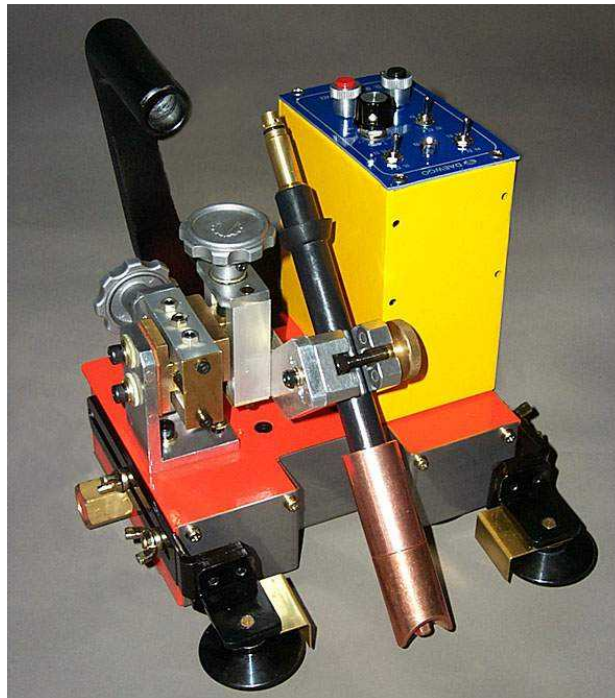


**【OPERATING MANUAL】**  
**CARRY AUTO MINI**  
**MODEL : SD-CA-MINI-4**



**MANUFACTURES, EXPORTERS & IMPORTERS**

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## 1. Specification

CLASS.	SPEC.	REMARK
NAME	Mini Auto Carriage	
MODEL	SD-CA-MINI-4	
DIMENSION	330mm(W)×230mm(L)×240mm(H)	
INPUT VOLT.	1Ø 110/220V 50/60Hz	
WELD. CURRENT	DC 50 ~ 500 Ampare	
TRAVEL SPEED	0 ~ 130 Cm/Min	
CARRIAGE WET.	7.5kg	
TRACTION POWER	15kgf	
DRIVING WHEEL	4-WHEEL DRIVING	
APPLICABLE PLATE	Fillet Joint , Butt Joint	
End Limit	PUSH BUTTON STICKED	
CONTROL METHOD	WELD/NOT WELD , FORWARD/BACKWARD , TRAVEL SPEED, STOP TRAVEL, START TRAVEL	
TORCH ADJ.	HORIZONTAL : 33mm VERTICAL: 33mm	
TORCH ANGLE	UP/DOWN : 45° ±15°, LEFT/RIGHT : 0° ±10°	
APPLICABLE ANGLE ADJ.	CURVE OVER 2000R, INCLINATION UNDER 25°	
APPLICABLE WIDTH	11mm	
GUIDE ROLLER HEIGHT ADJ.	10 - 70mm	
GUIDE ROLLER WIDTH ADJ.	60mm	
PLATE TO CARRIAGE BASE PLATER HEIGHT	6mm	
WELDING METHOD	CONTINUOUS, 1pole	
TORCH SPEC.	500Amp 5MR	
POWER CABLE	3C×1.5SQ 2CT×20MR	
TRAVEL MOTOR	DC 24V 4500RPM	
GEAR BOX	400 : 1	
Guide Roller	S45C 50Ø	

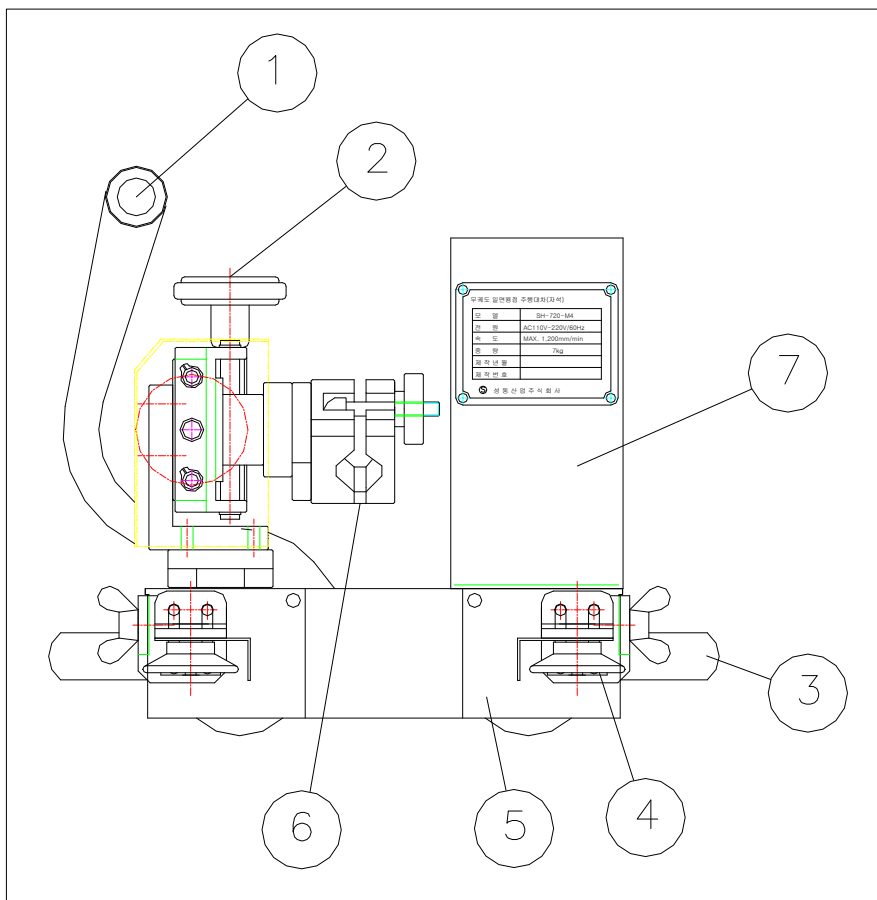
## 2. Characteristic

- 1) This carriage has built-in the magnet so can prevent being ditched.
- 2) This carriage has also built-in magnet on-off handle.
- 3) The weight of carriage is just 7.5kg so convenient to move.
- 4) This carriage can adjust the angle of torch.
- 5) This carriage uses AC220V.

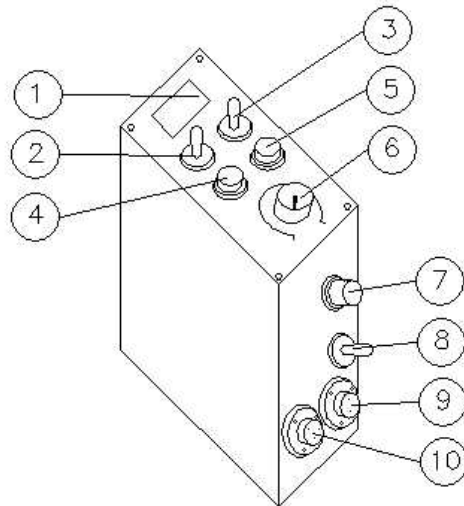
### 3. Part explanation & operating

#### 3-1. Part explanation

- ① Handle ----- Moving handle
- ② Slide ----- Torch forward/backward adjust
- ③ Limit S/W ----- Welding stop
- ④ Guide Roller ----- Prevent being ditched
- ⑤ Wheel Cover ----- Prevent spatter
- ⑥ Torch Clamp ----- Fixed torch body
- ⑦ Control Box ----- Operating panel



### 3-2. Control Box



- ① Speed Meter LCD
- ② Travel direction ..... Select the direction (left/right)
- ③ Weld / Not weld S/W ..... Select Weld to weld,  
not weld to move carriage
- ④ Welding start ..... Push to weld
- ⑤ Welding stop ..... Push to stop welding
- ⑥ Travel speed ..... Travel speed adjust 0~130(Cm/Min)
- ⑦ Fuse & Fuse Holder(2A)
- ⑧ Power S/W ..... Carriage power ON/OFF
- ⑨ Torch connector ..... Connection torch connector (2P, 16 ϕ )
- ⑩ Power connector ..... AC 220V power connector (3P, 16 ϕ )

### 3-3 Welding preparation & sequence

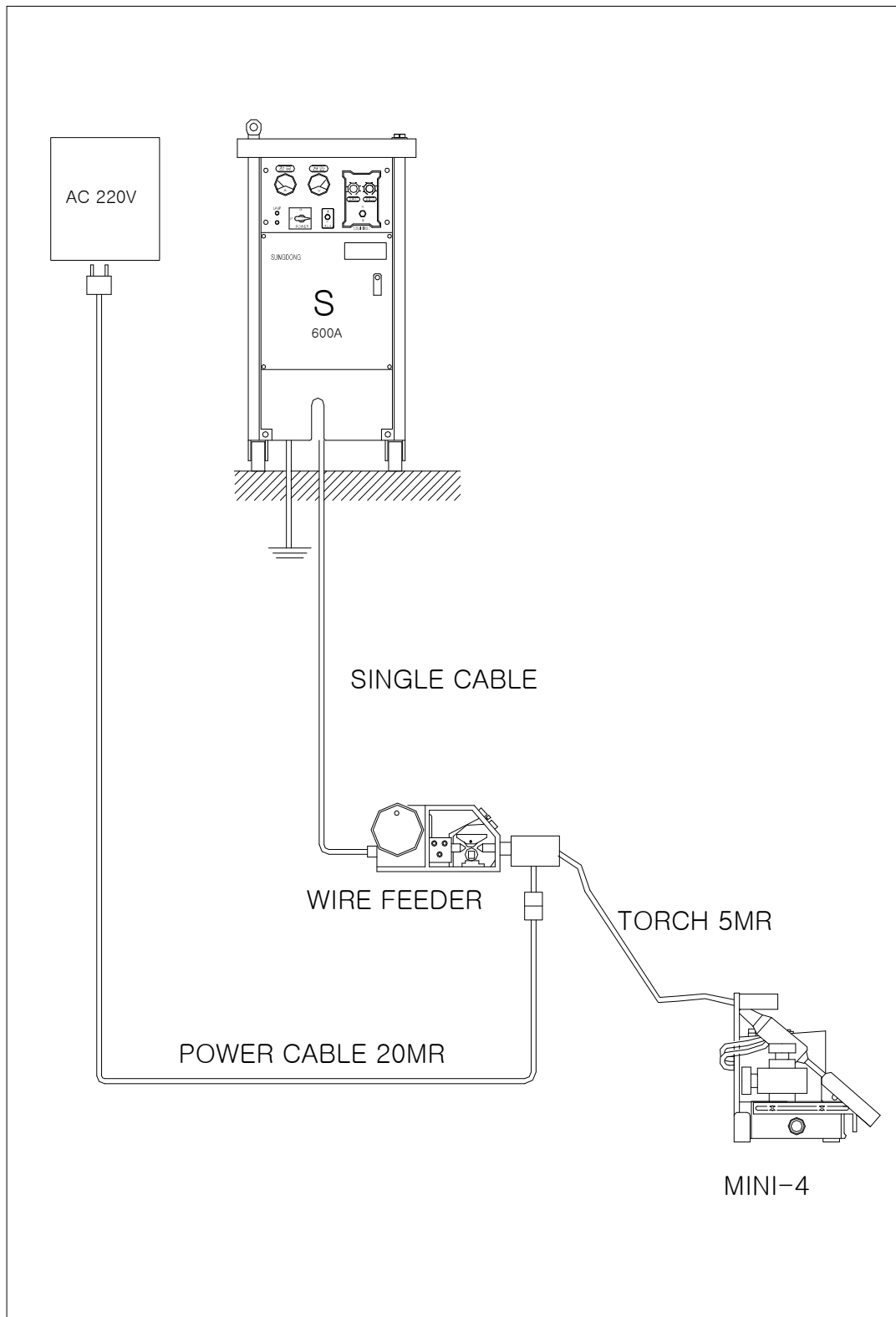
- ① To connect with power cable to the connector(2p, 16  $\phi$  ).
- ② To connect with torch cable to the connector(3p, 16  $\phi$  ).
- ③ To settle the torch body with torch clamp.
- ④ To connect with torch to the wire feeder.
- ⑤ To settle the wire with wire feeder spool.
- ⑥ To weld to adjust torch clamp.
- ⑦ To install the guide roller
- ⑧ Power Switch ON
- ⑨ To select NOT WELD s/w to move the carriage , control the travel speed.
- ⑩ Welding condition control with welding machine and wire feeder.
- ⑪ To push the start button
- ⑬ To push the stop button to stop the weld

### 3-4. Caution

- ① Before welding, remove the dust, spatter and so on.
- ② To install the torch body with torch clamp tightly to be not loosen.
- ③ Do not throw the carriage
- ④ After welding, clean the carriage



#### 4. External Connection



## 5. Check & maintenance

To use the carriage efficiently, please check the list as below:

### 5-1. Daily maintenance

- 1) Check the abrasion of the torch nozzle and tip.
- 2) Clean the guide roller and check the limit switch.

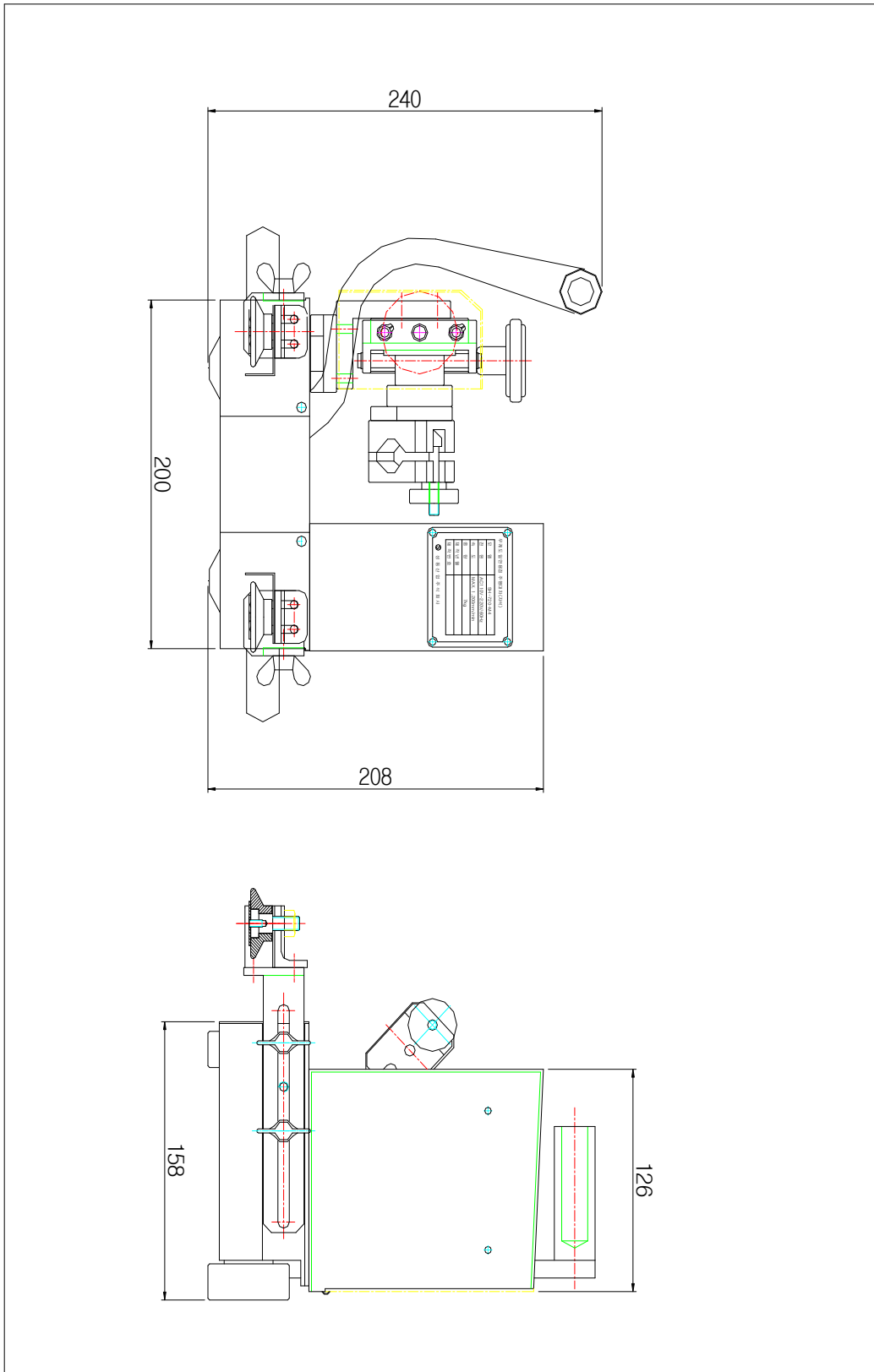
### 5-2. Weekly maintenance

- 1) Clean the wheel and switch.
- 2) Check the guide roller rotation.
- 3) Clean the base cover and spatter cover.

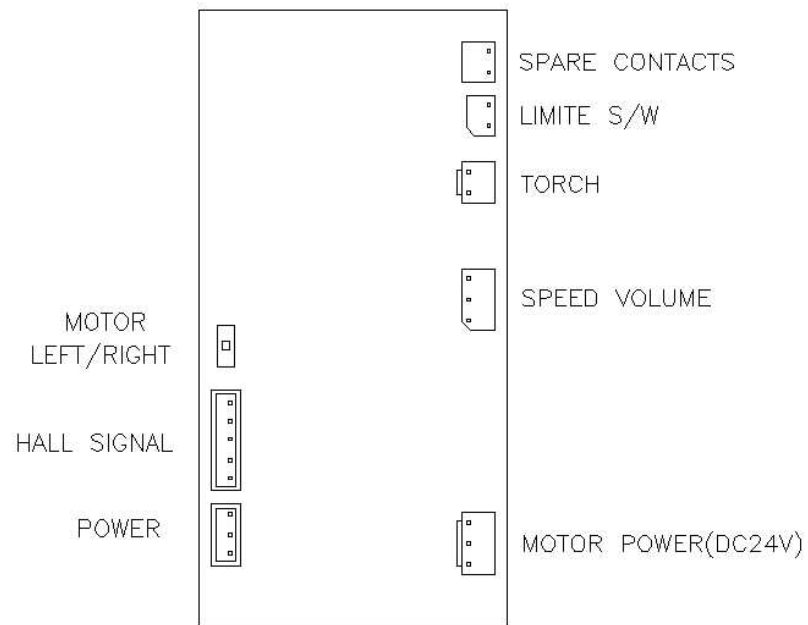
### 5-3. Monthly maintenance

- 1) Check the bolts and switch.
- 2) Check the motor & gear box.
- 3) Check the torch clamp & slide.
- 4) Check the magnet on/off.

## 6. Dimension



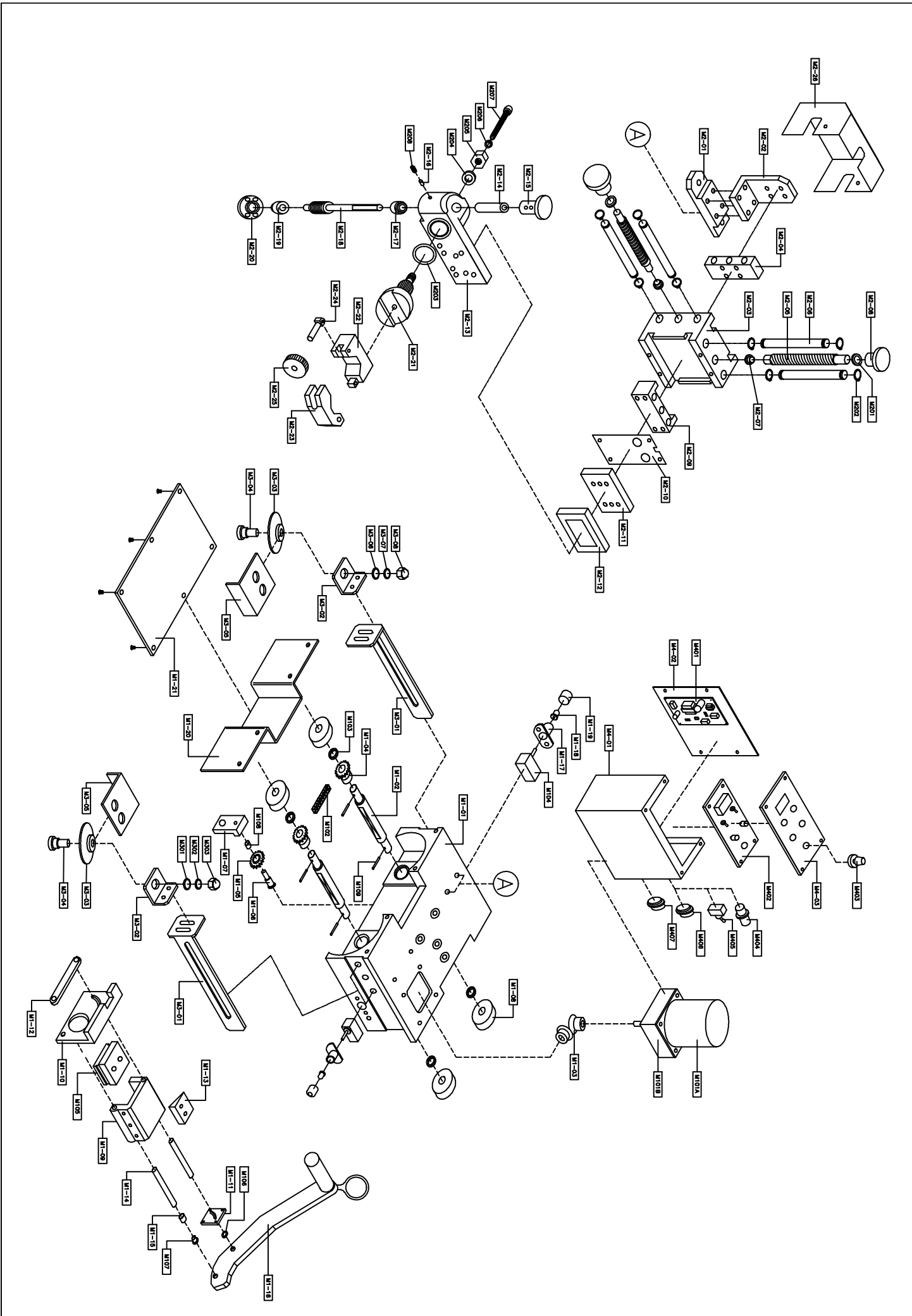
## 7. Electrical diagram



# MINI CARRIAGE PART LIST(SD-CA-MINI-IV)

PART No.	품 명	수 량	재질&규격	비 교
<b>BODY &amp; WHEEL ASS'Y</b>				
M1-01	BODY	EA	1	AL
M1-02	DRIVE SHAFT	EA	2	SUS
M1-03	DRIVING GEAR	SET	1	S45C
M1-04	SPROCKET	EA	2	S45C
M1-05	TENSION SPROCKET	EA	1	S45C
M1-06	TENSION BOLT	EA	1	S45C
M1-07	TENSION BRACKET	EA	1	SS41
M1-08	RUBBER WHEEL φ50	EA	4	RUBBER
M1-09	M/G SUPPORT HOUSING	EA	1	AL
M1-10	M/G GUIDE BRACKET	EA	1	AL
M1-11	M/G GUIDE	EA	1	SUS
M1-12	HANDLE PLATE	EA	1	AL
M1-13	M/G SUPPORT BLOCK	EA	1	SS41
M1-14	M/G SUPPORT BAR	EA	2	SUS
M1-15	SPACER φ12	EA	1	AL
M1-16	HANDLE	EA	1	AL
M1-17	LIMIT S/W CASE	EA	2	AL
M1-18	LIMIT S/W BALL	EA	2	AL
M1-19	LIMIT S/W COVER	EA	2	AL
M1-20	SPATER COVER	EA	1	SUS
M1-21	BASE COVER	EA	1	SUS
M101A	DC MOTOR	EA	1	
M101B	GEAR BOX	EA	1	
M102	CHAIN	EA	1	No.25
M103	BALL BEARING	EA	4	6900ZZ
M104	LIMIT S/W	EA	2	SM2011
M105	MAGNET	EA	1	50x60x25
M106	PLANE WASHER	EA	1	φ8. 2XO. 8T
M107	FDU BUSH(A)	EA	1	FDU0806
M108	DU BUSH(B)	EA	1	DU0806
M109	SPRING PIN	EA	4	φ3x20
<b>X-Y SLIDE ASS'Y</b>				
M2-01	SLIDE BRACKET -A	EA	1	AL
M2-02	SLIDE BRACKET - B	EA	1	AL
M2-03	SLIDE MAIN FRAME	EA	1	AL
M2-04	SLIDE BLOCK-A	EA	1	BS
M2-05	SLIDE SCREW SHAFT	EA	2	S45C
M2-06	SLIDE GUIDE SHAFT	EA	4	S45C
M2-07	SLIDE BUSHING	EA	2	BS
M2-08	SLIDE KNOB	EA	2	AL
M2-09	SLIDE BLOCK-B	EA	2	BS
M2-10	SLIDE COVER PLATE	EA	1	BS

PART No.	품 명	수 량	재 질	비 교
M2-11	SLIDE TORCH BLOCK-A	EA	1	MC
M2-12	SLIDE TORCH BLOCK-B	EA	1	MC
M2-13	SLIDE TORCH CLAMP PLATE	EA	1	AL
M2-14	SLIDE TORCH BUSHING	EA	1	SS41
M2-15	SLIDE TORCH KNOB	EA	1	AL
M2-16	SLIDE TORCH MC	EA	1	
M2-17	SLIDE TORCH BUSHING-A	EA	1	S45C
M2-18	SLIDE TORCH WORM SHAFT	EA	1	S45C
M2-19	SLIDE TORCH BUSHING-B	EA	1	S45C
M2-20	SLIDE TORCH COVER	EA	1	AL
M2-21	SLIDE TORCH WORM WHEEL	EA	1	S45C
M2-22	SLIDE TORCH CLAMP - A	EA	1	AL
M2-23	SLIDE TORCH CLAMP - B	EA	1	AL
M2-24	SLIDE TORCH CLAMP BOLT	EA	1	S45C
M2-25	SLIDE TORCH CLAMP HANDLE	EA	1	AL
M2-26	SLIDE COVER	EA	1	SS41
M201	SLIDE WASHER	EA	2	φ8
M202	SLIDE "E" SNAP RING	EA	4	φ8
M203	SLIDE TORCH O-RING	EA	1	P25
M204	SLIDE TORCH WASHER	EA	1	
M205	SLIDE TORCH NUT	EA	1	M6
M206	SLIDE TORCH SPRING WASHER	EA	1	M6
M207	SLIDE TORCH BOLT	EA	1	M6
M208	SLIDE TORCH SET SCREW	EA	1	M6
<b>GUIDE ROLLER ASS'Y</b>				
M3-01	GUIDE ARM	EA	2	SS41
M3-02	GUIDE BRACKET	EA	2	SS41
M3-03	GUIDE ROLLER	EA	2	
M3-04	ROLLER BOLT	EA	2	SS41
M3-05	ROLLER COVER	EA	2	BS
M3-06	PLANE WASHER	EA	2	M8
M3-07	SPRING WASHER	EA	2	M8
M3-08	CAP NUT	EA	2	M8
<b>CONTROL BOX ASS'Y</b>				
M4-1	CONTROL BOX	EA	1	SS41
M4-2	CONTROL BOX COVER	EA	1	SS41
M4-3	NAME PLATE	EA	1	SS41
M401	P.C.B UNIT	EA	1	WS-DC24V3A
M402	P.C.B UNIT	EA	1	ROBOT100
M403	SDEED V/R & KNOB	EA	1	RV24YN20S
M404	FUSE	EA	1	F8303
M405	POWER TOGGLE S/W	EA	1	WJT-2203S
M406	TORCH CONNECTOR	EA	1	16-2P
M407	POWER CONNECTOR	EA	1	16-3P



9. Torch & power cable specification

