



Owner's Operating Manual

EVPOS-2TA



CONTENTS

Chapter 1: Introduction

- 1.1 : Objective____Page 1
- 1.2 : Restriction of the work piece____Page 1
- 1.3 : Structure____Page 2

Chapter 2: Safety

- 2.1 : General____Page 3
- 2.2 : Safety Labels____Page 4
- 2.3 : Electrical Hazards And High Temperature____Page 5
- 2.4 : ROTATING And Other____Page 6
- 2.5 : Power____Page 7
- 2.6 : Stop____Page 8
- 2.7 : Table Angle Sensor____Page 9
- 2.8 : Contril Panel____Page 10
- 2.9 : Remote Contril Panel____Page 11

Chapter 3: Machine Installation

- 3.1 : General____Page 12
- 3.2 : Transporting____Page 12
- 3.3: Electrical Supply Requirements and Connection____Page 13
- 3.4 : Regular machinery____Page 14
- 3.5 : Welder Cooperates____Page 15

Chapter 4: Machine's Operation

- 4.1 : Table Rotation Direction____Page 16
- 4.2 : Table Inch Rotation____Page 16
- 4.3 : Table Hold Rotation____Page 17
- 4.4 : Table Rotation Speed____Page 17
- 4.5 : Table Angle Up____Page 18
- 4.6 : Table Angle Down____Page 18

- 4.7 : The welder is started in step____Page 19
- 4.8 : The Foot Controls The Table speed (Options)____Page 20
- 4.9 : 2T(2 Cycle) / HOLD / MIG____Page 21,22
- 4.10 : 2T(2 Cycle) / INCH / MIG____Page 23,24

Chapter 5: Setup Procedure

- 5.1 : General____Page 25
- 5.2 : Table Angle Limit____Page 25
- 5.3 : Table Accelerate time____Page 25

Chapter 6: Maintenance

- 6.1 : General____Page 26
- 6.2 : Machine Preventative Maintenance And Clean____Page 26
- 6.3 : Electrical Preventative Maintenance And Clean____Page 27

Chapter 7: Troubleshooting

- 7.1 : General____Page 28
- 7.2 : Machine Troubleshooting____Page 28
- 7.3 : Electrical Troubleshooting____Page 29

Appendix

WPT-60FB A: Electrical Diagram B : System Block Diagram C : Mechanical Assembly D:Size

Chapter 1: Introduction

1.1 OBJECTIVE

1.1.1 The WPT-45FB Welding positioner can be used welded, cut and grind, it has one table rotate and table angle move, the operator can be apt to adjust the work piece position fast, enable him to finish the work and keep quality fast.

1.1.2 Forbid using the case:

1.1.2.1 The weight or length of the work piece exceed designing limiting, please look at charts [Figure:1.2-1].

1.1.2.2 The work piece does not have certain locking in table of WPT-45FB Welding positioner.

1.1.2.3 The scope of activities of the work piece has personnel or hinders things.

1.1.2.4 Have not imputed the machine to the ground or firm foundation.

1.2 RESTRICTION OF THE WORK PIECE

1.2.1 CAPABILITY

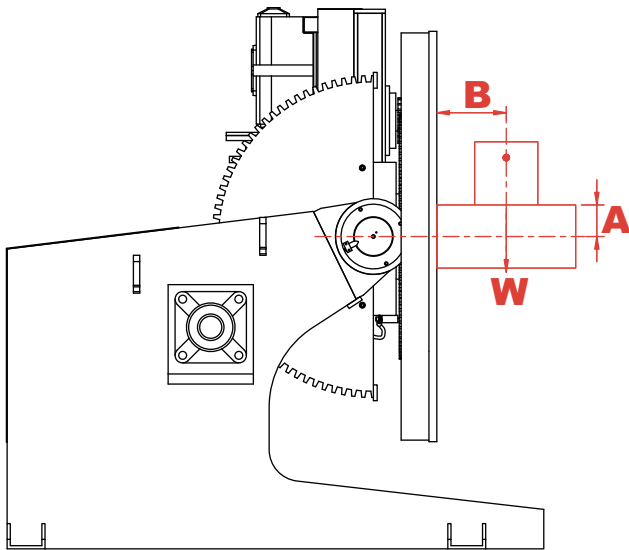
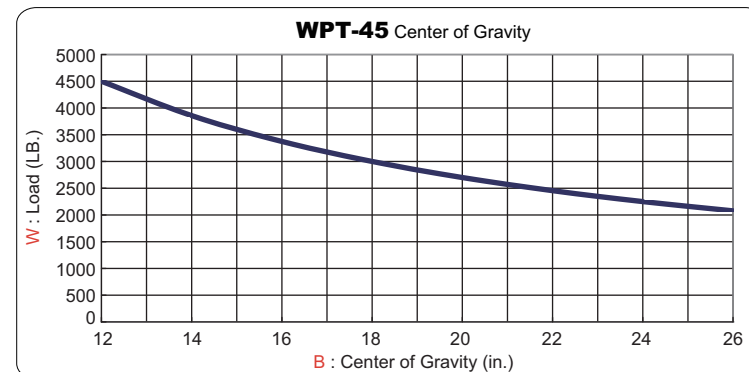
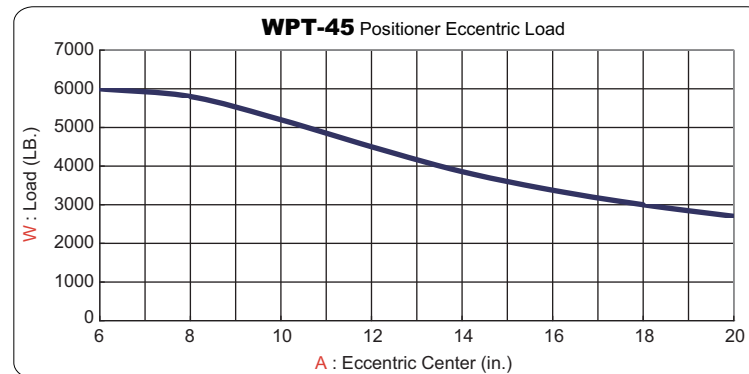


Figure: 1.2-1



1.3 Structure

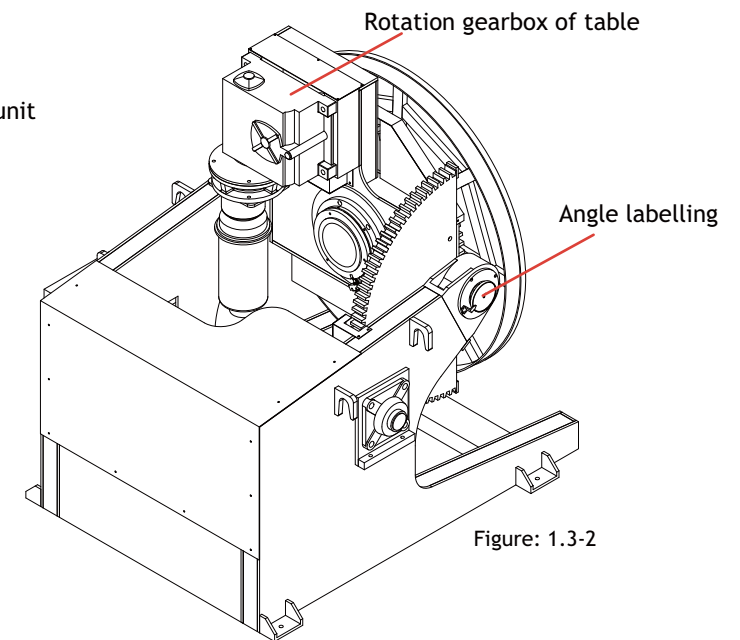
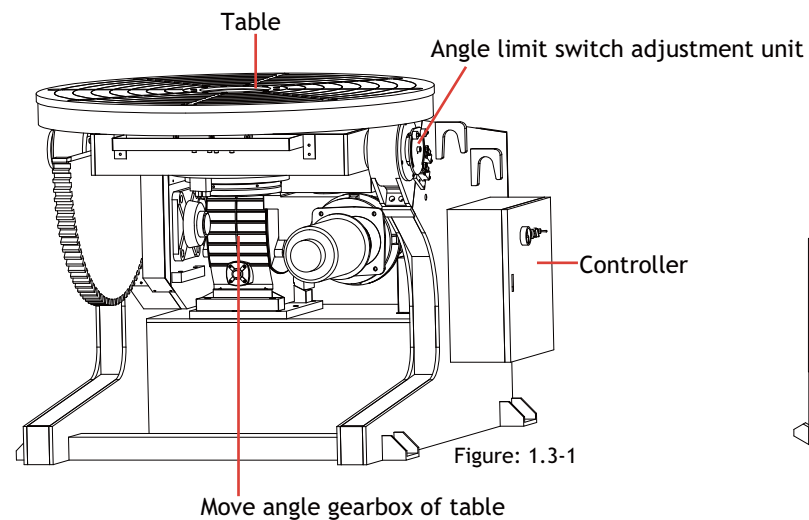
1.3.1 Specification

Specification	WPT-45FB
Power	AC 440V/60Hz/3Ø(Optional:AC220V/60Hz/3Ø)
Table rotate motor	AC3HP
Capacity	4500LBS.
Eccentricity	12"
Center of Gravity	12"
Table Dia.	47-1/4"
Spindle Thru Hole	7"
Table speed	0.12 - 1.2RPM
Table angle	0° - 135°
Table angle speed	57 sec / 135°
Table angle motor	AC1HP
Table angle lock	Motor brake
Table angle control	Up & Down(W/ 6'5" Cable)
Welding current	1000A/100%
Table rotate control	Foot switch(W/ 6'5" Cable) & adjustable speed footswitch (The wire is 6'5" Cable)
Control method	Manual / Hold
Remote control	Table speed adj. & Table rotate the direction cw. or ccw. (W/ 9' Cable)

1.3.2 Standard Accessories

Part Name	Quantity
Pedal Switch 	1
Welder start wire 	1
T-Slot Nuts  M14	8

1.3.3 WPT-45FB Structure



Chapter 2: Safety

2.1 SAFTY INFORMATION

2.1.1 This document provides general safety instructions. Some information requires special attention for either safety or procedural reasons. Label with an appropriate heading WARNING and CAUTION will be used throughout this manual. For example:

WARNING

2.1.1.1 Failure to follow WARNING instruction could result in severe injury or death to the operator, a bystander or a person inspecting or repairing the machine.

CAUTION

2.1.1.2 Failure to follow CAUTION instruction may result in injury to the operator, a bystander or a person inspecting or repairing the machine, or damage to the machine's part and/or controller.

DANGER

2.1.1.3 Failure to follow DANGER instruction could result in severe injury or death to the operator, a bystander or a person inspecting or repairing the machine.

ATTENTION

2.1.1.4 Failure to follow ATTENTION instruction may result in injury to the operator, a bystander or a person inspecting or repairing the machine, or damage to the machine's part and/or controller.

Forbid operators on the mechanical table.

When the mechanical table angle is moved or static, forbid having operators below the work piece.

Fix machinery on the ground or the strong foundation.

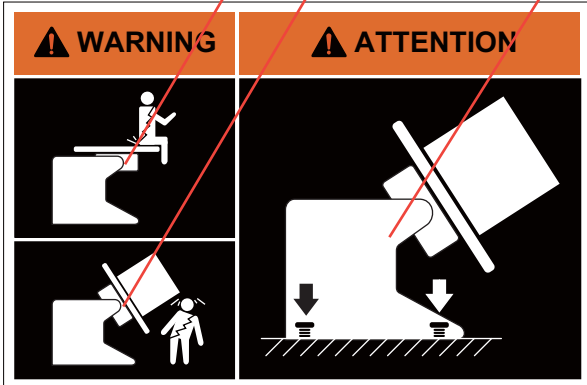


Figure:2.2-1

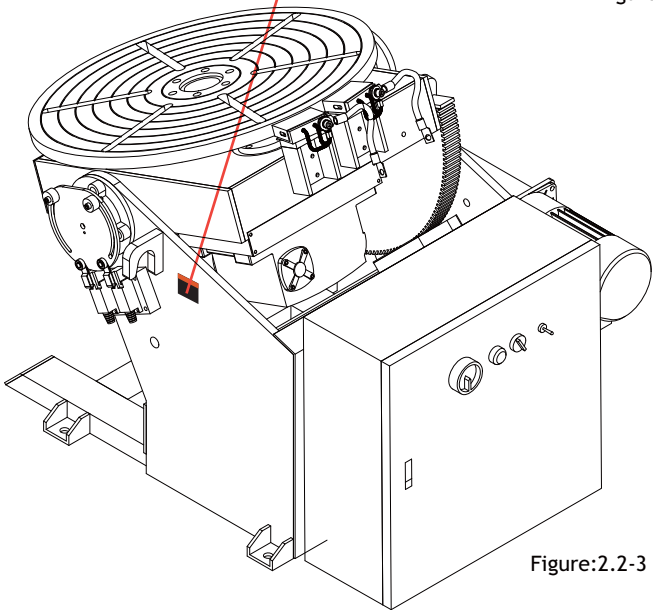


Figure:2.2-3

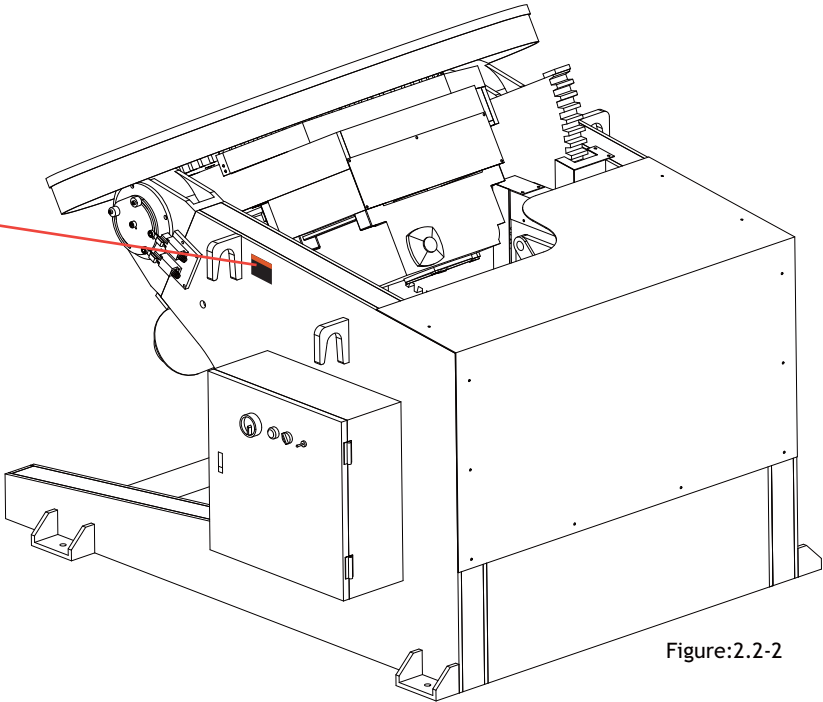
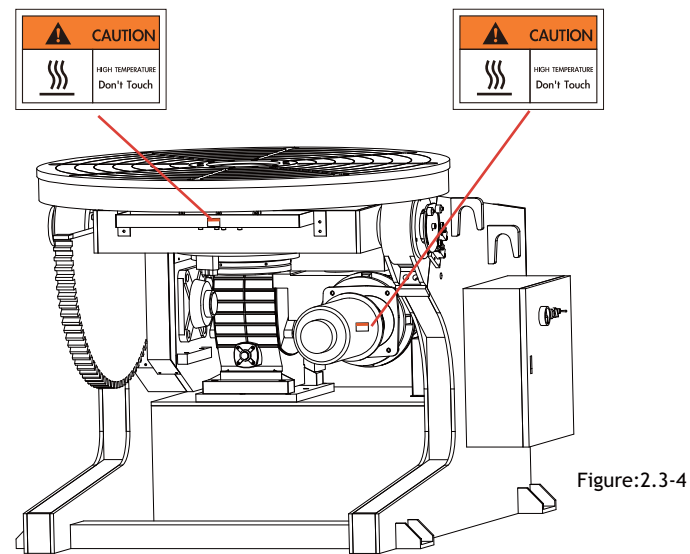
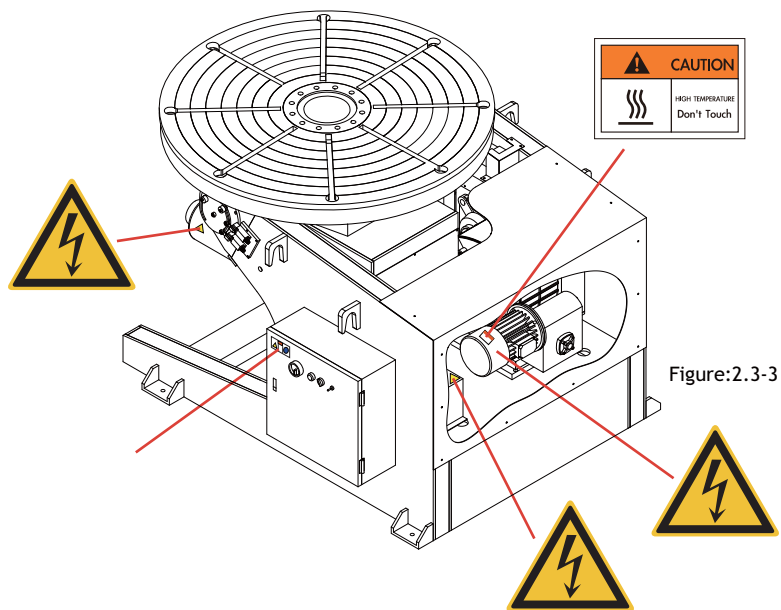
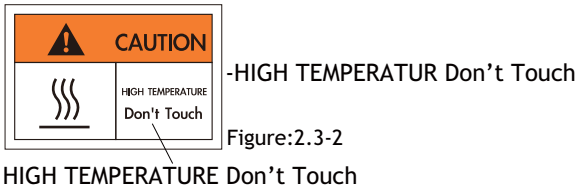
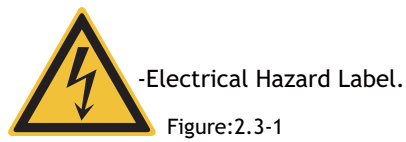


Figure:2.2-2

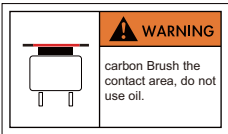


2.4 ROTATING AND OTHER



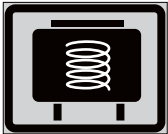
-ROTATING keep hands away.

Figure:2.4-1



-Carbon Brush the contact area, do not use oil.

Figure:2.4-2



-Check Carbon Brush

Figure:2.4-3

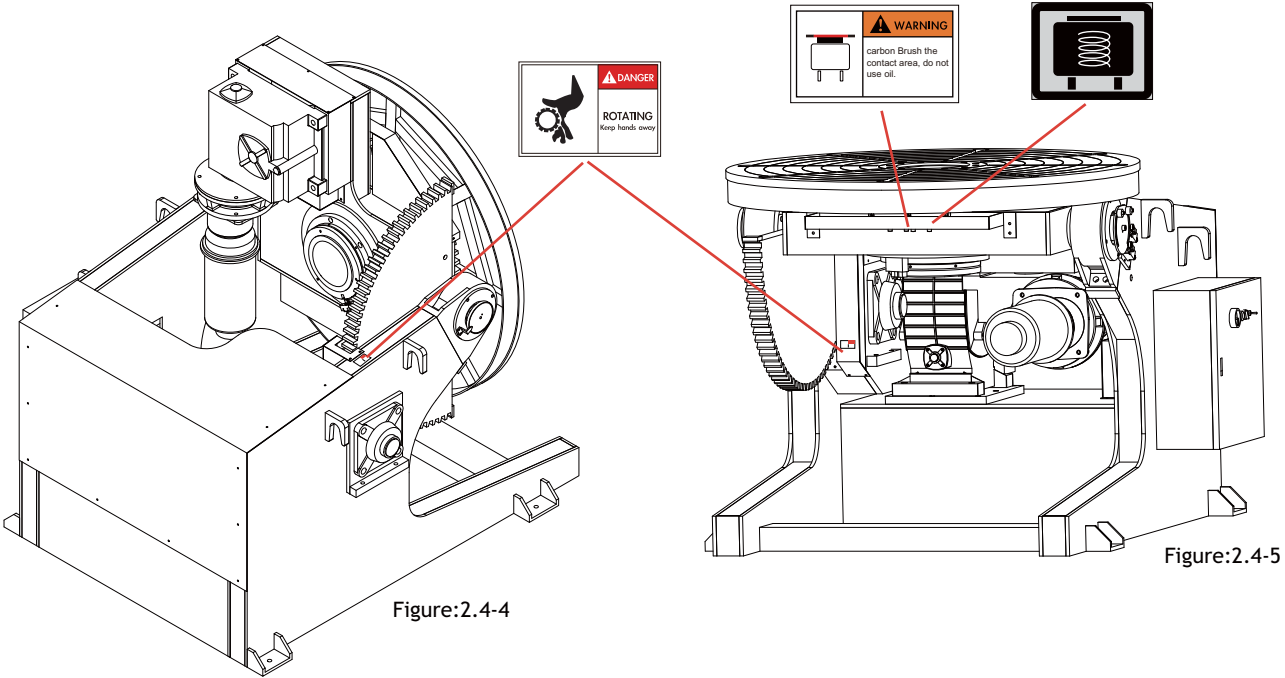


Figure:2.4-4

Figure:2.4-5

2.5.1 POWER ON

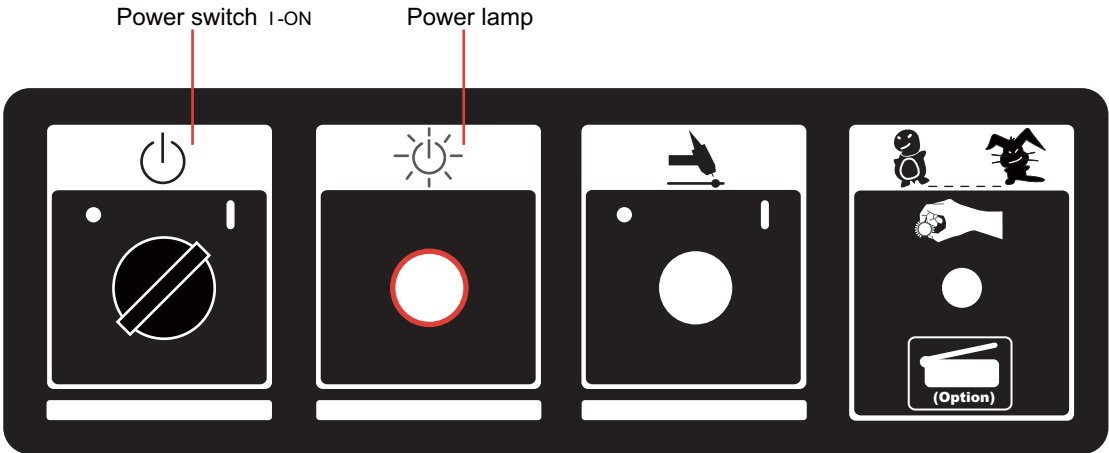
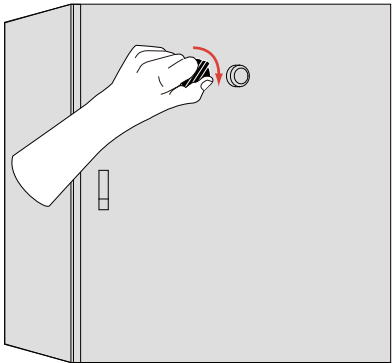
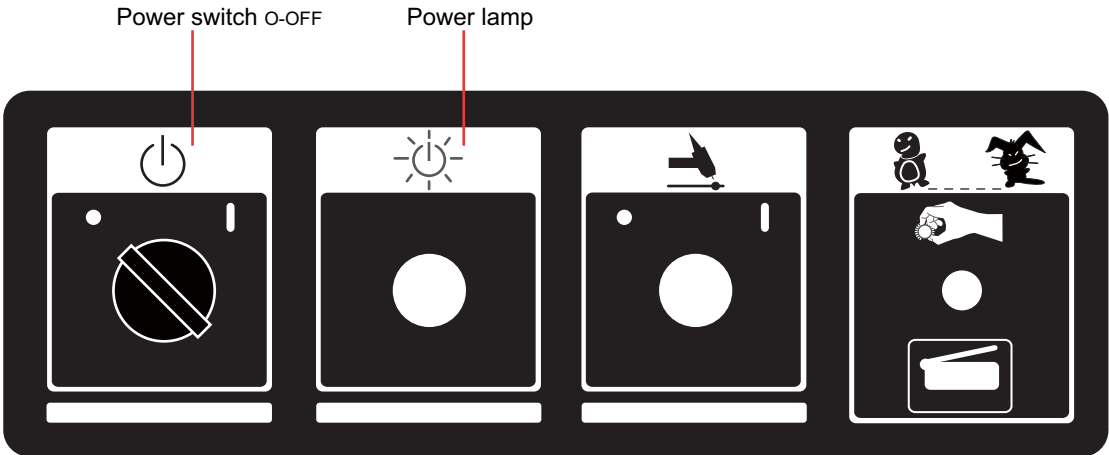
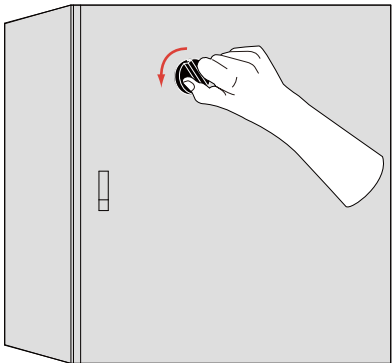


Figure:2.5-1

2.5.2 POWER OFF



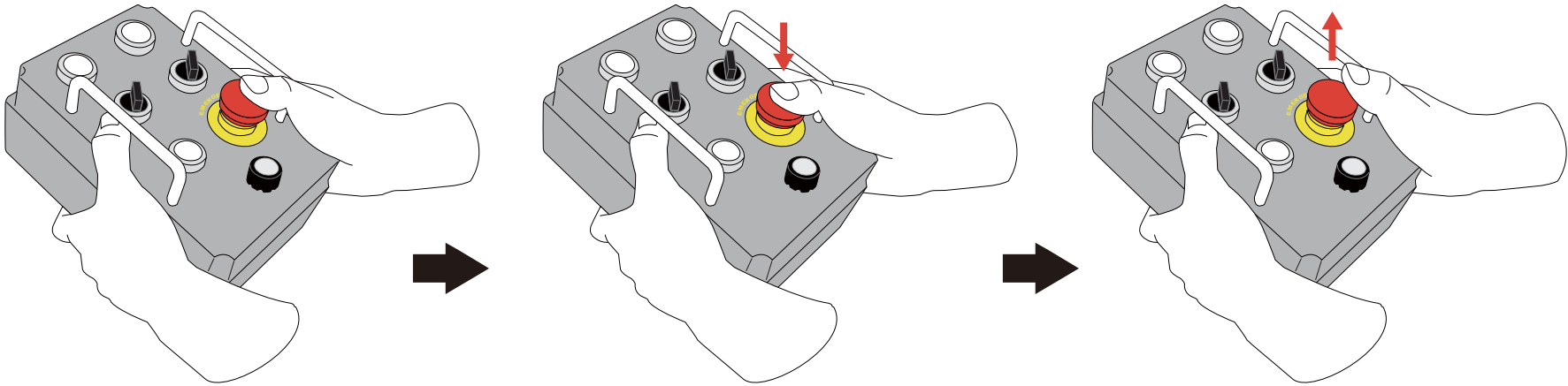
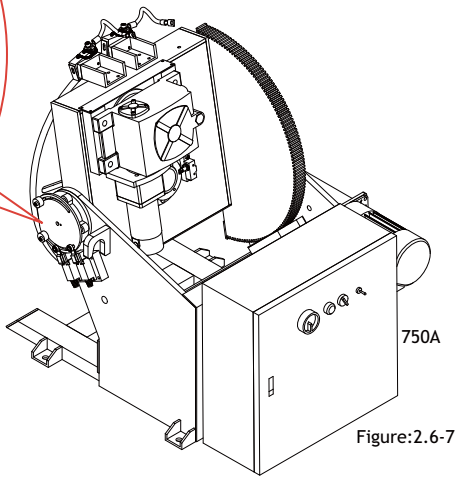
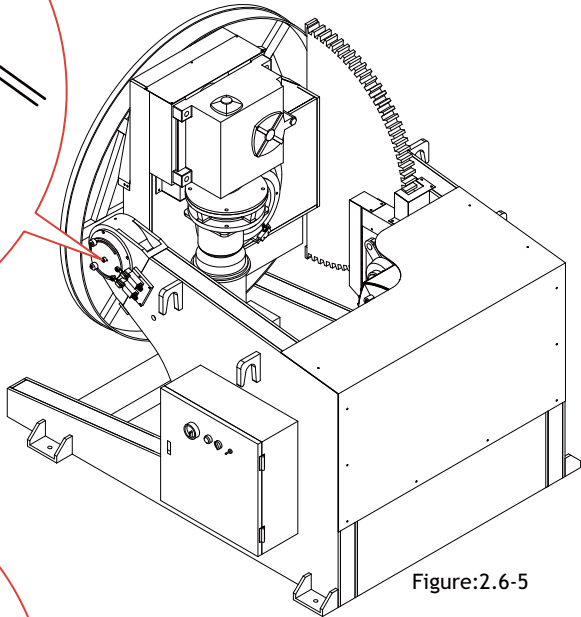
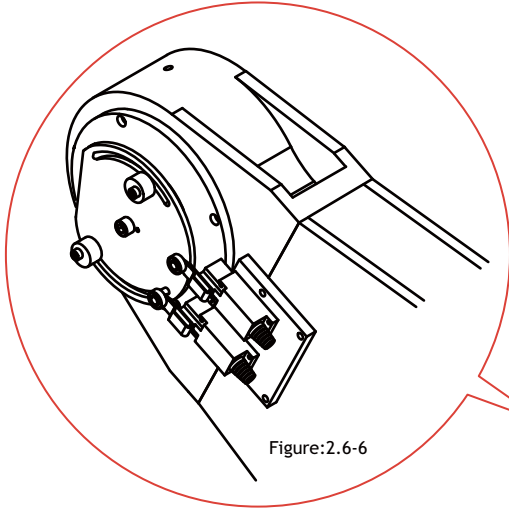
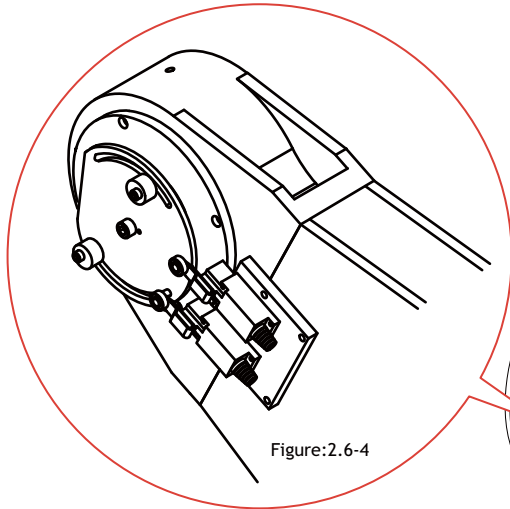
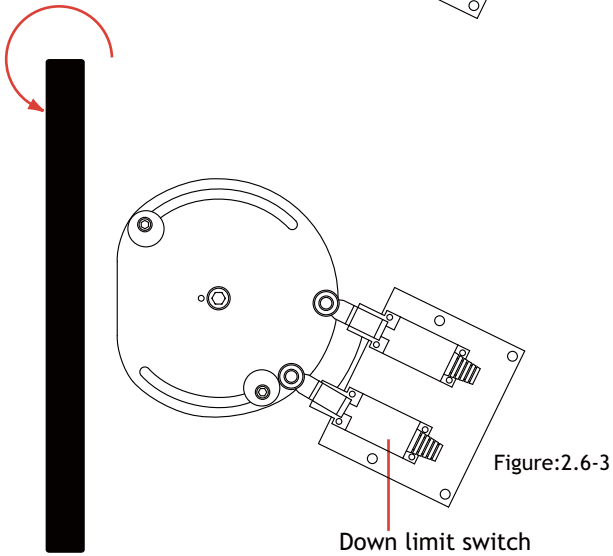
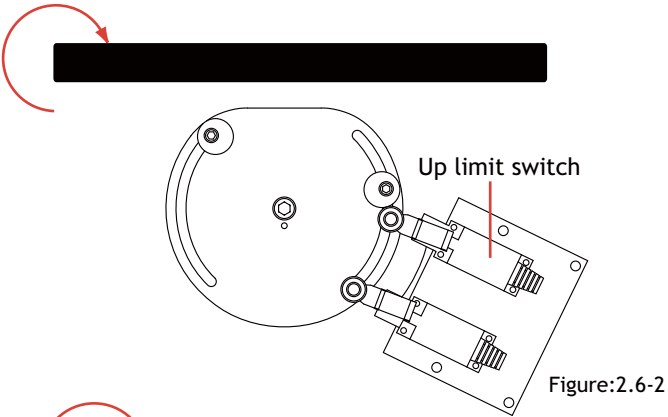
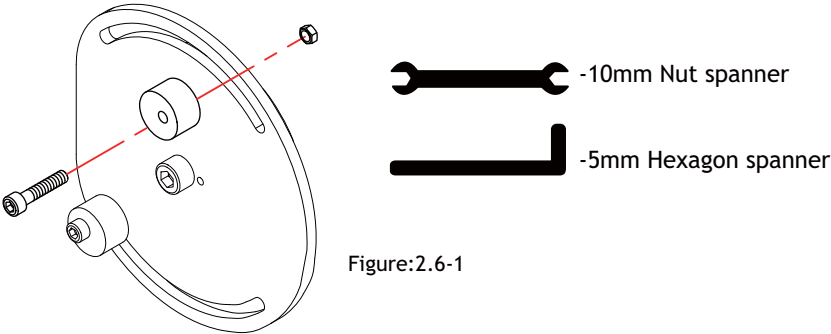


Figure:2.6-1



2.7 CONTRIL PANEL

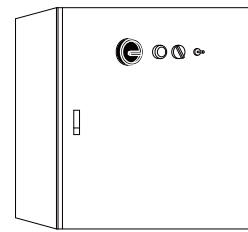
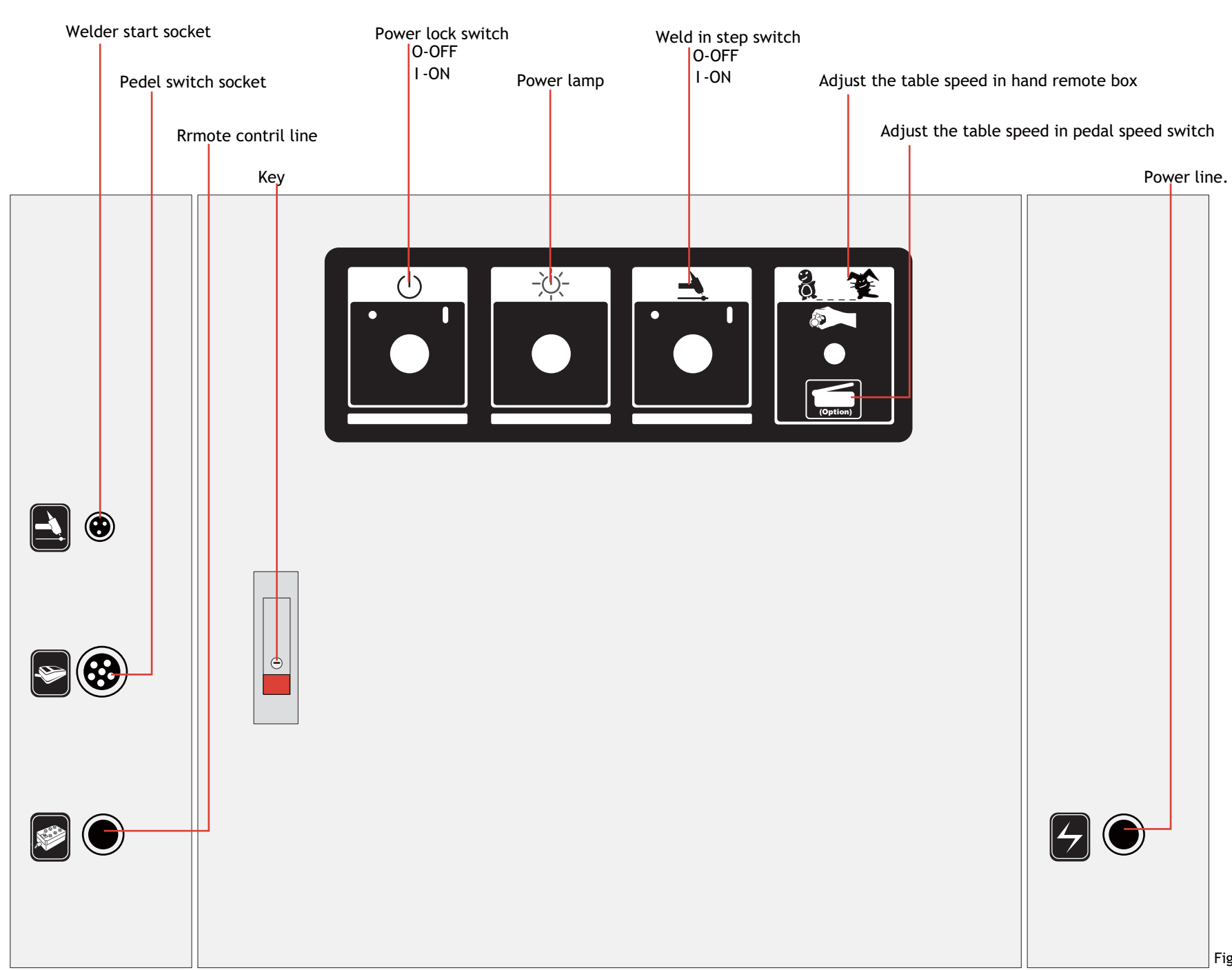


Figure:2.7-2

Figure:2.7-1

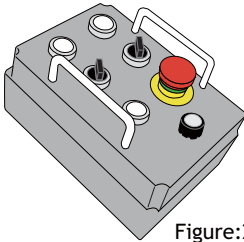
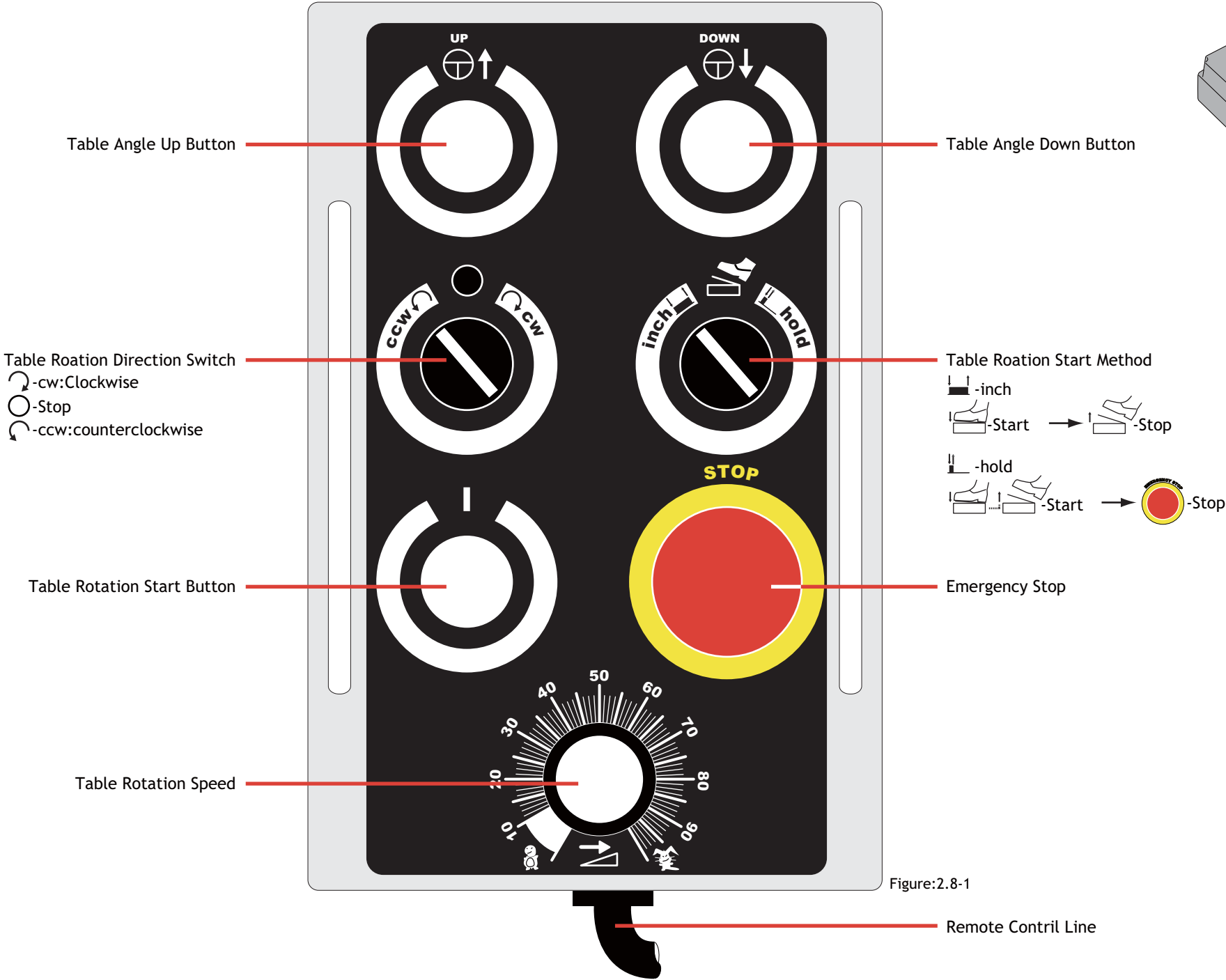


Figure:2.8-2

Chapter 3: Machine Installation

3.1 GENERAL

3.1.1 In order to guarantee the security that the work piece moves, so need really installation WPT series positioner, can operate after confirming installing finishing, please scrutinize the explanation of this chapter and do it.

3.2 TRANSPORTING

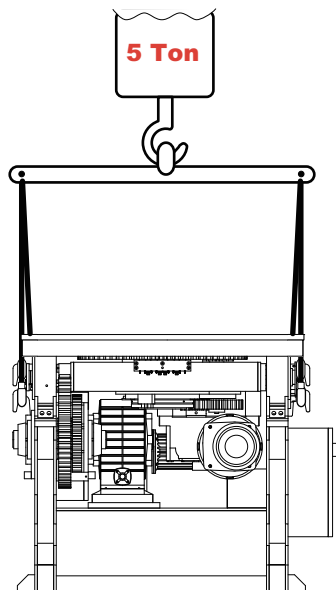


Figure:3.2-1

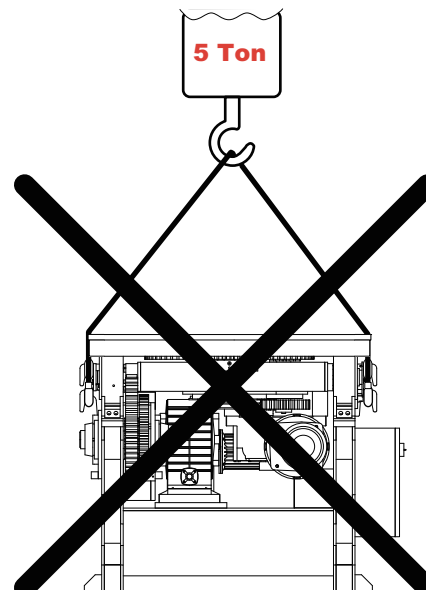


Figure:3.2-2

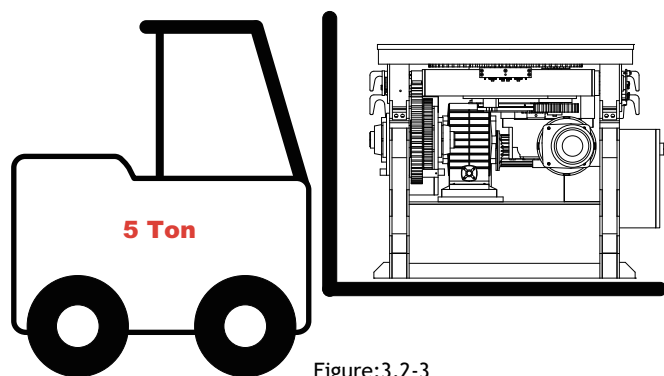


Figure:3.2-3

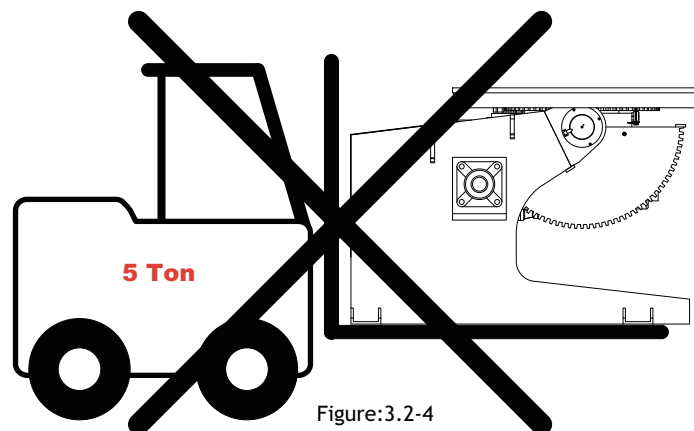


Figure:3.2-4

3.3 ELECTRICAL SUPPLY REQUIREMENTS AND CONNECTION

3.3.1 The power is AC 440V 3phases and has earth circuit.

3.3.2 Use the power broken circuit switch.

3.3.3 Use the proper tool and really lock the power cable and power broken circuit switch.

3.3.4 There can't be damage on the power cable surface or join after the electric wire ruptures.

3.3.5 Do not propose joining the power switch with welder machine.

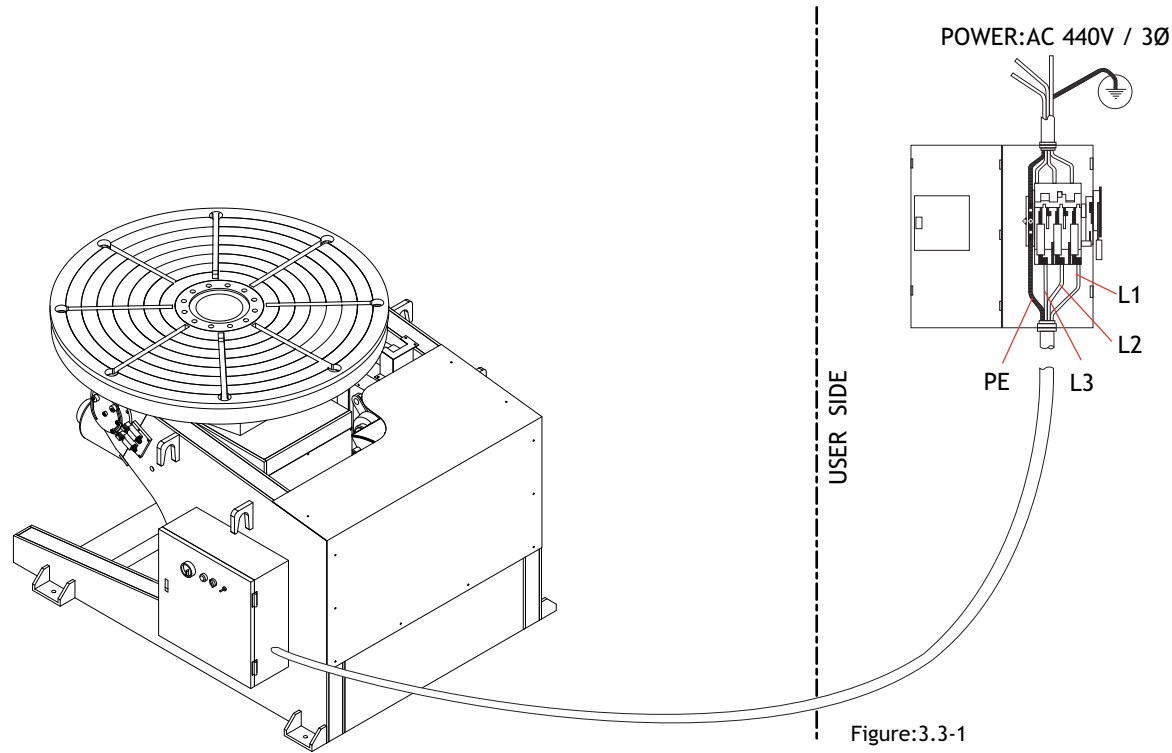


Figure:3.3-1

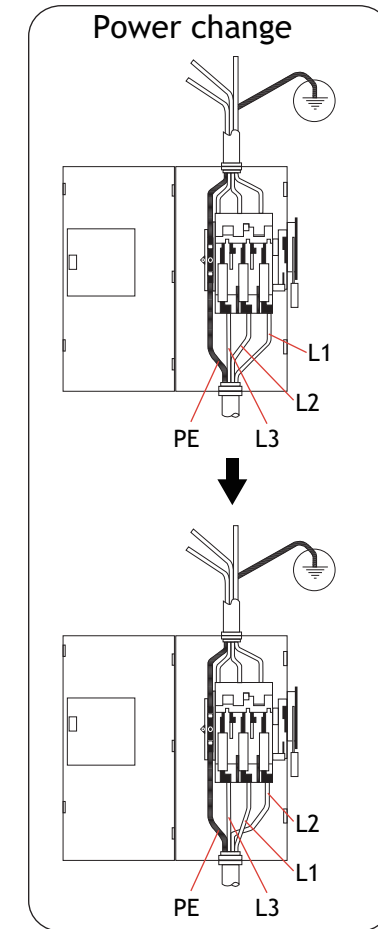
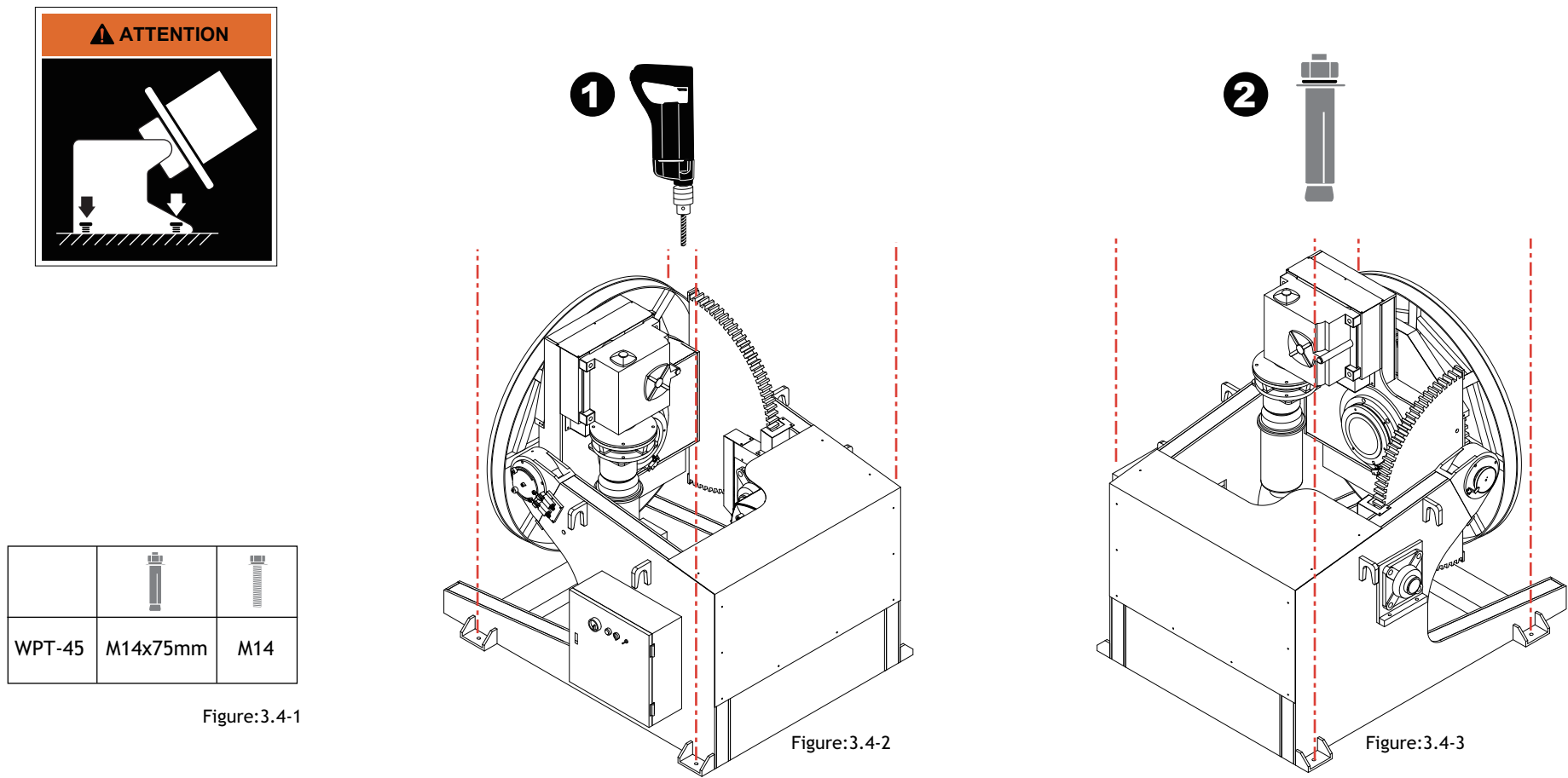


Figure:3.3-2



After the power is installed finished, please operate the table angle to move first, if direction mistake, please change the position of the L1 and L2 electric wire each other. [Use see Figure:3.3-2]

3.4.1 If machinery was fixed and installation in the ground , use the ground bolt [Figure:3.8-1] to lock machinery on the ground.



If machinery was fixed and installation in the strong steel foundation, please drilling four screw holes on the strong steel foundation and use the screw [Figure:3.4-1] to lockmachinery on the strong steel foundation.

3.5 WELDER COOPERATES

3.5.1 Please lock the cable ,welder contact and carbon brush firmly.

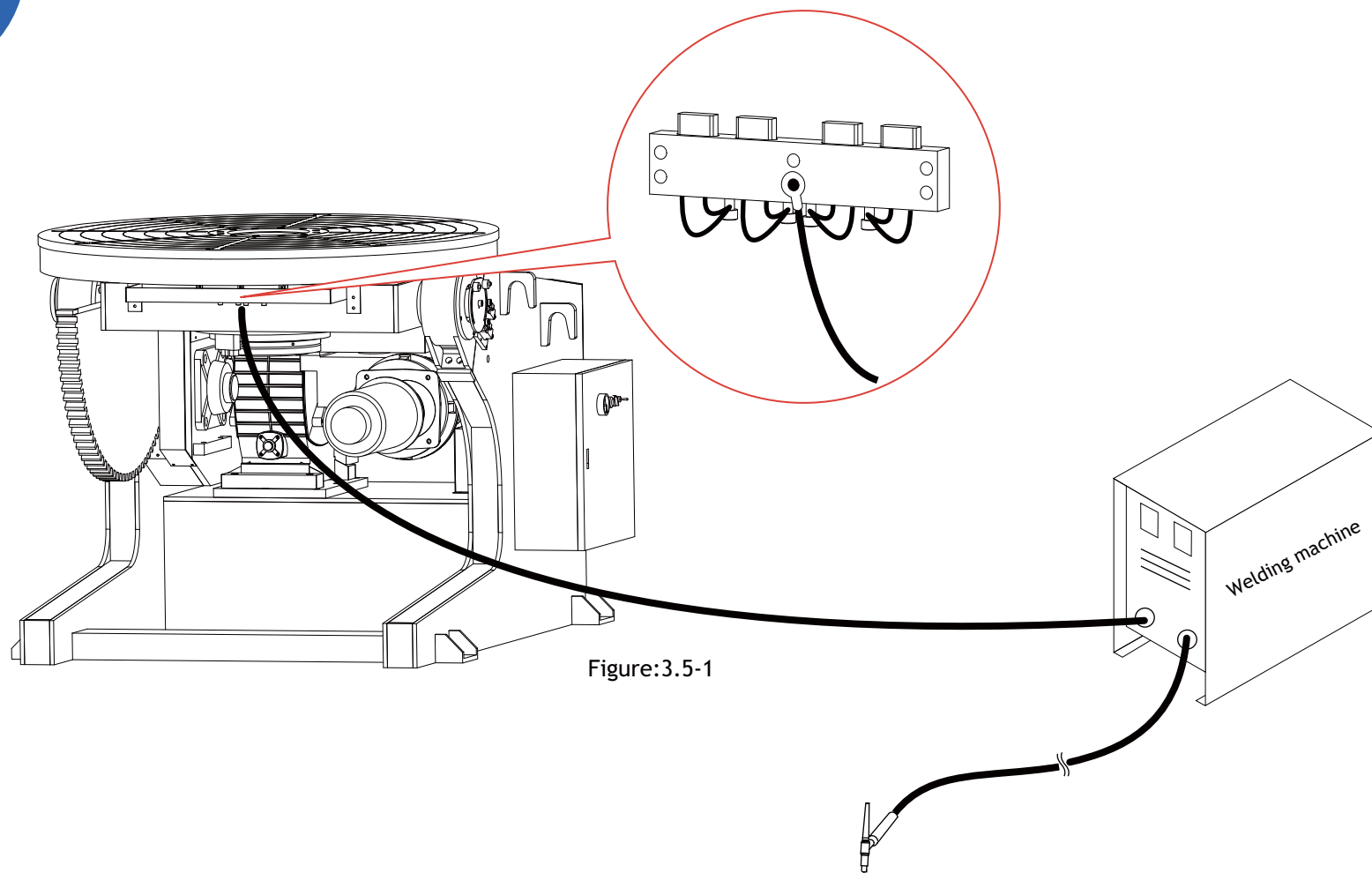
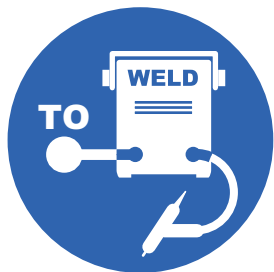


Figure:3.5-1

Chapter 4: Machine's Operation

4.1 TABLE ROTATION DIRECTION

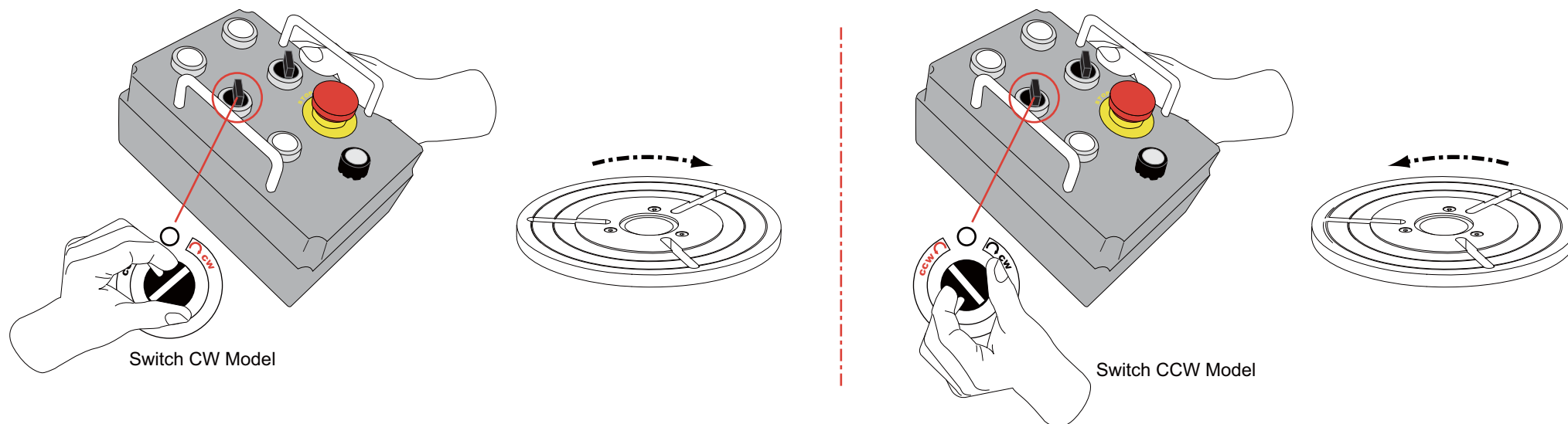


Figure:4.1-1

4.2 TABLE INCH ROTATION

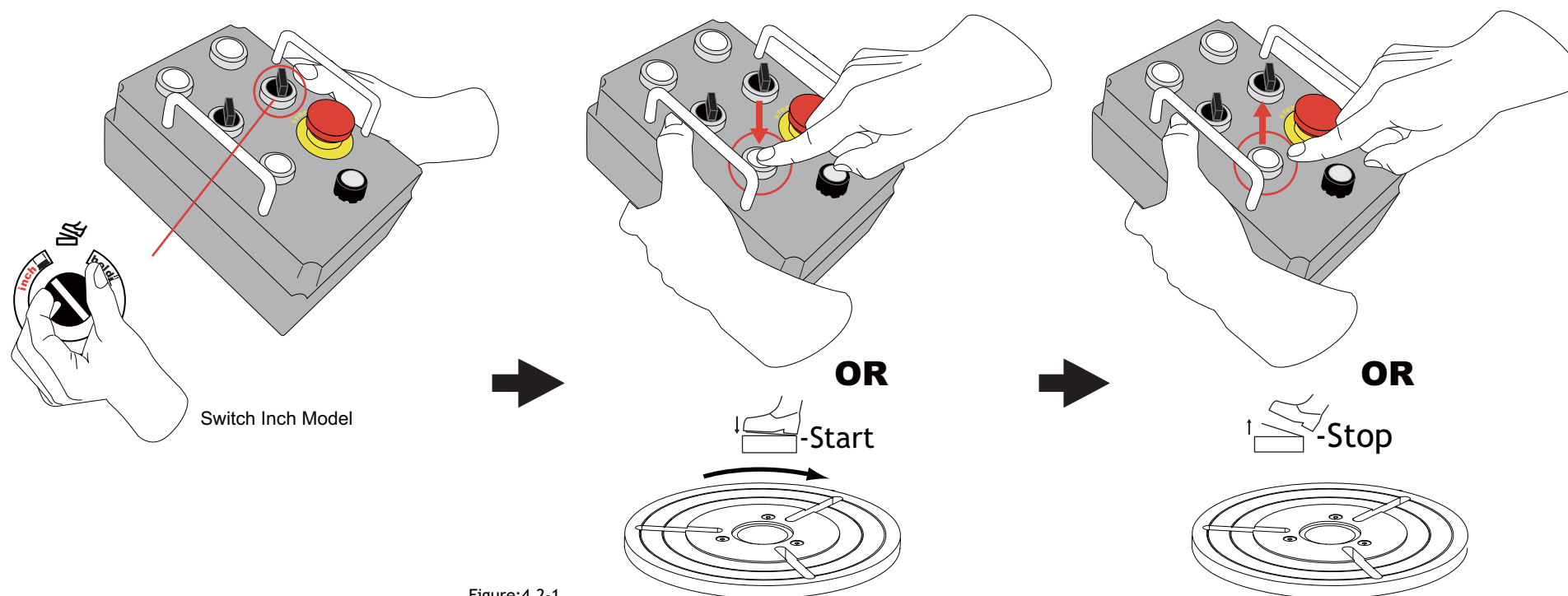
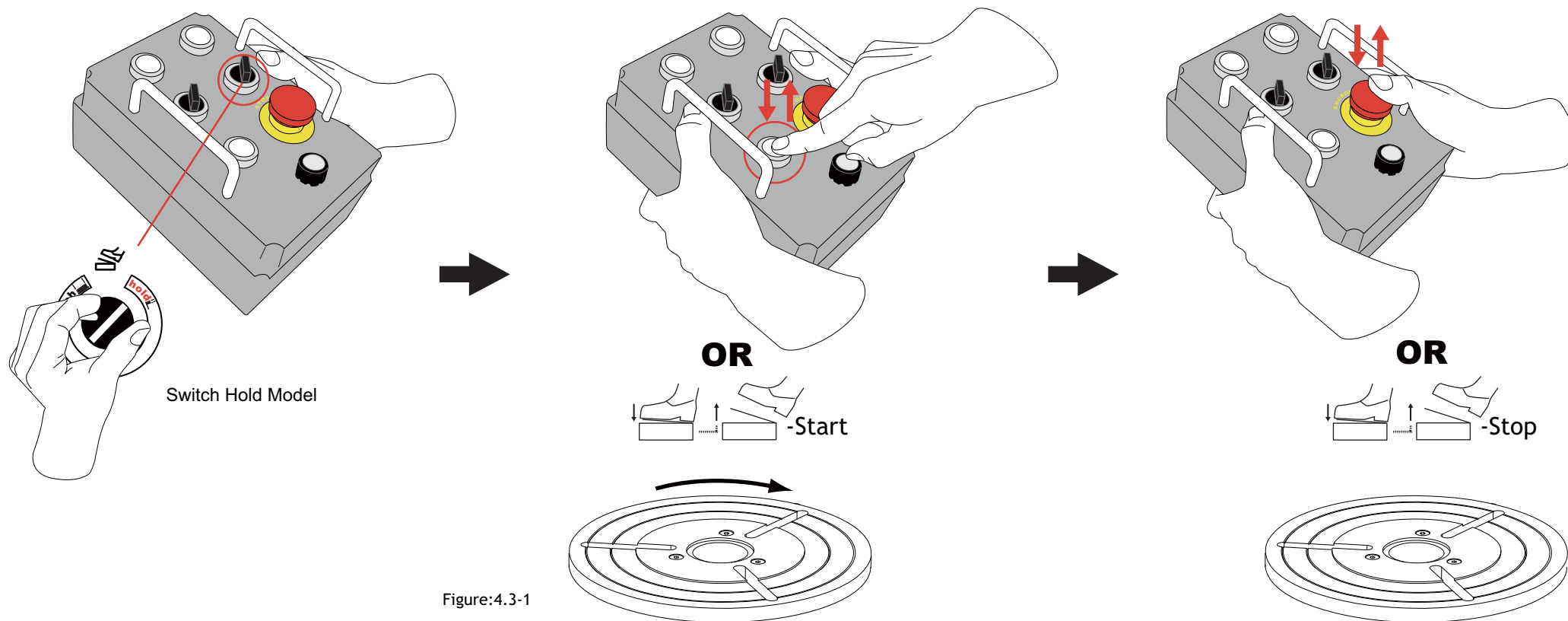
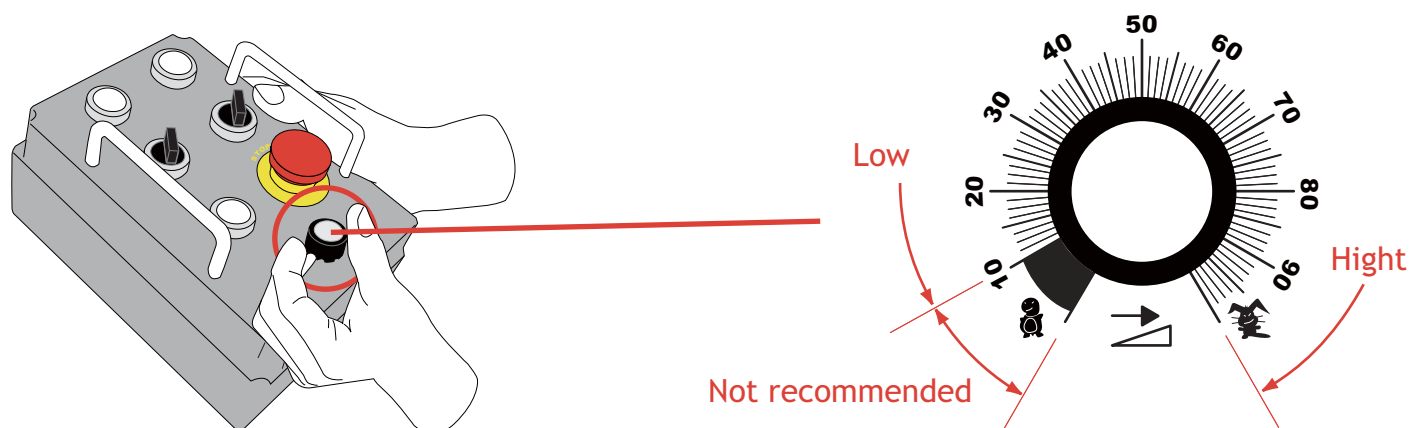


Figure:4.2-1

4.3 TABLE HOLD ROTATION



4.4 TABLE ROTATION SPEED



4.5 TABLE ANGLE UP

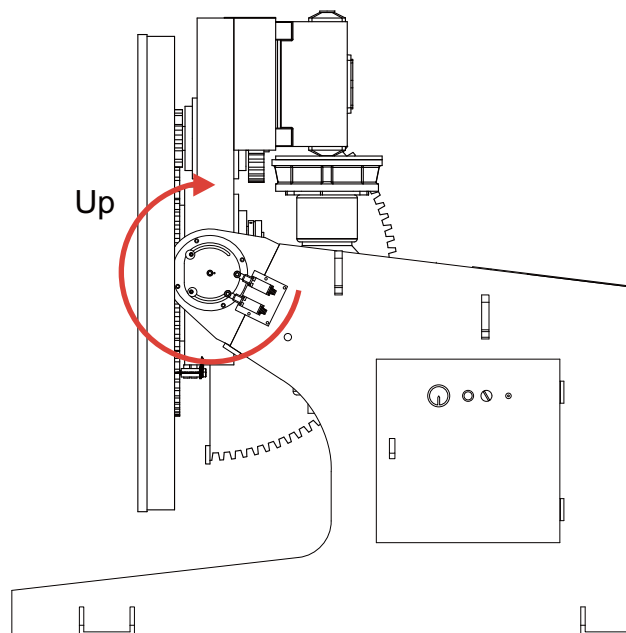
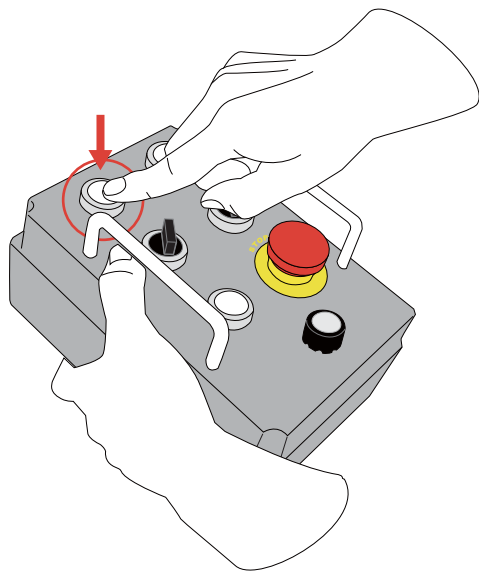


Figure:4.5-1

4.6 TABLE ANGLE DOWN

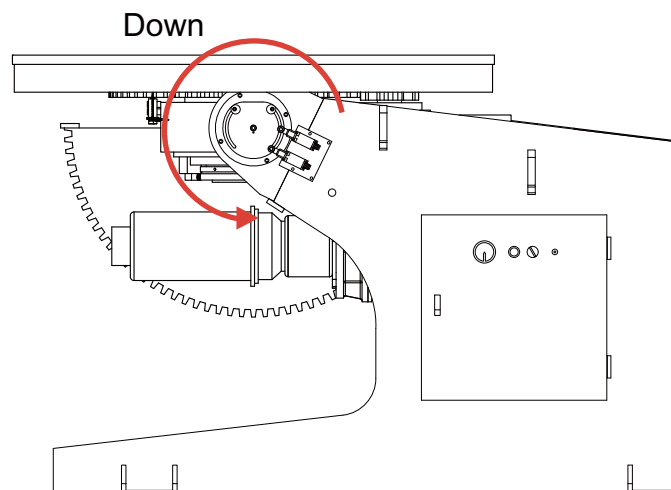
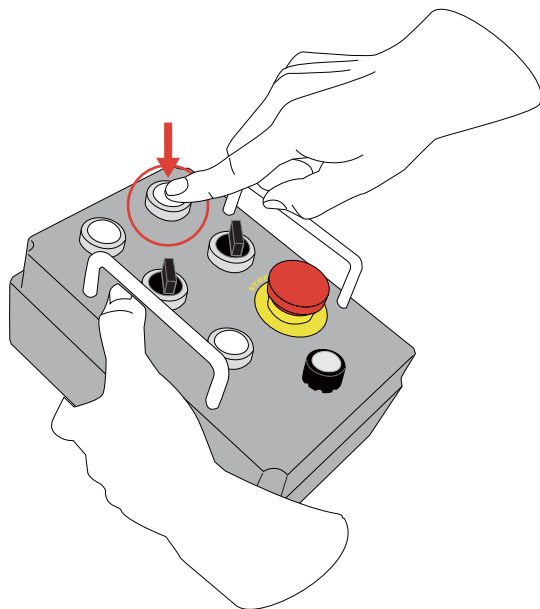


Figure:4.6-1

4.7 THE WELDER IS START IN STEP

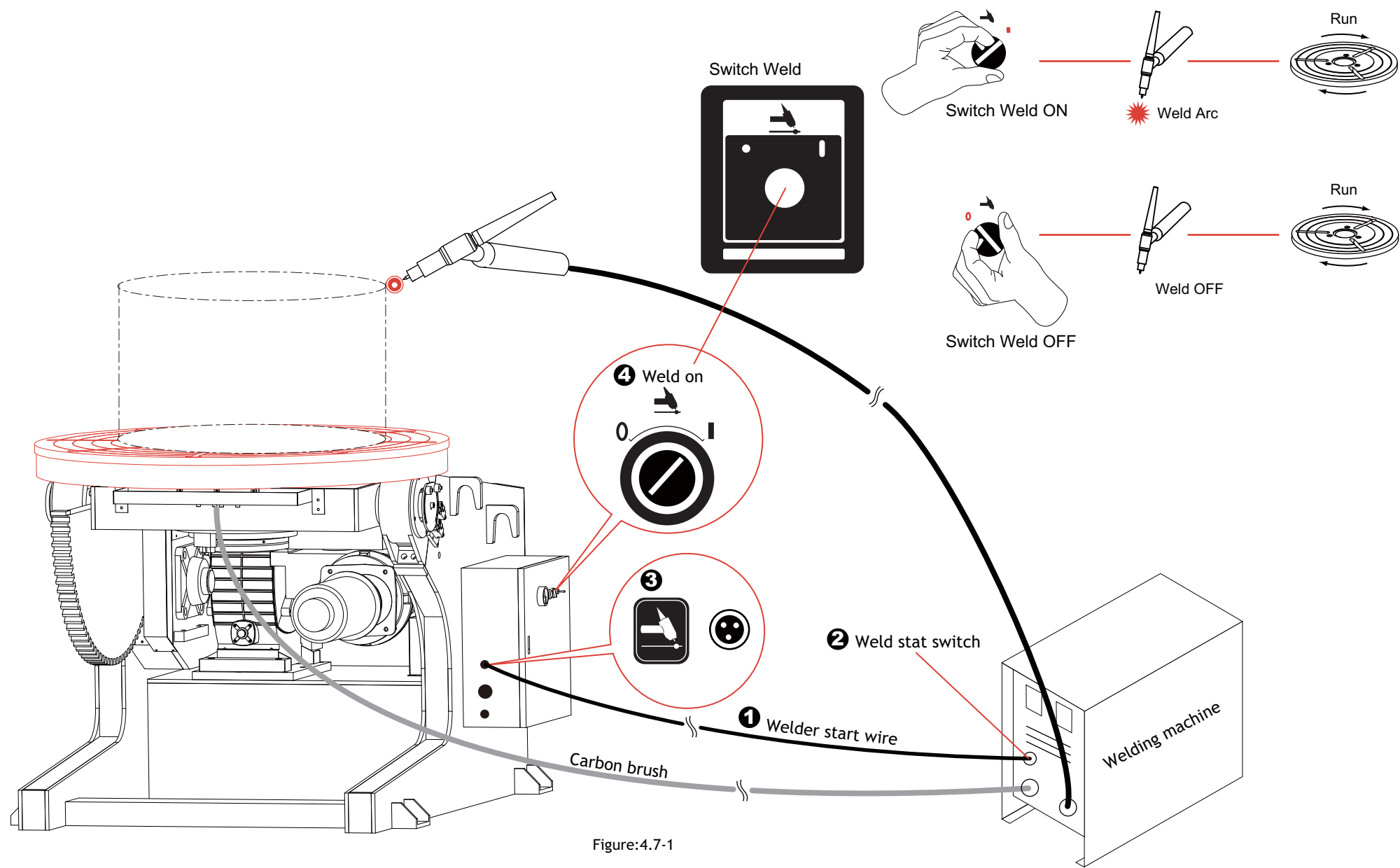
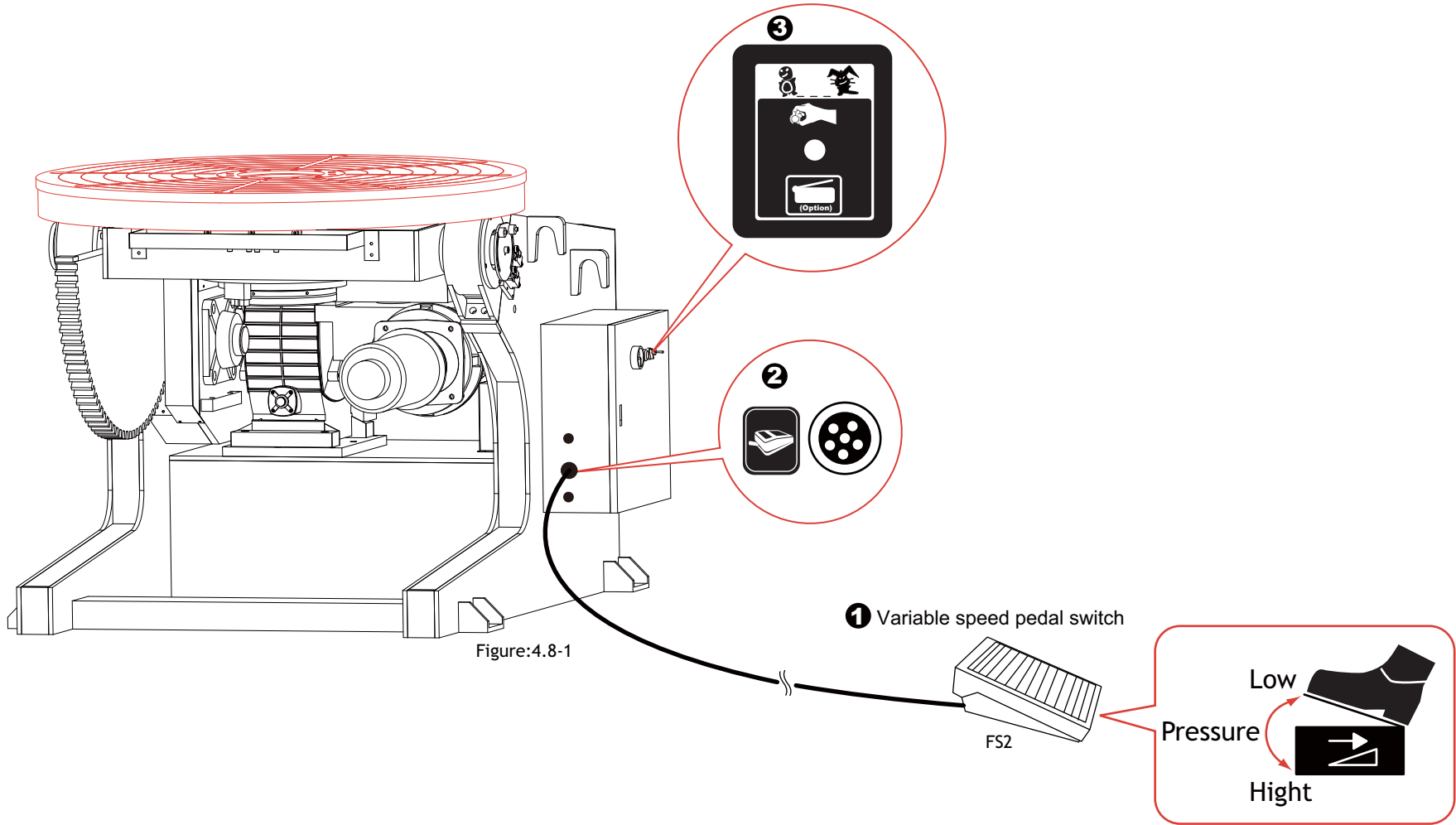


Figure:4.7-1



2T(2 cycle) Machine's Operation

4.9 2T(2 CYCLE) / HOLD / MIG

4.9.1 PREPARATION

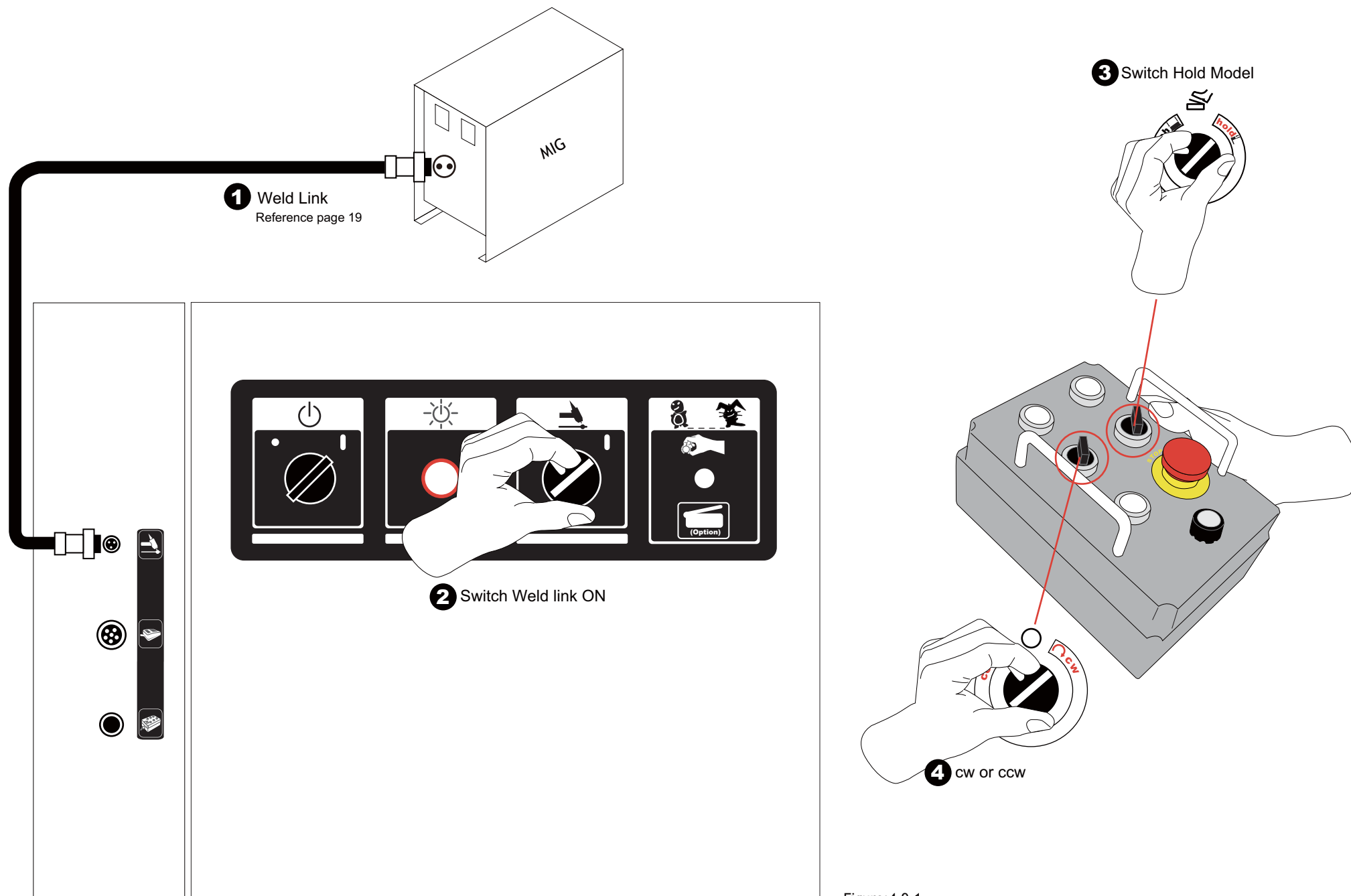


Figure:4.9-1

4.9 2T(2 CYCLE) / HOLD / MIG

4.9.2 WELD START

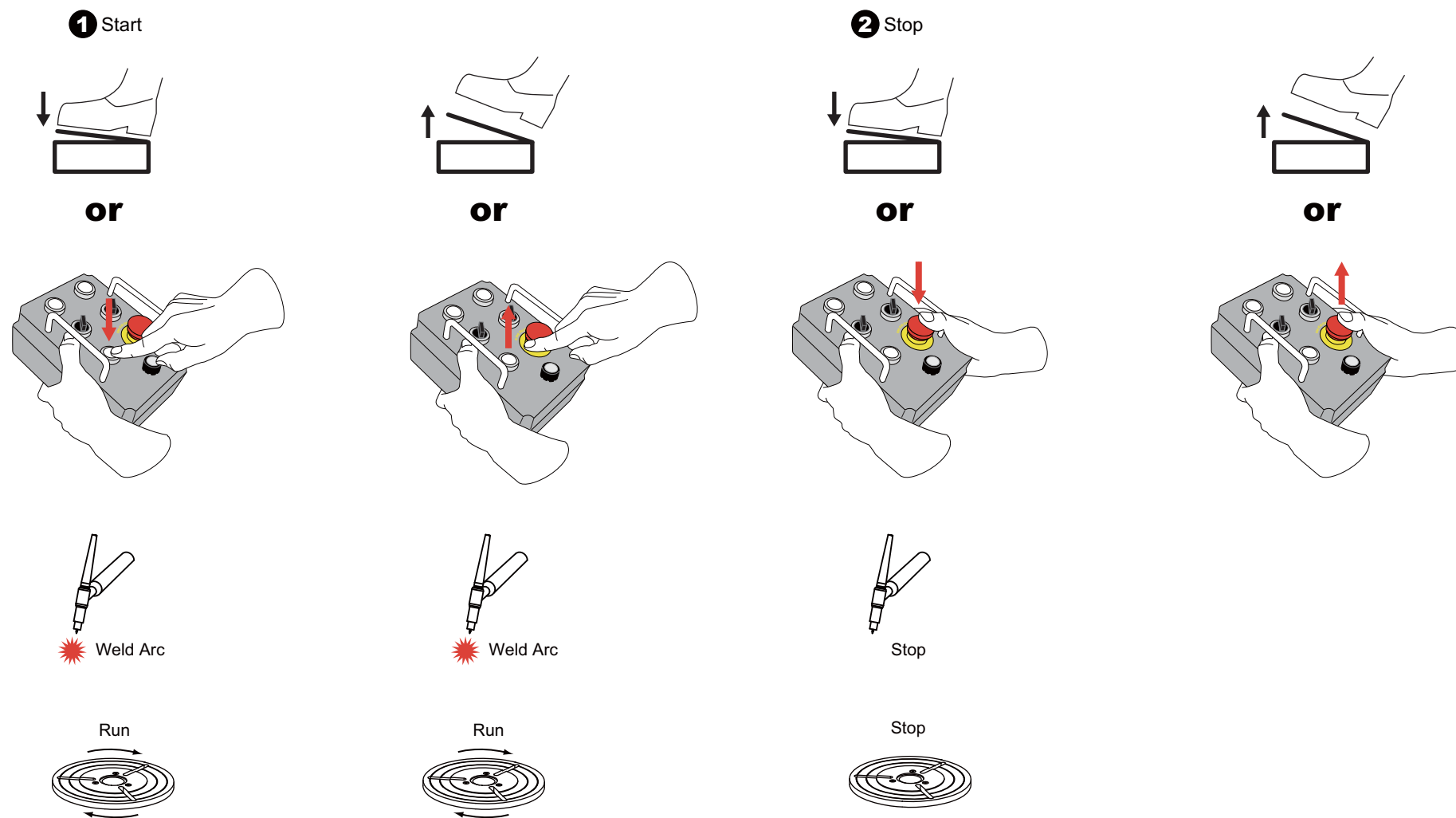


Figure:4.9-2

4.10 2T(2 CYCLE) / INCH / MIG

4.10.1 PREPARATION

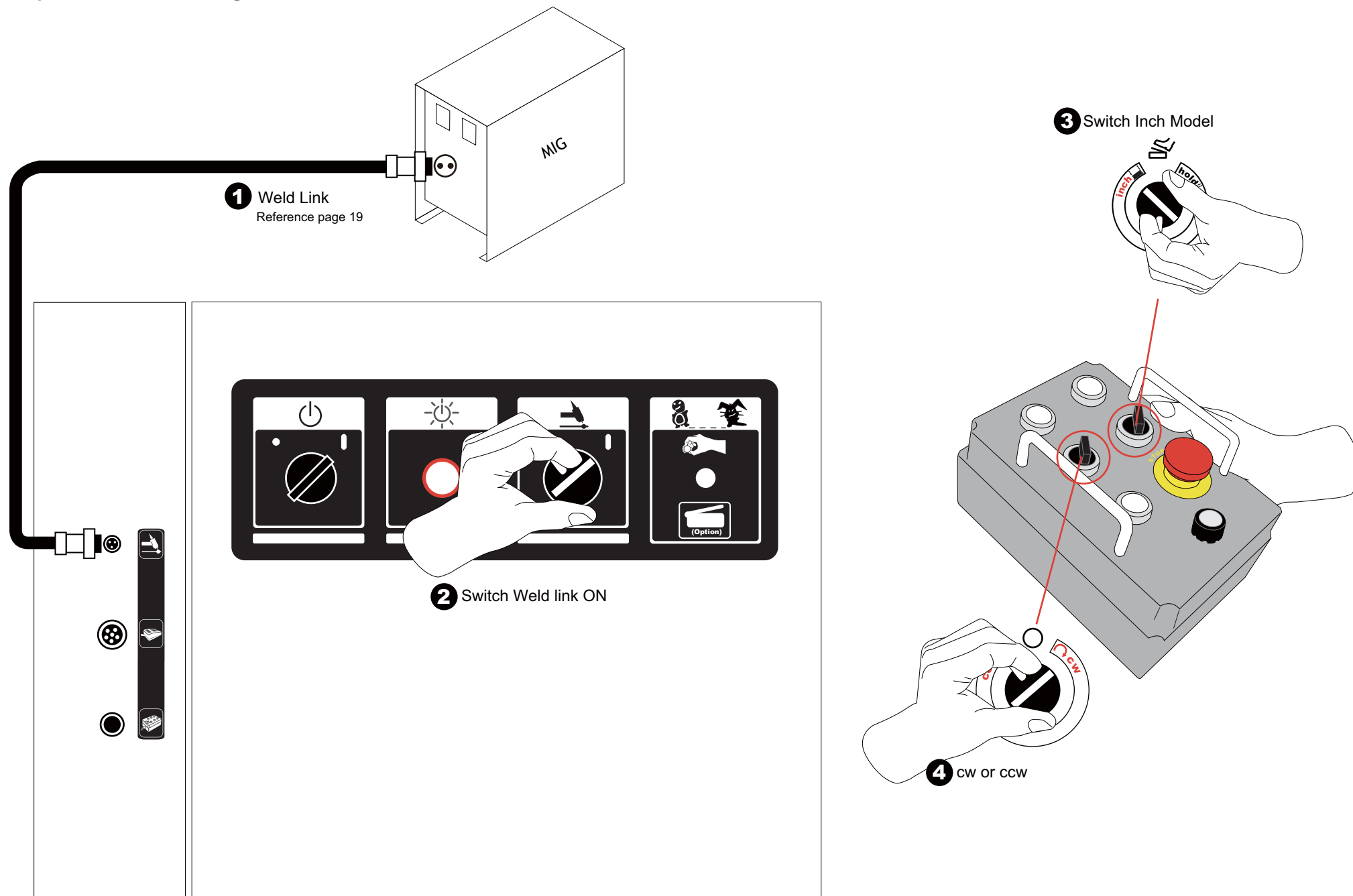


Figure:4.10-1

4.10 2T(2 CYCLE) / INCH / MIG

4.10.2 WELD START

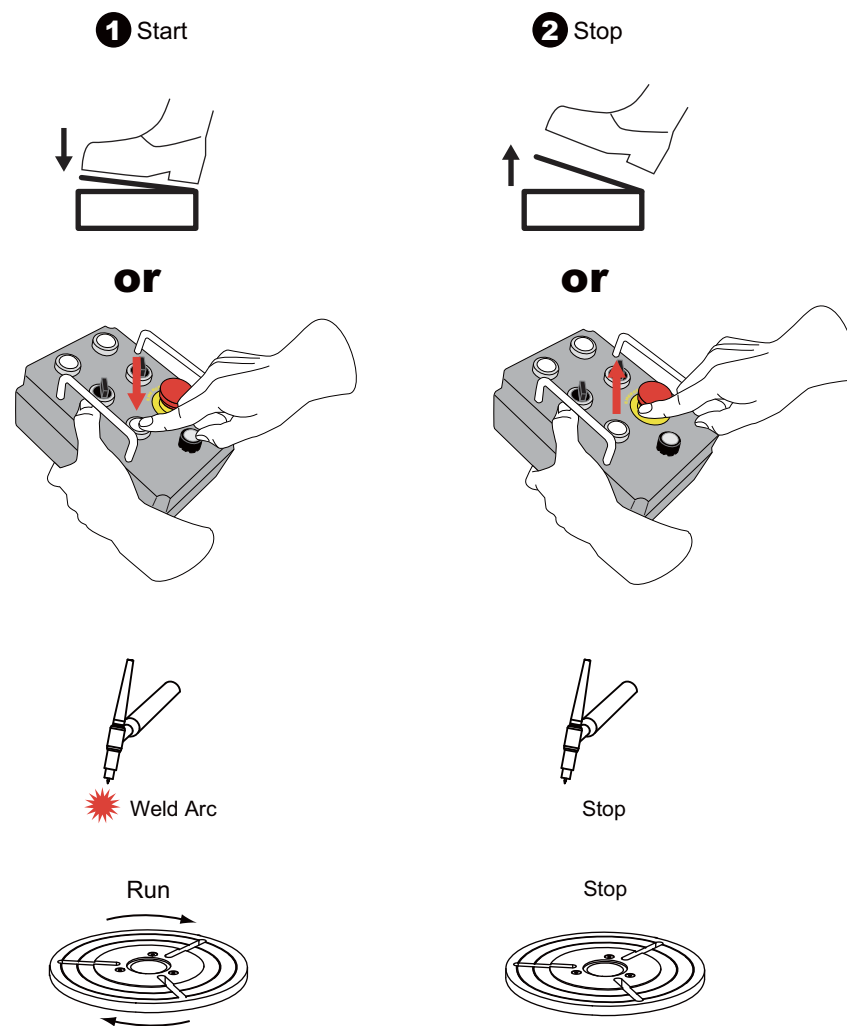


Figure:4.10-2

Chapter 5: Setup Procedure

5.1 GENERAL

5.1.1 The operator can be within the range of table permission angle (0° - 135°), adjust the up limit and down limit position according to the demand, and can adjust table begin rotation to accelerate time, please scrutinize the explanation of this chapter and do it.

5.2 TABLE ANGLE LIMIT

5.2.1 Reference[2.7 Table Angle Sensor]

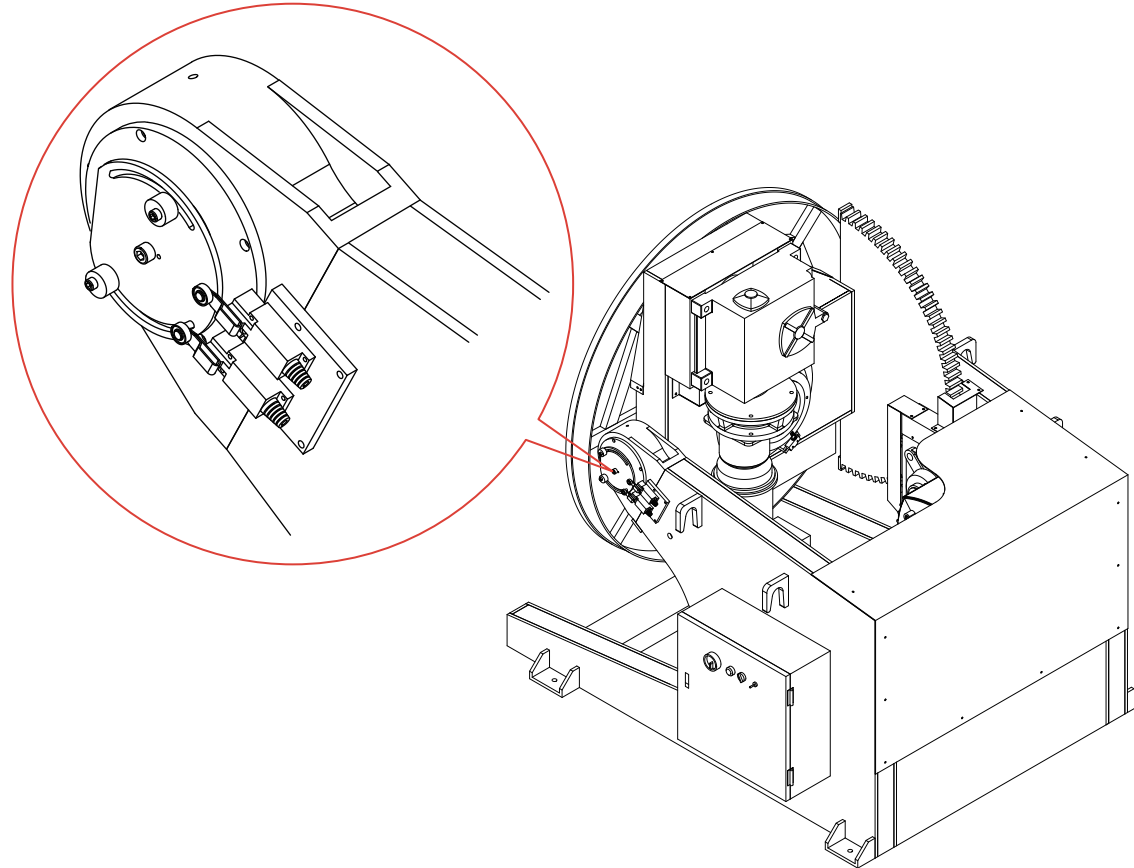


Figure:5.2-1

Chapter 6: Maintenance

6.1 GENERAL

6.1.1 EVPOS series positioner should keep the good state and normal running, you should clean it at any time and maintenance according to the instruction, if you need to clean or maintenance the structure in machinery, please contact your distributor and accept their instruction or them do it.

6.2 MACHINE PREVENTATIVE MAINTENANCE AND CLEAN

6.2.1 Machine Preventative Maintenance

Description	always	daily	weekly	monthly	yearly
General cleaning on the machine.	V	V	V		
Check and clean weld the carbon brush of the circuit and do not permit the oil.	V	V	V		
Check and lock the fixed screw of table.			V	V	V
Check and add the butter in the rotation gear of table				V	V
Check and add the butter in the angle gear of table				V	V
Check and add the butter in the rotation bearing seat of table				V	V
Check and add the butter in the angle bearing seat of table				V	V
Check and add the lubricating oil in the rotation gearbox of table				V	V
Check and add the lubricating oil in the angle gearbox of table				V	V
Check and cleaning the butter in the rotation motor of table			V	V	V
Check and cleaning the butter in the angle motor of table			V	V	V
Check and lock all screws on machinery				V	V



Sure these maintenances stated above are done while electrical power are turned OFF.

6.3 ELECTRICAL PREVENTATIVE MAINTENANCE AND CLEAN

6.3.1 Electrical Preventative Maintenance

Description	always	daily	weekly	monthly	yearly
General cleaning on the controller and hand remote box.	V	V	V		
General cleaning and check of cable connector and electrical wire.		V	V	V	V
Check circuit breaker fuse functionality.			V	V	V
Check if all switches are functioning.			V	V	V
Check if all sensors are functioning				V	V
Check if earth leakage circuit breaker is functioning.				V	V
Check if emergency stop button is functioning.			V	V	V
Check if any connecting wires are damaged.				V	V
Check the function of the pedal switch.				V	V
Check the speed adjustment of table is normal.				V	V
 Make sure these maintenances stated above are done by trained personnel while electrical power is OFF.					

Chapter 7: Troubleshooting

7.1 GENERAL

7.1.1 When machinery is unable to operate, according to proposing checking and repairing by oneself, if your unable repair and operation, please contact your distributor and accept their instruction or them do it.

7.2 MACHINE TROUBLESHOOTING

7.2.1 Machine Troubleshooting

Error Message	General cleaning on the machine.
It is unstable to weld the electric current.	Check or change weld the carbon brush.
The table rotating is shaking.	Check whether the AC motor drive voltage of output is steady. Check whether the electric wire of the AC motor keeps in touch well. Check whether the rotation bearing of table is locked.
The table angle moving is shaking.	Check whether the voltage of the angle AC motor is normal. Check whether the electric wire of the AC motor keeps in touch well. Check whether the brake of the angle AC motor is normal.
Operate the table angle up is unable to stop.	Check whether the function of the UP button is normal. Check whether the touching screw of the UP limit is locked Check whether the function of the UP limit is normal.
Operate the table angle down is unable to stop.	Check whether the function of the DOWN button is normal. Check whether the touching screw of the DOWN limit is locked Check whether the function of the DOWN limit is normal.
	Sure these maintenances stated above are done while electrical power are turned OFF.

7.3 MACHINE TROUBLESHOOTING

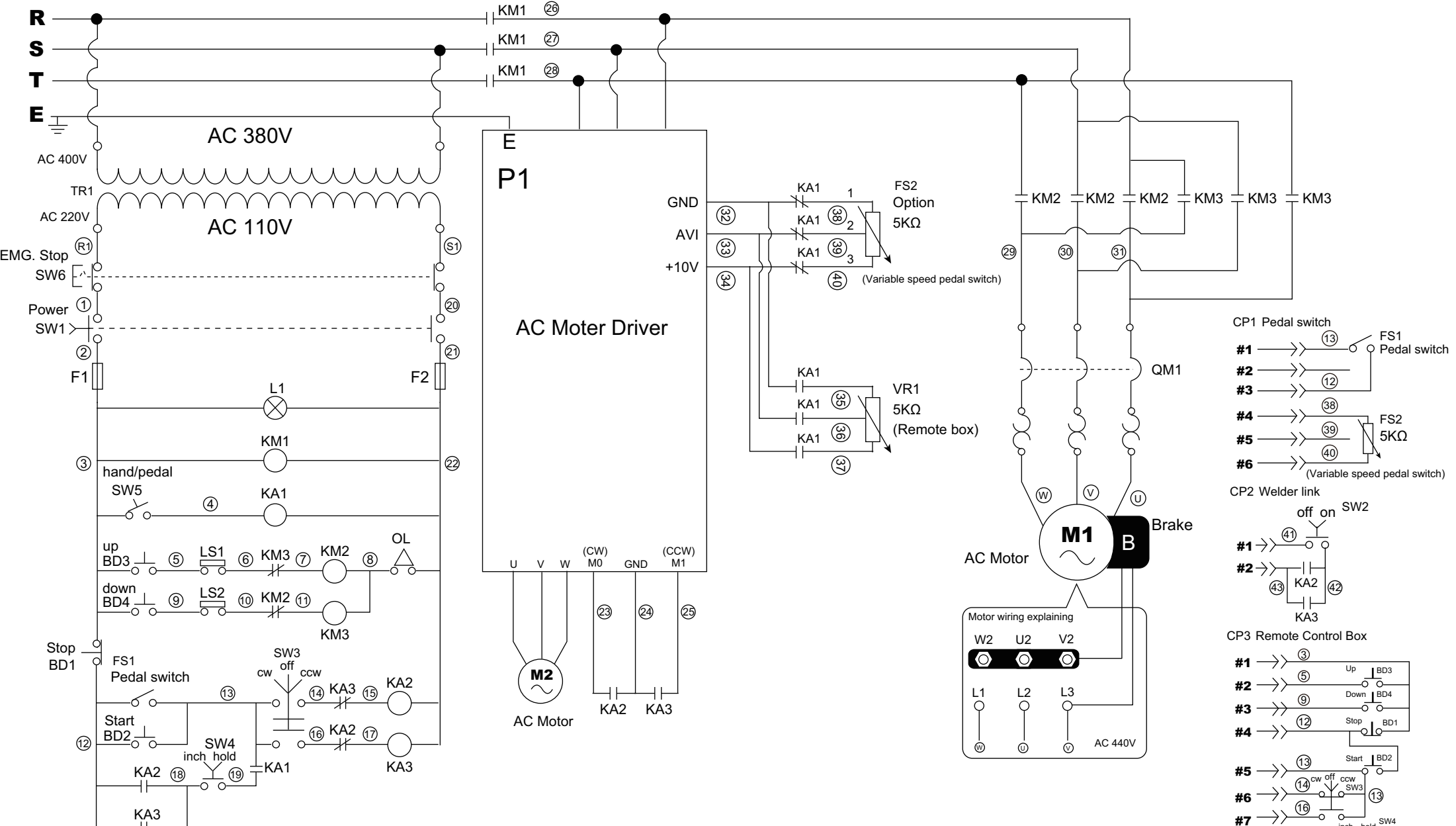
7.3.1 Machine Troubleshooting



Sure these maintenances stated above are done while electrical power are turned OFF.

Error Message	Troubleshooting
While opening the power, the power light is not bright.	Check whether the power is normal. Check whether the power circuit breaker is normal. Check whether the power light is normal.
The power light is on but unable to operate.	Check whether the voltage transformer is normal. Check or change fuse in the control circuit. Check whether the function of the emergency stop button is normal. Check whether the hand remote box and wire is normal.
Table is unable to rotate.	Check whether the AC motor drive outputs the AC voltage. Check whether the rotatory direction switch is normal. Check whether the electric wire of the AC motor keeps in touch well. Check whether the function of the start button or pedal switch is normal. Check whether the part of the control circuit is normal. Check whether the hand remote box and wire is normal
The table speed is unable to adjust.	Check whether the AC motor drive outputs the AC voltage. Check whether the variable resistance of adjusting the speed is normal. Check whether the part of the control circuit is normal. Check whether the hand remote box and wire is normal
Table is unable to angle moving.	Check whether the voltage of the angle AC motor is normal. Check whether the relay and breaker is normal. Check whether the UP limit switch and DOWN limit switch is normal. Check whether the electric wire of the AC motor keeps in touch well. Check whether the part of the control circuit is normal. Check whether the hand remote box and wire is normal.
It is unable to weld in step.	Check whether the starting the contact of the welder is normal. Check whether the connecting wire welded is normal. Check whether the wleder switch is normal. Check whether the relay and breaker is normal. Check whether the hand remote box and wire is normal.

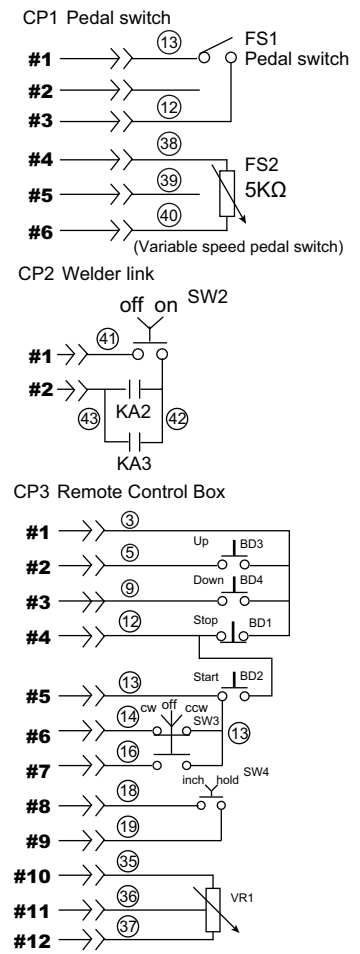
Appendix



Item	Part No.	Part Name	Q'TY
KM1	CU16/110/3A1b	Power Relay	1
KM2	CU11/110/3A1b	Angle Relay	1
KM3	CU11/110/3A1b	Angle Relay	1
KA1	RY-MY4J/110/4A4B	Relay	1
KA2	RY-MY4J/110/4A4B	Relay	1
KA3	RY-MY4J/110/4A4B	Relay	1
OL	RHN-10K	Load over(1.7A)	1
QM1	GV2ME07	Circuit-Breaker(1.6~2.5A)	1
LS1	TZ-8104	Limit Switch	1
LS2	TZ-8104	Limit Switch	1

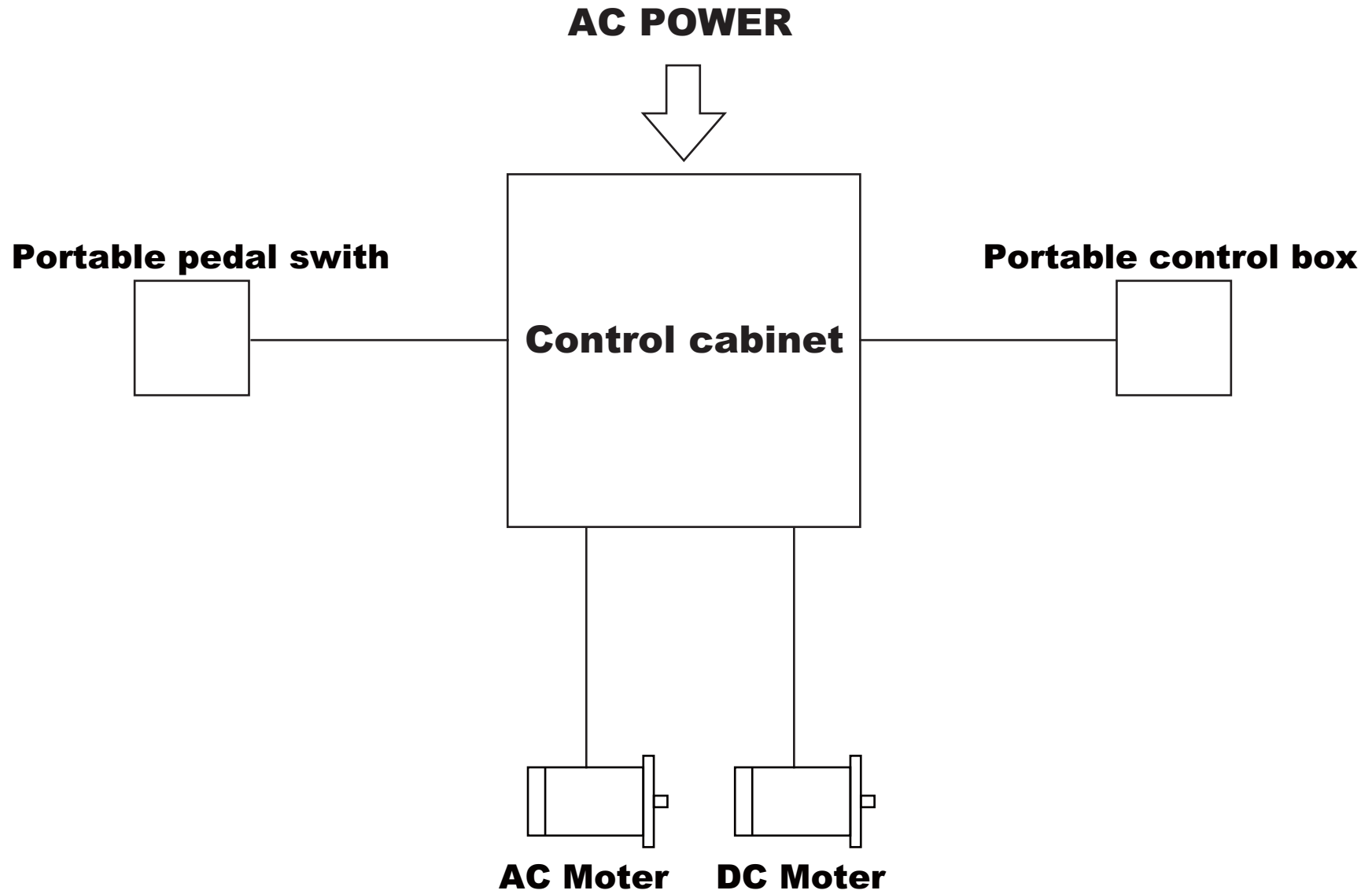
Item	Part No.	Part Name	Q'TY
SW1	SW22/2A	Power switch	1
SW2	SW22/1A	Welder linkswitch	1
SW3	SW22/1A-0-1A	cw/off/ccw switch	1
SW4	SW22/1A	inch/hold switch	1
SW5	TO11	hand/Pedal switch	1
SW6	TN2BK/2B	Emergency Stop	1
BD1	TN2BFRB/1B	Stop button	1
BD2	TN2BFRB/1A	Start button	1
BD3	TN2BFRB/1A	Up button	1
BD4	TN2BFRB/1A	Down button	1
L1	LR-D22A1	Power lamp	1

Item	Part No.	Part Name	Q'TY
M1	ACM-1HP24-3-B	AC1HP Brake Motor(220V/440V/3Ø)	1
M2	ACM-3HP24-3	AC3HP Motor(220V/440V/3Ø)	1
F1	TFBR-101	Fuse Socket	1
F2	TFBR-101	Fuse Socket	1
VR1	VR24YN 20S/5KVΩ	Resistance	1
CP1	P/D25P6	Pedal Socket	1
CP2	P/DE16P3	Welder link Socket	1
CP3	PLS-28120	Remote Control Box	1
FS1	TFS-101Z	Pedal Switch	1
FS2	VSPS-101Z	Variable speed pedal switch	1
P1	VFD022M43B	AC Motor Driver	1

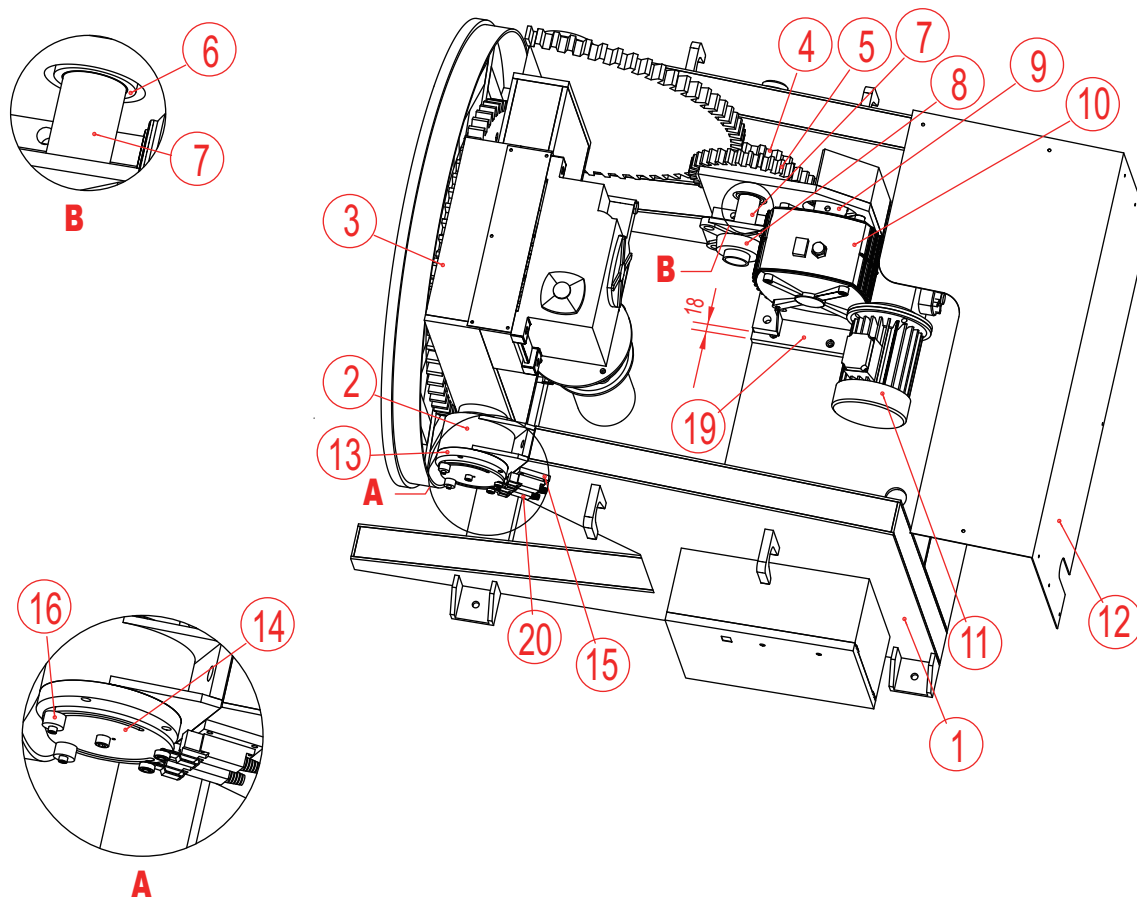


EVPOS-2TA
AC 380V

B.1 SYSTEM BLOCK DIAGRAM

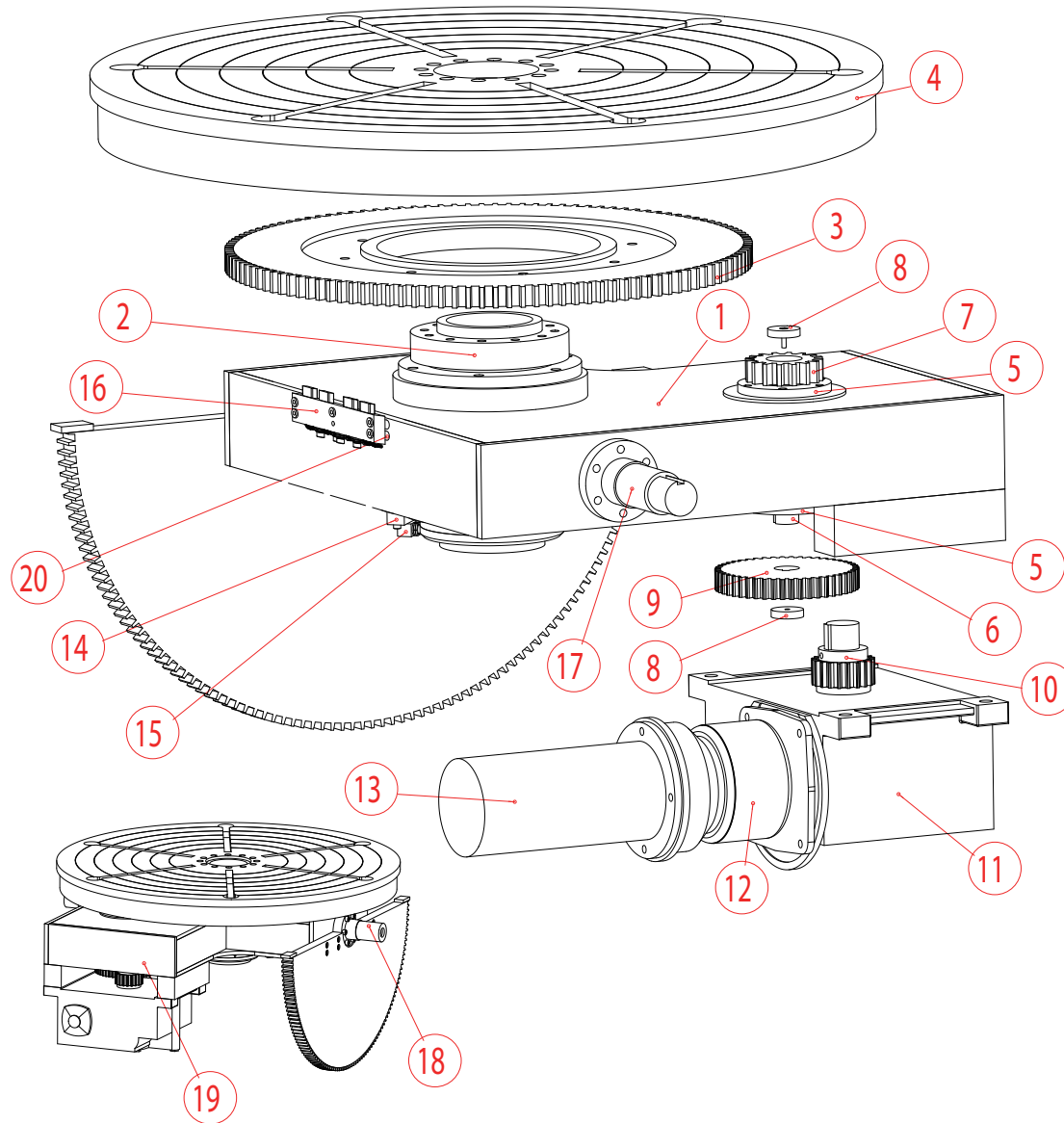


EVPOS-2TA



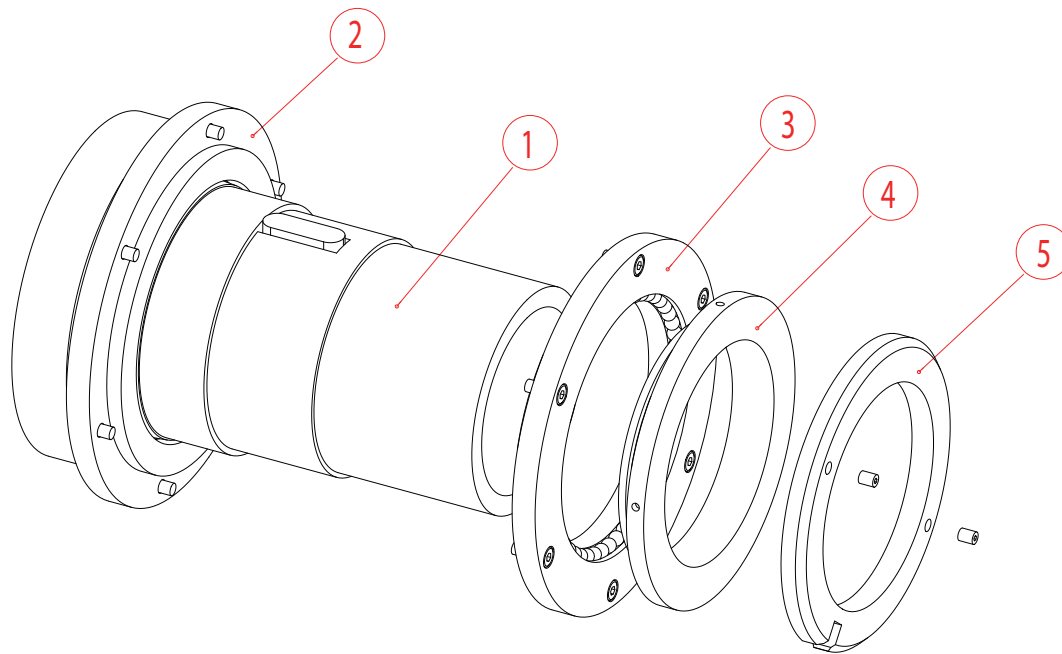
Item	Part No.	Part Name	Q`TY
1	EV2T-07	Table shelf	1
2	EV2T-15	Bearing seat	2
2-1	22312CD	Bearing	2
3	EV2T-1	Table case group	1
3-1	AN12	Bearing nuts	4
4	EV2T-32	12T Gear	1
5	EV2T-31	36T Gear	1
6	EV2T-27	Ring	1
7	EV2T-30	Angle movable gear axle	1
8	UCF310	Bearing seat	2
9	EV2T-11	Angle gear	1
10	LHM-120R-250B	Worm Gear Reducer	1
11	AC1HP-1800RPM	AC1HP motor / AC220V3	1
12	EV2T-25	Base cover	1
13	EV2T-21	Bearing seat cover	2
14	EV750A-01	Limit scale	1
15	EV1T-22	Limit switch seat	1
16	EV750A-02	Touching	2
17	EV750-16	Angle scale	1
18	EV2T-23	Index	1
19	EV2T-16	seat	1
20	YJ-8104	Limit switch	2

EVPOS-2TA



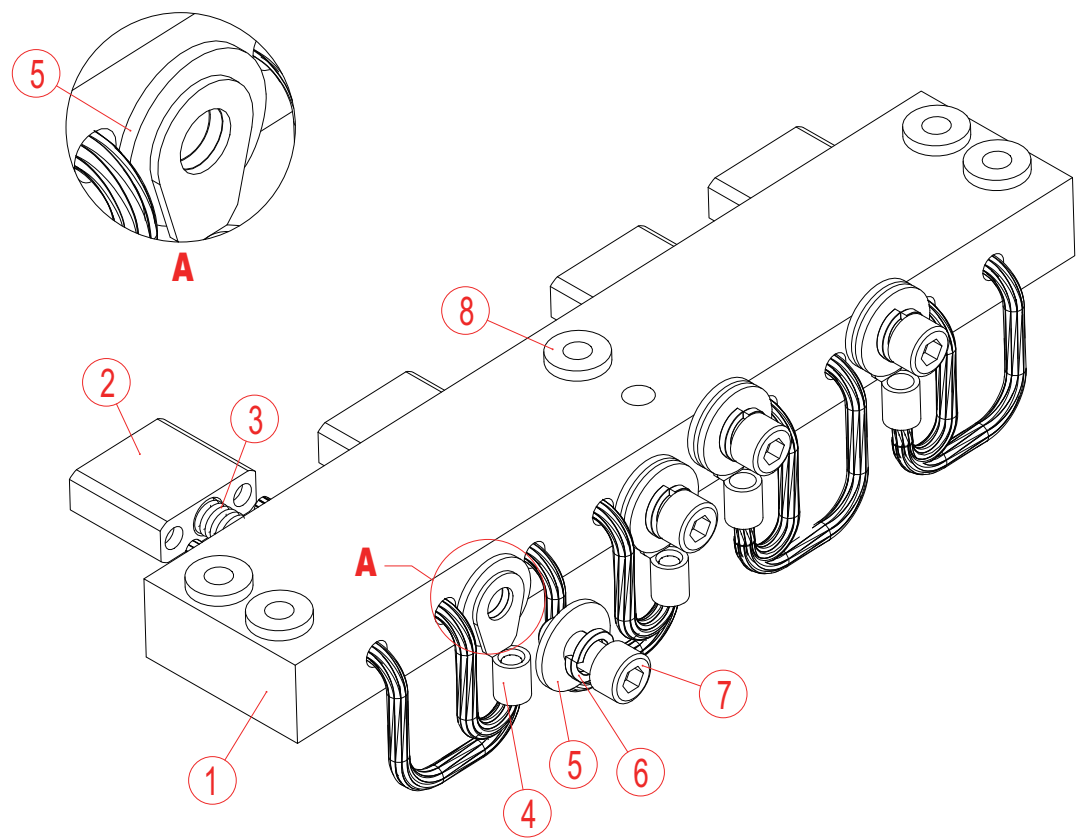
Item	Part No.	Part Name	Q'TY
1	EV2T-06	Table case	1
2	EV2T-1-1	Table axis group	1
3	EV2T-08	Table gear	1
4	EV2T-18	Table	1
5	EV2T-12	Bearing Cover	2
6	EV2T-13	Bearing	1
7	EV2T-09	9T Gear	1
8	EV2T-14	Lock ring	2
9	EV2T-28	35T Gear	1
10	EV2T-29	Drive gear	1
11	EDM3-120-30AA-Ø28	Worm Gear Reducer	1
12	CVM-750W-28	Gear Reducer	1
13	AC1HP	AC Motor	1
14	EV2T-24	Limit one	1
15	TM1308	Limit Switch	1
16	EV3T-1-1	Welding ground	1
17	EV2T-20	Angle axle	1
18	EV2T-19	Gear axle	1
19	EV2T-26	Gear cover	1
20	EV3T-32	Bakelite bush	5

EV2T-1-1



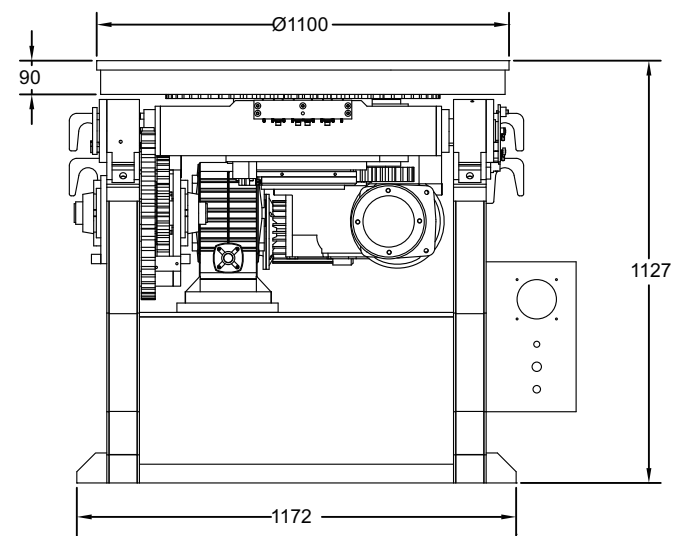
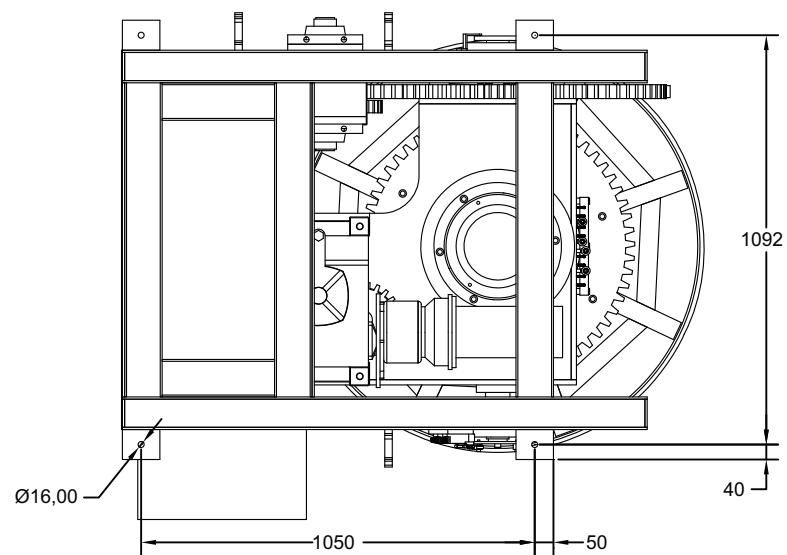
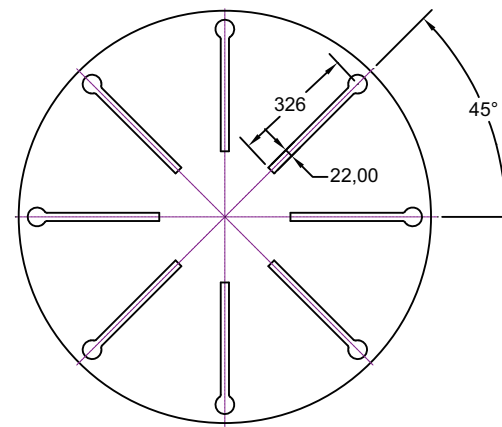
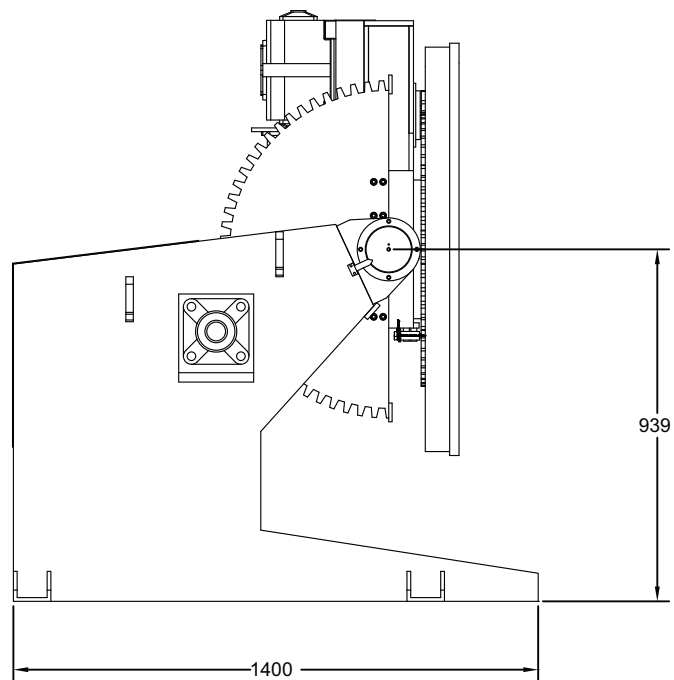
Item	Part No.	Part Name	Q`TY
1	EV2T-01	Table axis	1
2	EV2T-02	Front bearing	1
2-1	OD-10	Steel ball 10mm	82
3	EV2T-03	End bearing	1
3-1	OD-10	Steel ball 10mm	79
4	EV2T-04	End bearing cover	1
5	EV2T-05	Lock ring	1

EV3T-1-1



Item	Part No.	Part Name	Q'TY
1	EV3T-27	Ground seat	1
2	P1008-2	Carbon	4
3	P1008-3	Spring	4
4	T8-8	Terminal	4
5	WS8-D23	Washer	8
6	SWS8	Spring washer	4
7	IS-M8L20	Screw	4
8	EV3T-31	Bakelite bush	5

D.1 SIZE



UNIT:mm