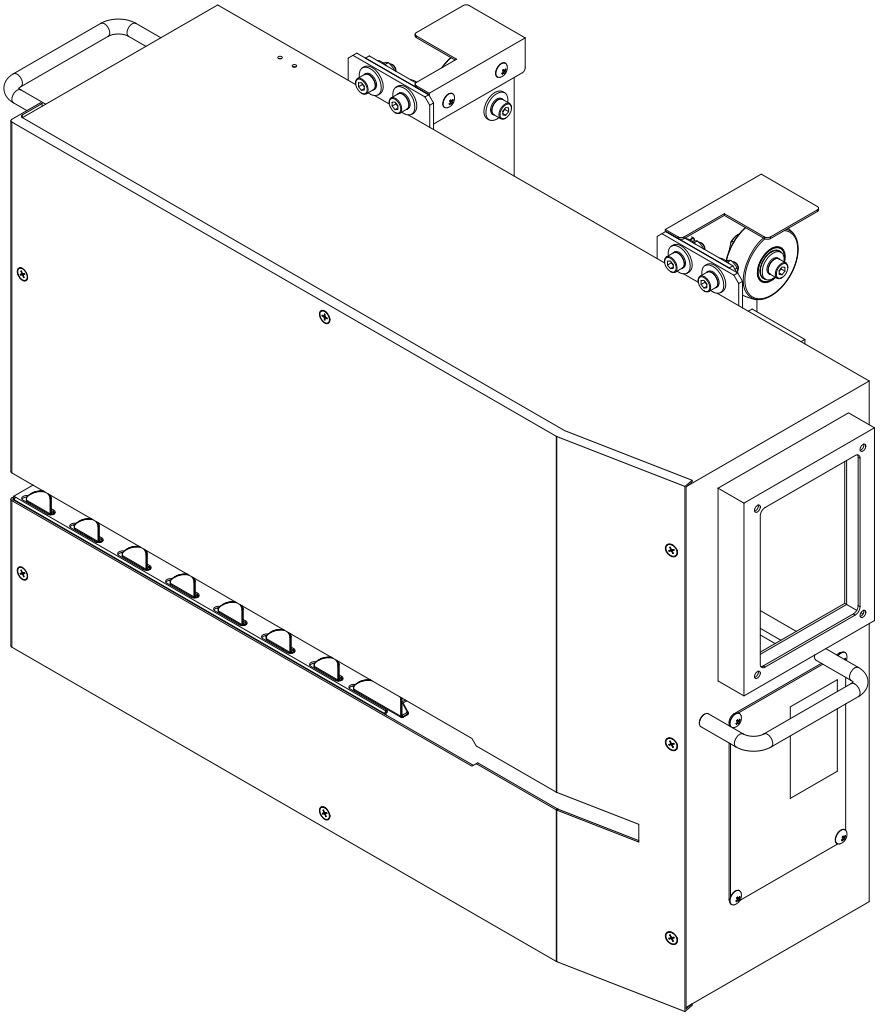
3-1 REEL CONTROL GROUP 5MH-3-100000



3-1 REEL CONTROL GROUP 5MH-3-100000

REF. NO.	PART NO.	DESCRIPTION	Q'TY	REMARKS
1	TC-009	Brake Shaft	1	
2	TC-011	Washer	1	
3	T6-4-10570	Inner Flange	1	
4	TC-014	Outer Flange	1	
5	TC-015	Protector	1	
7	TC-020	Pin	1	
8	TC-021	Split Pin	1	
10	T6-3-10120	Accumulator Balance Spring	1	
11	TC-045-1	Fixing Brake Lining Bracket	1	
12	TC-050	Lining Holder	1	
13	TC-075	Center Drum (For 280mm)(Option)	1	
14	TC-076	Washer	1	
15	TC-094	Spacer	1	
16	TD-003	Reel Shaft	1	
17	TD-016	Reel Nut Handle (LH)	1	
18	TD-024	Spring Hook	1	
19	TD-046-1	Arm	1	
20	LA-30200	Label	2	
21	LA-30210	Label	1	
22	T2-3-10160	Reel Support	1	
23	T2-4-20015	Brake Belt	1	
24	T6-4-20031	Lining Fixed Bracket	1	
25	TE-027	Roller Holder	1	
26	T6-4-20320	Roller	1	
27	TE-029	Pin	1	
28	BR6003ZZ	Bearing, 6003ZZ	2	
29	ER19	Snap Ring, E-19	1	
30	HB0816	HB, M8×16	1	
31	HBS0525HN	HBS, M5×25 (H)(N)	1	
32	HBS0616N	HBS, M6×16 (N)	1	
33	HN05	HN, M5	2	
34	HN06	HN, M6	2	
35	SR10	Snap Ring, S-10	1	
36	SR15	Snap Ring, S-15	1	
37	SR20	Snap Ring, S-20	2	
38	SW06	SW, M6	1	
39	ER04	Snap Ring, E-4	2	
45	PMS0415	PMS, M4×15	3	
46	PMS0420	PMS, M4×20	2	
50	PW04	PW, M4	5	

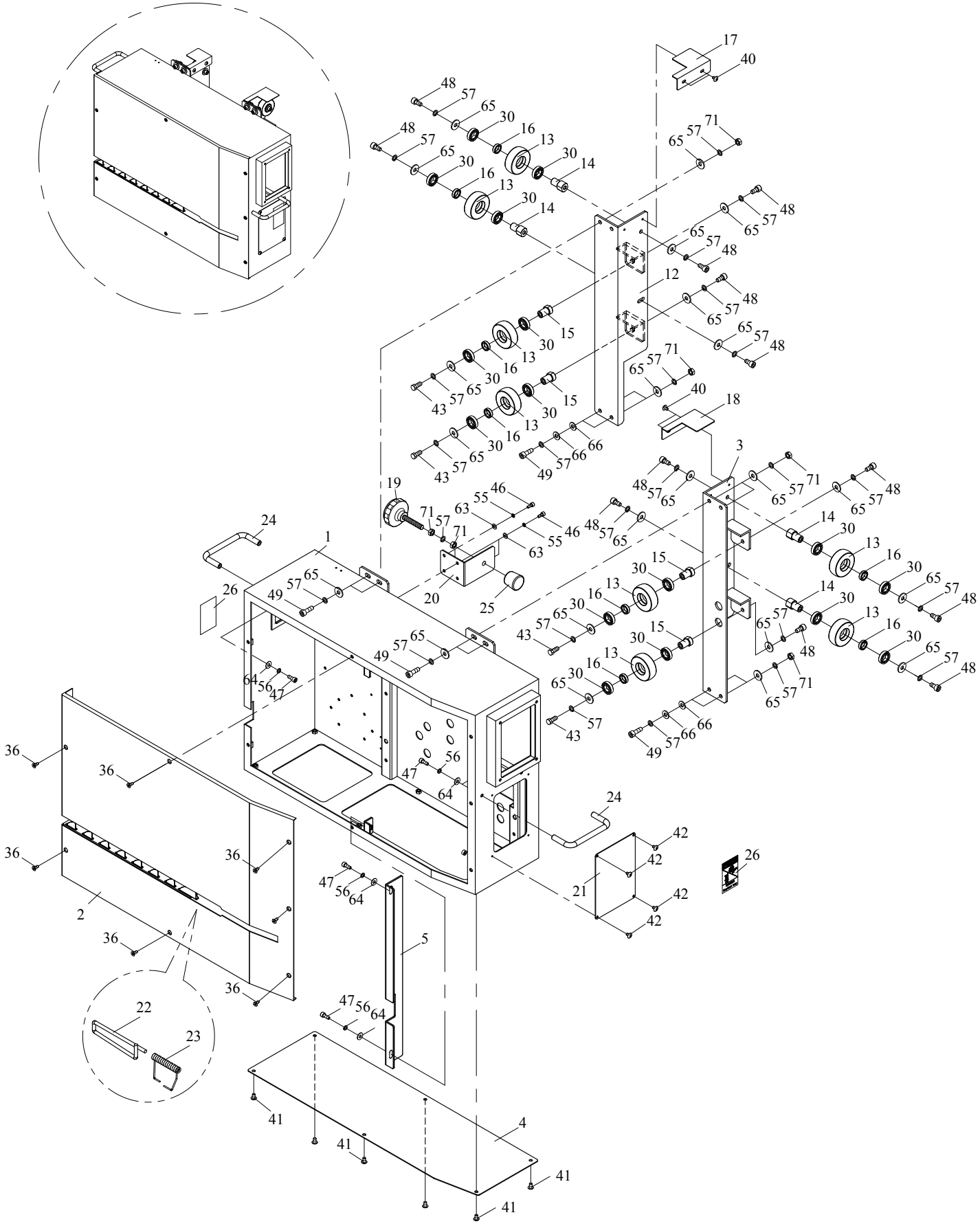
4 BODY FRAME GROUP 5MH-4-100000



4 BODY FRAME GROUP 5MH-4-100000

REF. NO.	PART NO.	DESCRIPTION	Q'TY	REMARKS
	5MH-4-100000	Body Frame Group	1	

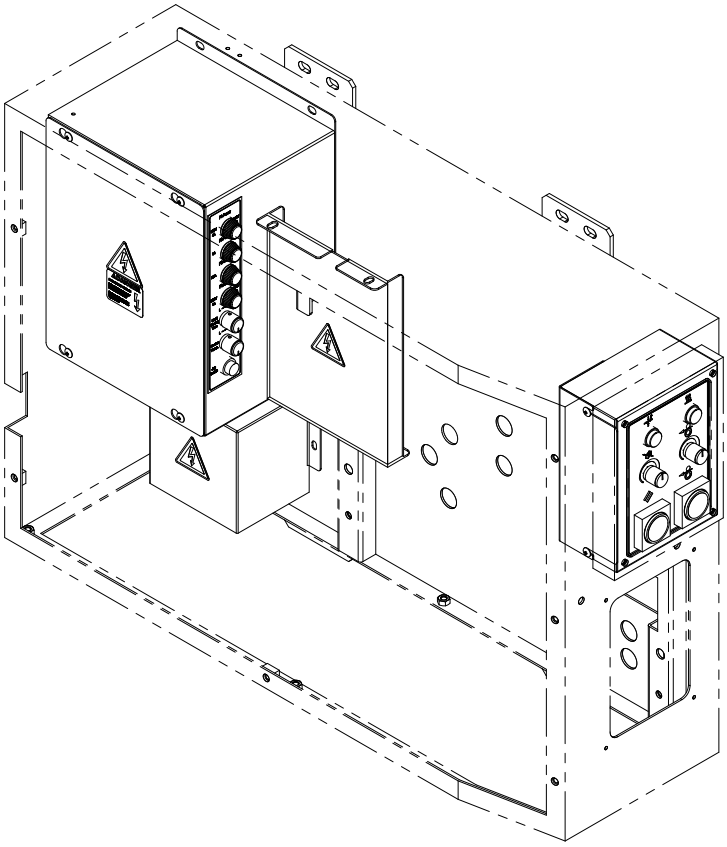
4-1 BODY FRAME GROUP 5MH-4-100000



4-1 BODY FRAME GROUP 5MH-4-100000

REF. NO.	PART NO.	DESCRIPTION	Q'TY	REMARKS
1	5MH-4-100100	Frame	1	
2	5MH-4-100200	Top Plate	1	
3	5MH-4-100300	Roller Bracket (Right)	1	
4	5MH-4-100400	Cover	1	
5	5MH-4-100500	Support	1	
12	T2-4-10120	Roller Bracket (Left)	1	
13	T2-4-10130	Roller Guide	8	
14	T2-4-10150	Roller Pin (V)	4	
15	T2-4-10160	Roller Pin	4	
16	T2-4-10200	Spacer	8	
17	T2-4-10210	Roller Cover (L)	1	
18	T2-4-10220	Roller Cover (R)	1	
19	T2-5-10180	Knob	1	
20	T2-5-10190	Knob Bracket	1	
21	5MH-4-100600	Side Cover	1	
22	T6-2-11140	RH Bandway Flap Pin (Rear)	2	
23	T6-2-11150	RH Bandway Flap Spring	2	
24	T6-5-11150	Table Handle	2	
25	TL-023	Stopper	1	
26	LA-40006	Remind Label	2	
30	BR6902ZZ	Bearing, 6902ZZ	16	
36	FMS0512S	FMS, M5×12	7	
40	TMS0508N	TMS, M5×8 (N)	4	
41	TMS0610N	TMS, M6×10 (N)	6	
42	TMS0408N	TMS, M4×8 (N)	4	
43	HB0816	HB, M8×16	4	
46	HBS0512N	HBS, M5×12	4	
47	HBS0616N	HBS, M6×16	6	
48	HBS0816N	HBS, M8×16	12	
49	HBS0825N	HBS, M8×25	8	
55	SW05	SW, M5	4	
56	SW06	SW, M6	6	
57	SW08	SW, M8	33	
63	PW05	PW, M5	4	
64	PW06B	PW, M6 (B)	6	
65	PW08C	PW, M8 (C)	28	
66	PW08B	PW, M8 (B)	8	
71	HN08	HN, M8×25	10	

5 ELECTRIC CONTROL UNIT 5MH-5-900000 5MH-5-900010



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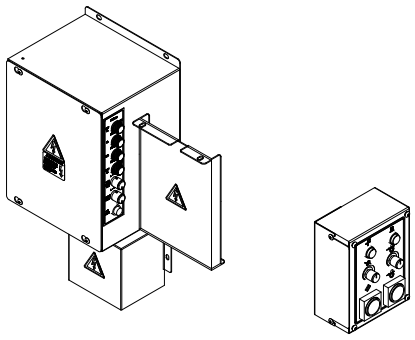

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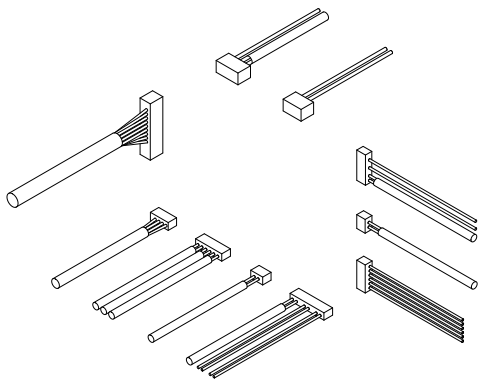
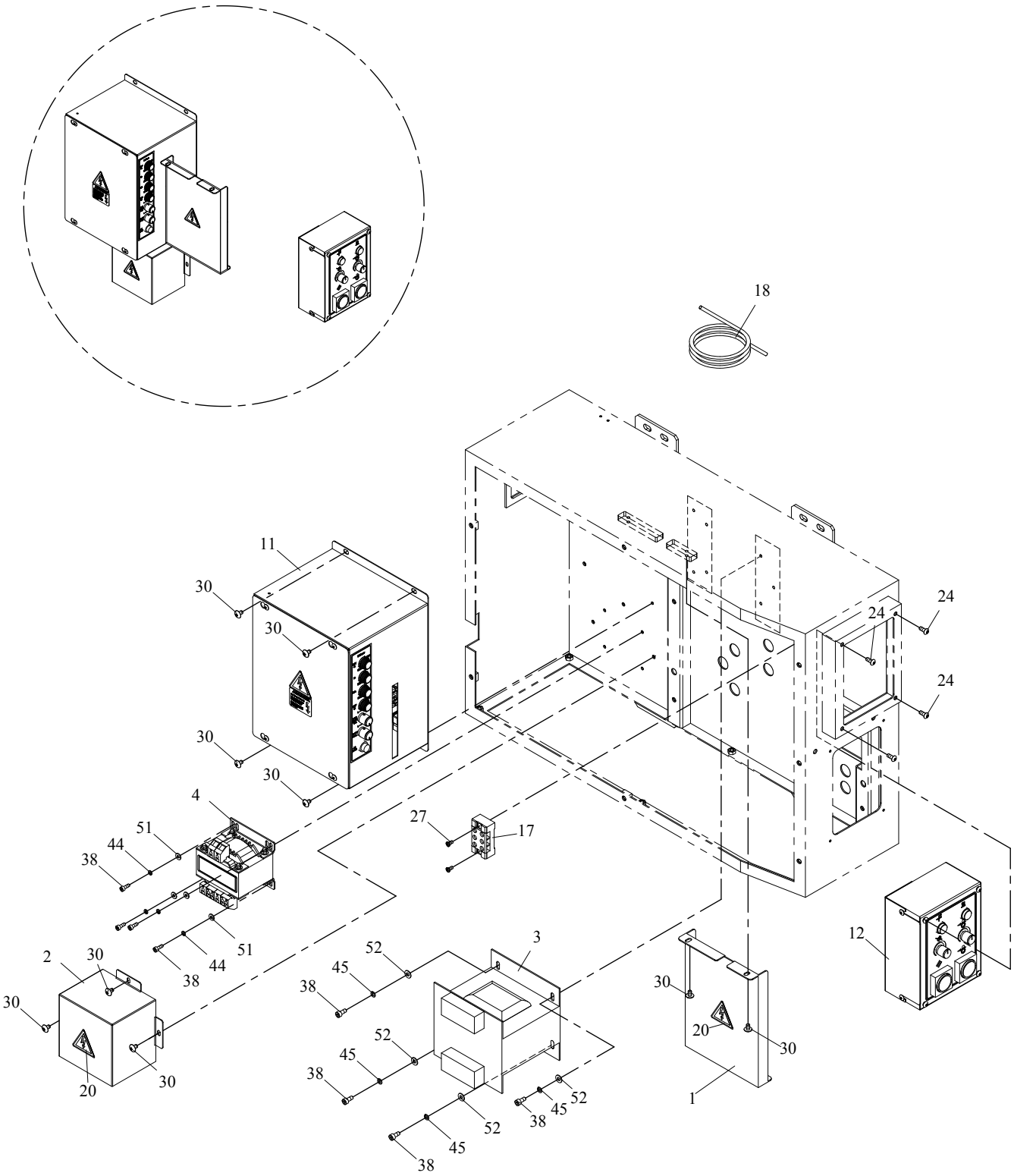


5 ELECTRIC CONTROL UNIT 5MH-5-900000 5MH-5-900010

REF. NO.	PART NO.	DESCRIPTION	Q'TY	REMARKS
	5MH-5-900000	Electric Control Unit (For 220V~240V)	1	
	5MH-5-900010	Electric Control Unit (For 110V)	1	
1	5MH-5-100000	Electric Control Group (For 220V~240V)	1	
	5MH-5-100010	Electric Control Group (For 110V)	1	
2	5MH-5-200001	Wires Group	1	

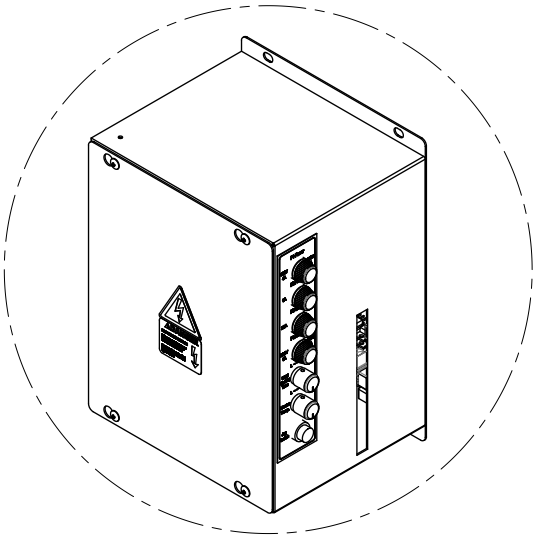
5-1 ELECTRIC CONTROL GROUP 5MH-5-100000 5MH-5-100010

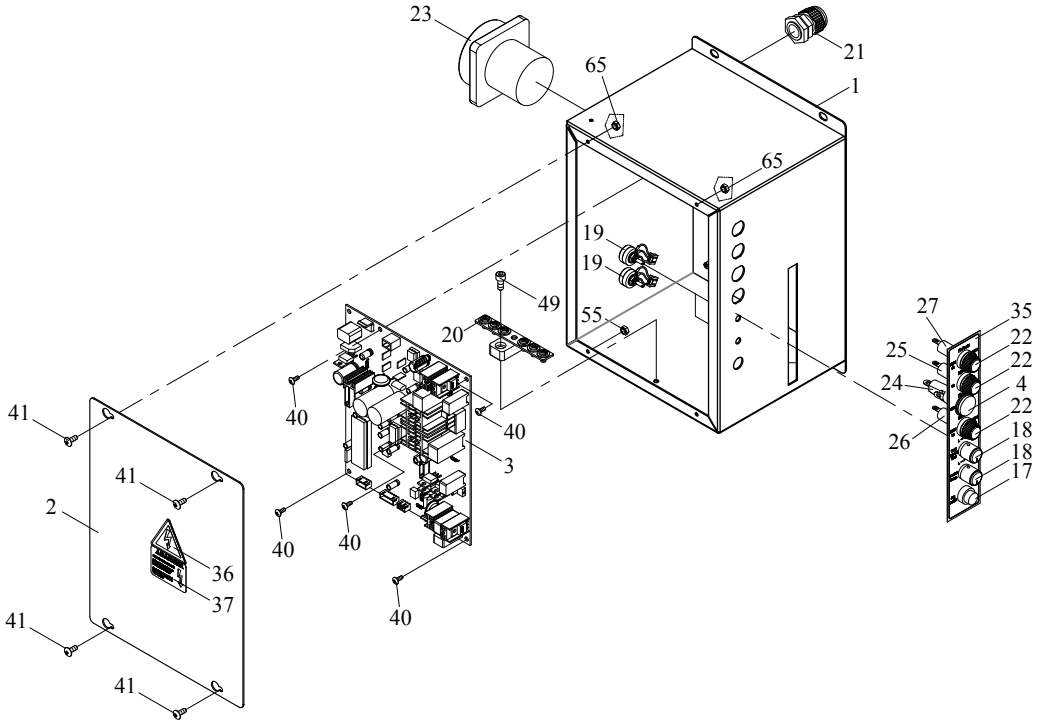


5-1 ELECTRIC CONTROL GROUP 5MH-5-100000 5MH-5-100010

REF. NO.	PART NO.	DESCRIPTION	Q'TY	REMARKS
	5MH-5-100000	Electric Control Group (For 220V~240V)	1	
	5MH-5-100010	Electric Control Group (For 110V)	1	
1	5MH-5-100110	Transformer Cover	1	
2	5MH-5-100200	Transformer Cover	1	
3	5MH-5-100300	Transformer (For 220V~240V)	1	
	5MH-5-100310	Transformer (For 110V)	1	
4	5MH-5-100400	Heater Transformer (For 220V~240V)	1	
	5MH-5-100410	Heater Transformer (For 110V)	1	
11	5MH-5-110000	Electrical Box Ass'y (For 220V~240V)	1	SEE PAGE C51
	5MH-5-110010	Electrical Box Ass'y (For 110V)	1	
12	5MH-5-120000	Control Panel Ass'y	1	SEE PAGE C53
17	T6-6-10320	Heater Terminal	1	
18	MV-6-10060	Power Cord (Europe Plug)	1	
	MV-6-10061	Power Cord (America Plug)	1	
20	LA-40001	Label	2	
24	THS0512N	THS, M5×12 (N)	4	
27	PMS0508	PMS, M5×8	2	
30	TMS0508N	TMS, M5×8 (N)	9	
38	HBS0510N	HBS, M5×10 (N)	8	
44	SW04	SW, M4	4	
45	SW05	SW, M5	4	
51	PW04	PW, M4	4	
52	PW05	PW, M5	4	

5-1-1 ELECTRICAL BOX ASS'Y 5MH-5-110000 5MH-5-110010

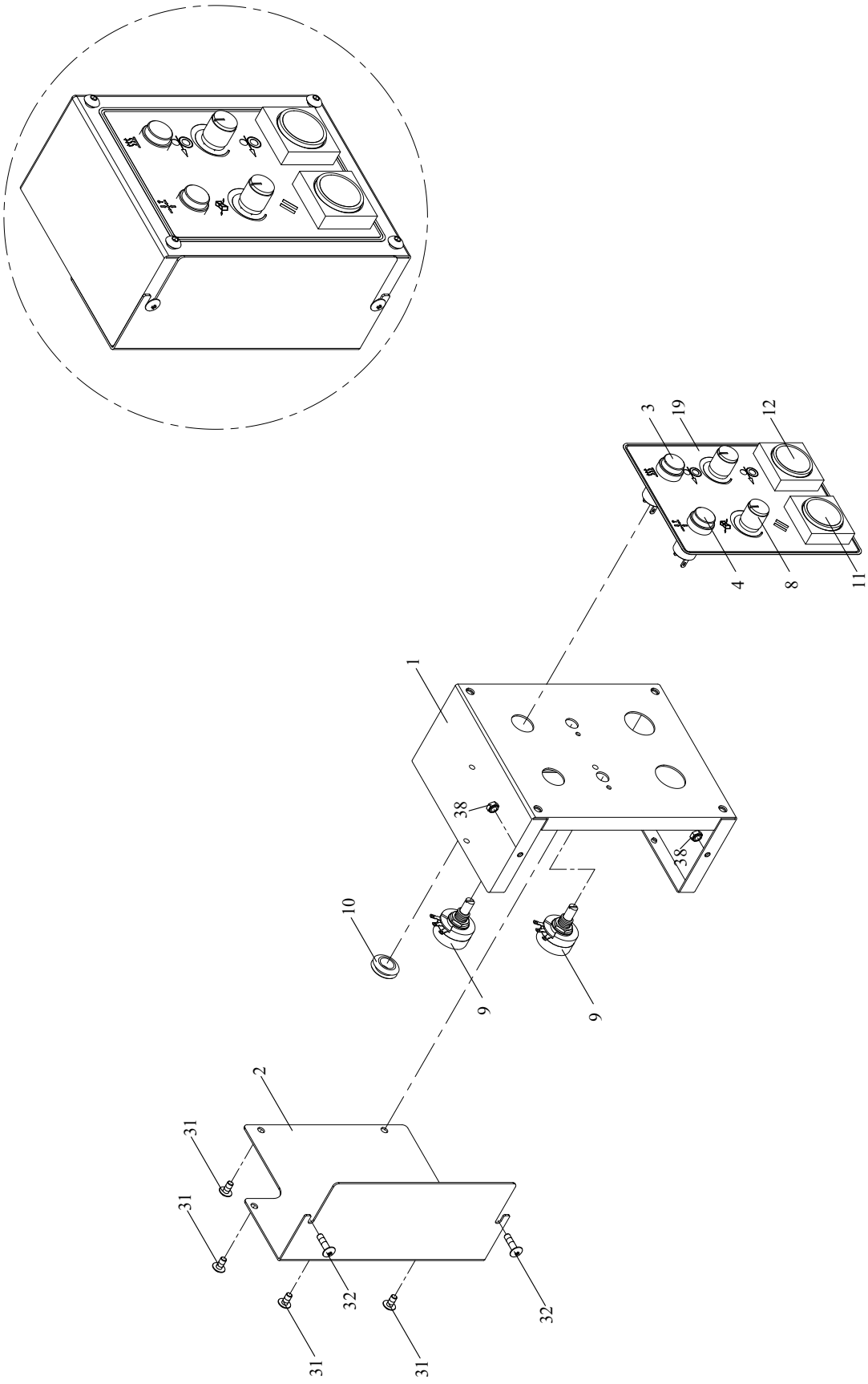




5-1-1 ELECTRICAL BOX ASS'Y 5MH-5-110000 5MH-5-110010

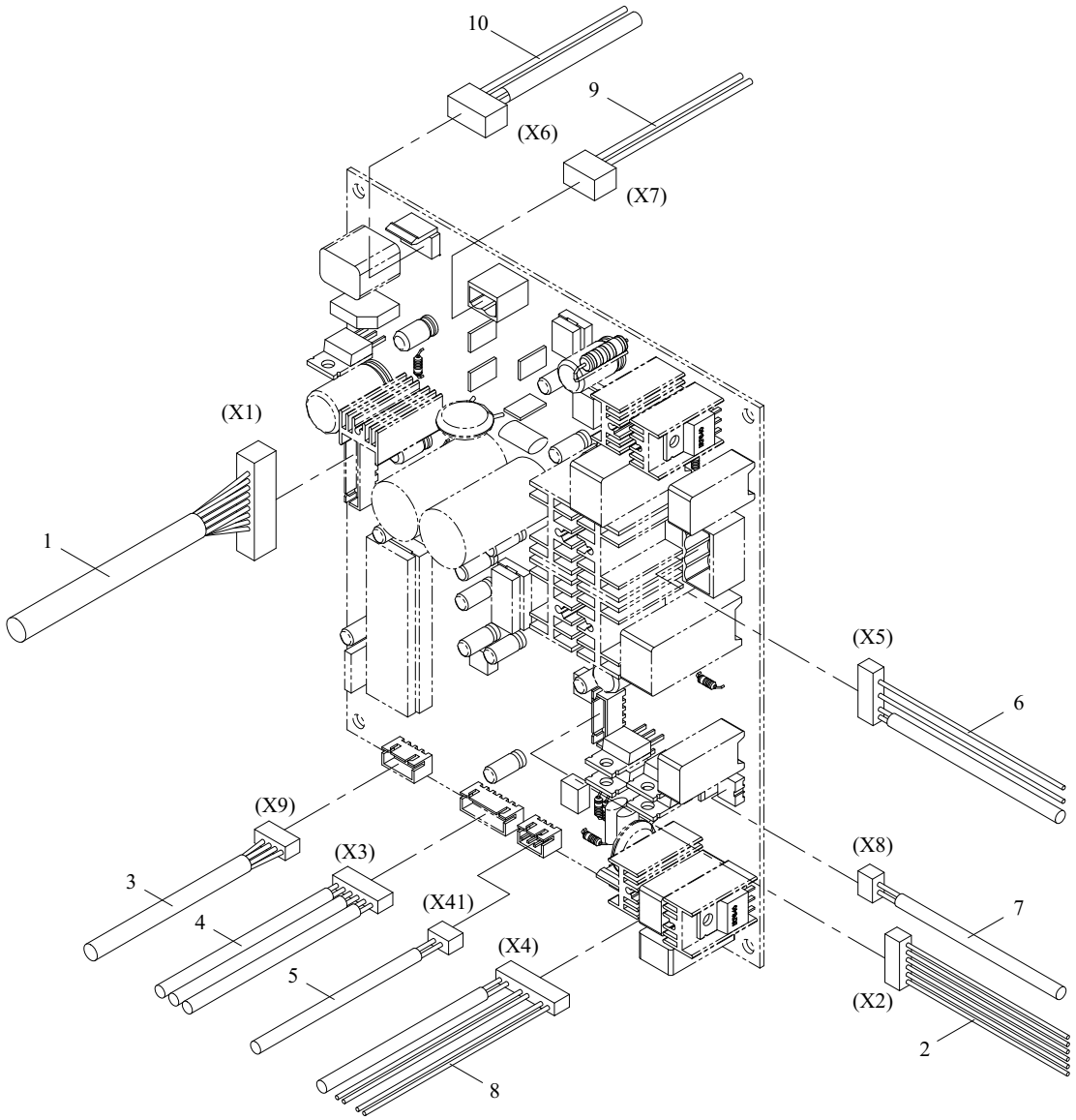
REF. NO.	PART NO.	DESCRIPTION	Q'TY	REMARKS
	5MH-5-110000	Electrical Box Ass'y (For 220V~240V)	1	
	5MH-5-110010	Electrical Box Ass'y (For 110V)	1	
1	5MH-5-110100	Electrical Box	1	
2	5MH-5-110200	Electrical Box Cover	1	
3	5MH-5-110301	Main P.C.B	1	
4	5MH-5-110400	Fuse Holder (30mm)(20A)	1	
17	T5-4-10210	Jog Switch	1	
18	T5-4-10221	Knob (Hole φ3.2)	2	
19	T5-4-10231	Variable Resistor (5K)(φ 3.2)	2	
20	T6-6-10250	Earth Plate	1	
21	T6-6-10980	Cable Gland (PG11)	1	
22	TG-013	Fuse Holder	3	
23	TK-001	Main Power Switch	1	
24	FU32200	Fuse (20A) 32L	1	
25	FU32010	Fuse (1A) 32L	1	
26	FU32010	Fuse (1A) 32L (For 220V~240V)	1	
	FU32020	Fuse (2A) 32L (For 110V)	1	
27	FU30040	Fuse (4A) 30L (For 220V~240V)	1	
	FU32070	Fuse (7A) 32L (For 110V)	1	
35	LA-20100	Label	1	
36	LA-40001	Label	1	
37	LA-40003	Label	1	
40	TMS0308N	TMS, M3×8 (N)	5	
41	TMS0410N	TMS, M4×10 (N)	4	
49	HBS0512N	HBS, M5×12 (N)	1	
65	NTE04	NTE, M4	4	

5-1-2 CONTROL PANEL ASS'Y 5MH-5-120000



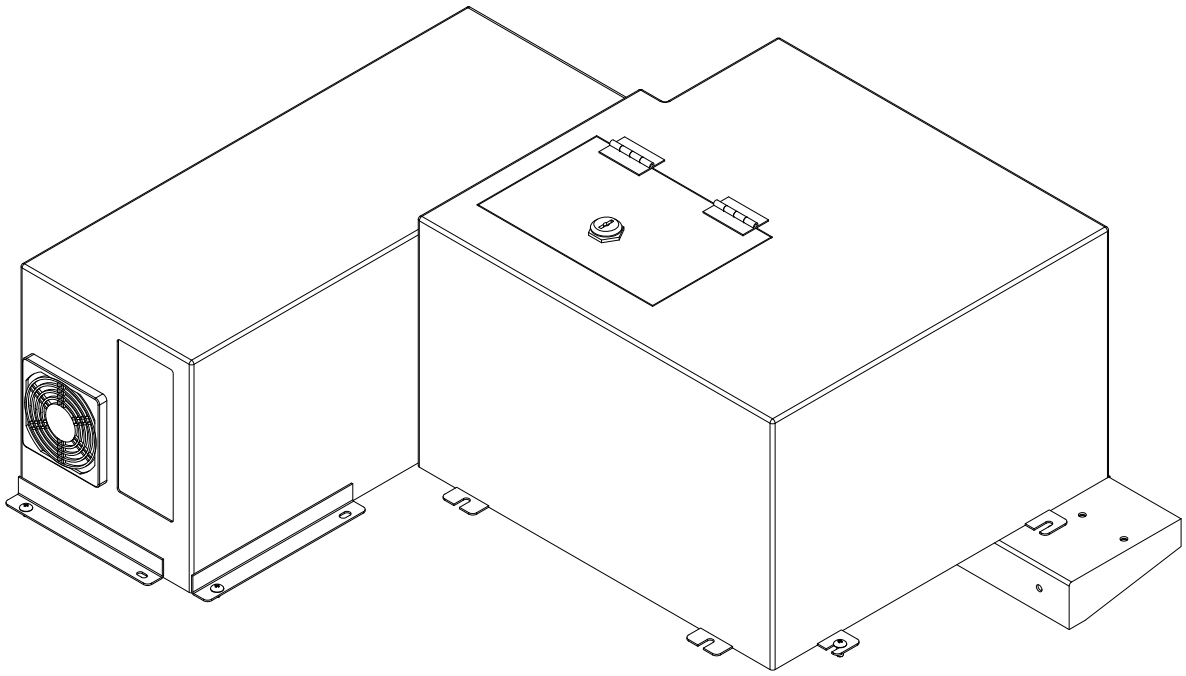
5-1-2 CONTROL PANEL ASS'Y 5MH-5-120000

REF. NO.	PART NO.	DESCRIPTION	Q'TY	REMARKS
1	5MH-5-120100	Control Panel Box	1	
2	5MH-5-120200	Control Panel Box Cover	1	
3	5MH-5-120300	Green Lamp Indicator	1	
4	5MH-5-120400	Amber Lamp Indicator	1	
8	T5-4-10222	Knob (Hole ∮6.0)	2	
9	T5-4-10232	Variable Resistor (5K)(∮6.0)	2	
10	T5-4-10580	Grommet	1	
11	TG-004	Reset Push Button Switch	1	
12	TG-005	Feed Push Button Switch	1	
19	LA-10540	Label	1	
31	TMS0406N	TMS, M4×6 (N)	4	
32	TMS0415	TMS, M4×15	2	
38	NTE04	NTE, M4	2	


10
9
(X6)
(X7)
(X1)
1
(X5)
6
(X9)
(X3)
3
(X41)
4
(X4)
5
(X8)
7
(X2)
2
8

REF. NO.	PART NO.	DESCRIPTION	Q'TY	REMARKS
1	EW52H0000X01	Wire Ass'y X1 (For Control Panel Ass'y)	1	
2	EW52H0000X02	Wire Ass'y X2 (For Electrical Box Control Panel)	1	
3	EW52H0000X09	Wire Ass'y X9 (For LED Indicator)	1	
4	EW52H0000X03	Wire Ass'y X3 (For SQ1/SQ2/SQ3)	1	
5	EW52H0000X41	Wire Ass'y X41 (For SQ4)	1	
6	EW52H0000X05	Wire Ass'y X5 (For M1/M2)	1	
7	EW52H0000X08	Wire Ass'y X8 (For M5)	1	
8	EW52H0000X04	Wire Ass'y X4 (For Heater)	1	
9	EW52H0000X07	Wire Ass'y X7 (For Transformer 28V Output)	1	
10	EW52H0000X06	Wire Ass'y X6 (For Transformer 10V Output)	1	

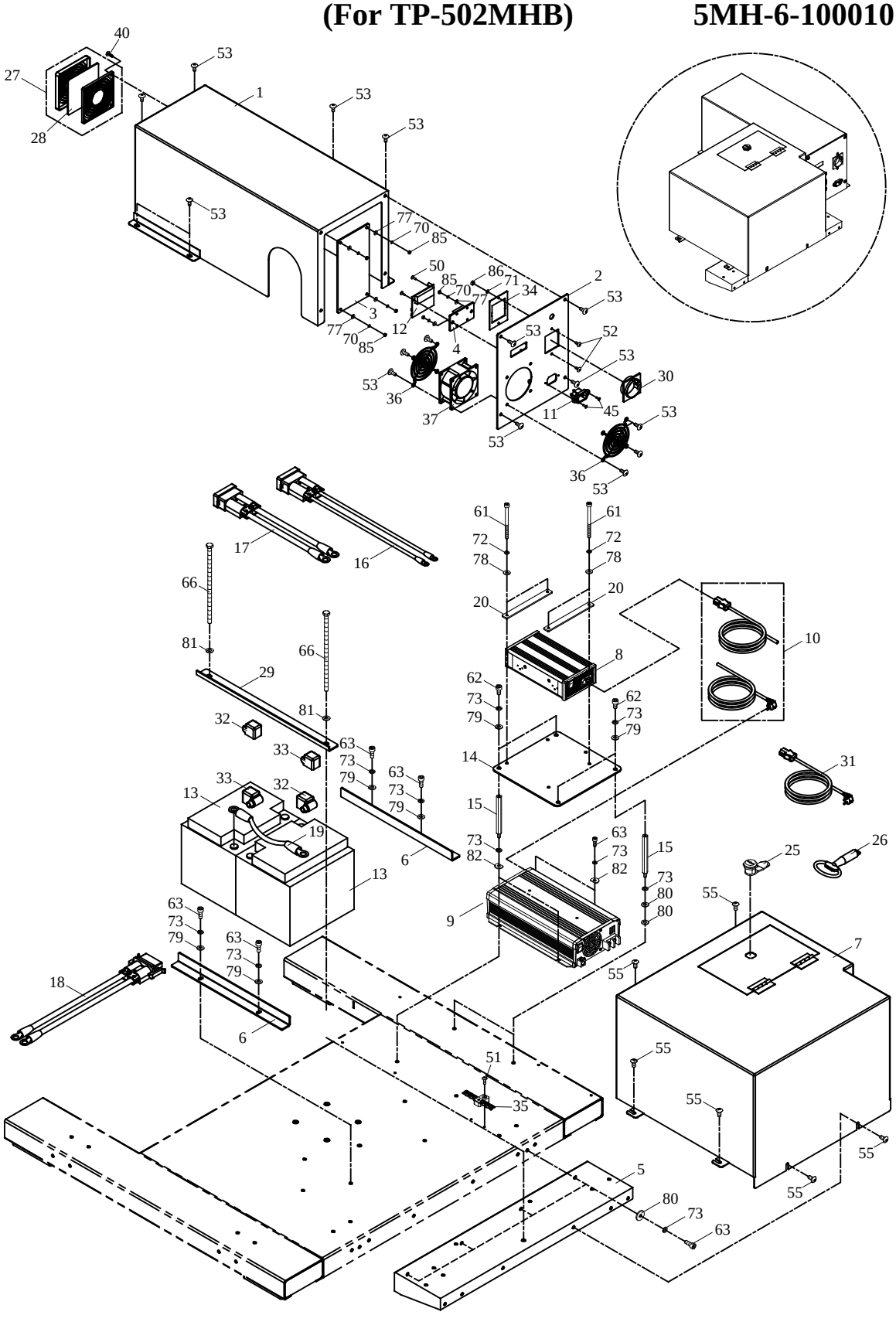
6 BATTERY GROUP 5MH-6-100000
(For TP-502MHB) 5MH-6-100010



6 BATTERY GROUP (For TP-502MHB) 5MH-6-100000 5MH-6-100010

REF. NO.	PART NO.	DESCRIPTION	Q'TY	REMARKS
	5MH-6-100000	Battery Group (For 220V/230V/240V)	1	
	5MH-6-100010	Battery Group (For 110V)	1	

6-1 BATTERY GROUP (For TP-502MHB) 5MH-6-100000 5MH-6-100010



6-1 BATTERY GROUP (For TP-502MHB) 5MH-6-100000 5MH-6-100010

REF. NO.	PART NO.	DESCRIPTION	Q'TY	REMARKS
	5MH-6-100000	Battery Group (For 220V/230V/240V)	1	
	5MH-6-100010	Battery Group (For 110V)	1	
1	5MH-6-100100	Electric Box	1	
2	5MH-6-100200	Cover	1	
3	5MH-6-100300	Windows (Big)	1	
4	5MH-6-100400	Windows (Small)	1	
5	5MH-6-100500	Base Extension	1	
6	5MH-6-100600	Battery Presser	2	
7	5MH-6-100800	Battery Box	1	
8	5MH-6-100901	Power Supply	1	
9	5MH-6-101001	Inverter (For 220V/230V/240V)	1	
	5MH-6-101011	Inverter (For 110V)	1	
10	5MH-6-101100	Charger Power Cord (Europe)(For 220V/230V/240V)	1	
	5MH-6-101110	Charger Power Cord (America)(For 110V)	1	
11	5MH-6-101200	Socket Inlet	1	
12	5MH-6-101300	Battery Voltage Indicator	1	
13	5MH-6-101400	Battery	2	
14	5MH-6-101500	Power Supply Fixing Plate	1	
15	5MH-6-101600	Support Rod	4	
16	5MH-6-101700	Charger Wire Connector	1	
17	5MH-6-101800	Inverter Wire Connector	1	
18	5MH-6-101900	Batter Wire Connector	1	
19	T2-6-30270	Battery Connector	1	
20	5MH-6-102100	Plate	2	
25	M7-5-206901	Lock	1	
26	M7-5-206930	Key	1	
27	M7-6-200100	Filter Set	1	
28	M7-6-201800	Filter	1	
29	T2-6-30131	Battery Presser	1	
30	T2-6-30230	UPS Outlet (Europe)	1	
	T2-6-30231	UPS Outlet (America)	1	
31	T2-6-30240	UPS Cable (Europe)	1	
	T2-6-30241	UPS Cable (America)	1	
32	T2-6-30331	Battery Contact Insulation Sheath (Positive)	2	
33	T2-6-30341	Battery Contact Insulation Sheath (Negative)	2	
34	T2-6-30380	Plate (Europe UPS Outlet)	1	
	T2-6-30351	Plate (America UPS Outlet)	1	
35	T6-6-10250	Earth Plate	1	
36	T7-6-10930	Fan Cover	2	
37	TF-021-1B	Fan (For 220V/230V/240V)	1	
	TF-021-B	Fan (For 110V)	1	

6-1 BATTERY GROUP (For TP-502MHB) 5MH-6-100000 5MH-6-100010

REF. NO.	PART NO.	DESCRIPTION	Q'TY	REMARKS
40	FMS0412N	FMS, M4×12 (N)	4	
45	FMS0306	FMS, M3×6	2	
50	TMS0308N	TMS, M3×8 (N)	2	
51	TMS0408N	TMS, M4×8 (N)	1	
52	TMS0412N	TMS, M4×12 (N)	2	
53	TMS0508N	TMS, M5×8 (N)	18	
55	TMS0612N	TMS, M6×12 (N)	6	
61	HBS0570HN	HBS, M5×70 (H)(N)	4	
62	HBS0612N	HBS, M6×12 (N)	4	
63	HBS0616N	HBS, M6×16 (N)	10	
66	HB08200	HB, M8×200	2	
70	SW03	SW, M3	8	
71	SW04	SW, M4	2	
72	SW05	SW, M5	4	
73	SW06	SW, M6	18	
77	PW03	PW, M3	8	
78	PW05	PW, M5	4	
79	PW06A	PW, M6 (A)	8	
80	PW06C	PW, M6 (C)	8	
81	PW08A	PW, M8 (A)	2	
82	PW06D	PW, M6 (D)	4	
85	HN03	HN, M3	8	
86	HN04	HN, M4	2	