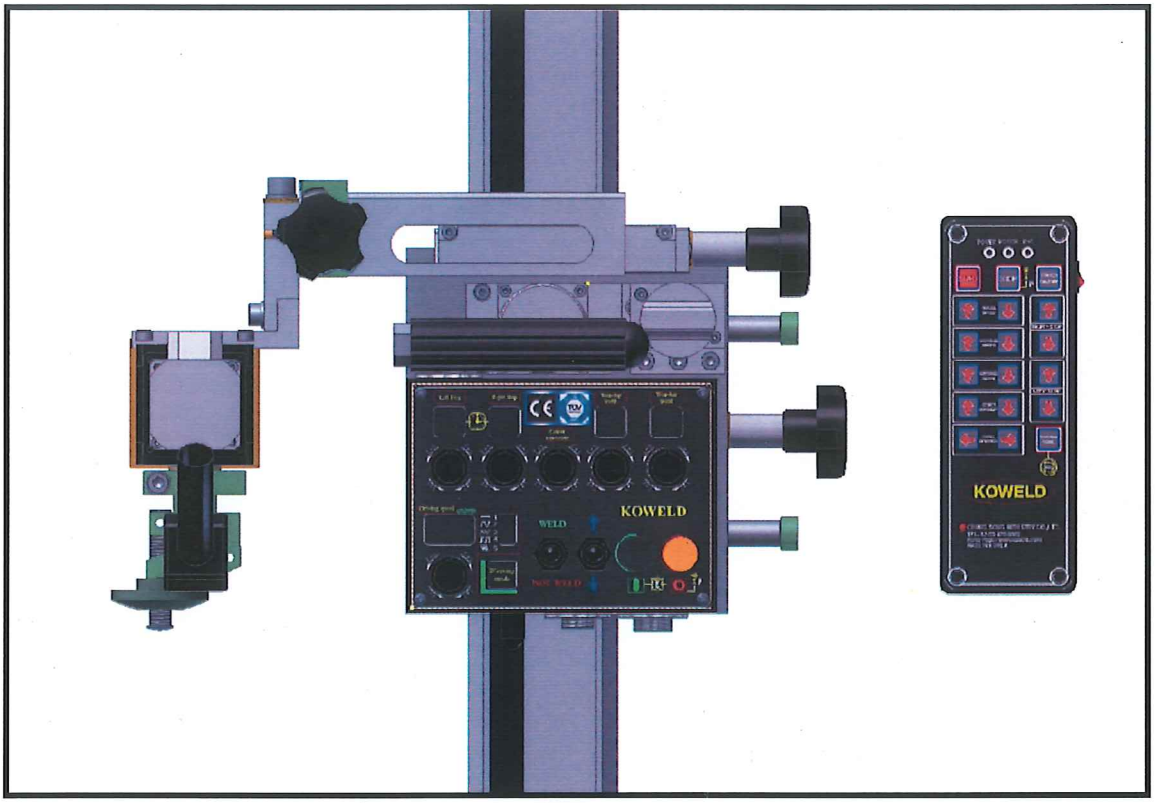
REV:1	2011-12-19

CS-100C USER MANUAL



KOWELD

CHUNG SONG INDUSTRY CO., LTD.

MADE IN KOREA

T) +82-55-329-9500 F) +82-55-329-9505 MAIL) koweld@koweld.co.kr Http://www.koweld.co.kr

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1) OUTLINE and CHARACTERISTICS

CS-100C TYPE CARRIAGE is a rail-running type Welding Equipment that adopted RACK & PINION driving method, which is applied to every fields such as general FILLET, and BUTT Welding and the welding is also possible in any posture as it can be applied for multi-purposes.

CS-100C TYPE is an integrated Equipment of Driving Body, Weaving Equipment, and Remote Controller and Operation Control Board, and it welds while driving on the rail that can be attached and detached. It is easy to carry and convenient to use because of its small size · light weight, and at time of VERTICAL Welding which requires an skilled engineer of High Function, it can increase the productivity and reduce the welding cost.

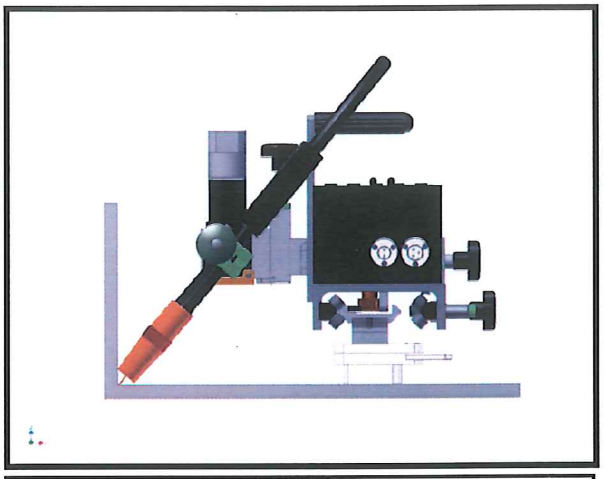
- CHARACTERISTICS -

1. Manual transmission on the rail is possible as there is a function of Clutch ON/OFF of the Power Transmission Equipment.
2. All the Operation Functions are made for the convenient Use of the Users.
3. In order to prevent the phenomenons of the Lack of Penetration, and Undercut at time of welding , while being weaved, there is a Function of Right Stop and Left Stop (DWELL TIME).
4. Rail is easy to move due to the small size · light weight, and MAGNET is convenient to use for the Detachment · Attachment and Setting of Welding by use of MAG SWITCH(MAGNET ON/OFF).
5. Driving Speed, Weaving Speed, Width of Weaving, Left Stop, Right Stop etc. are precisely controlled in Digital method.
6. It is convenient to set, as Weaving Function starts and ends at the MIDPOINT.

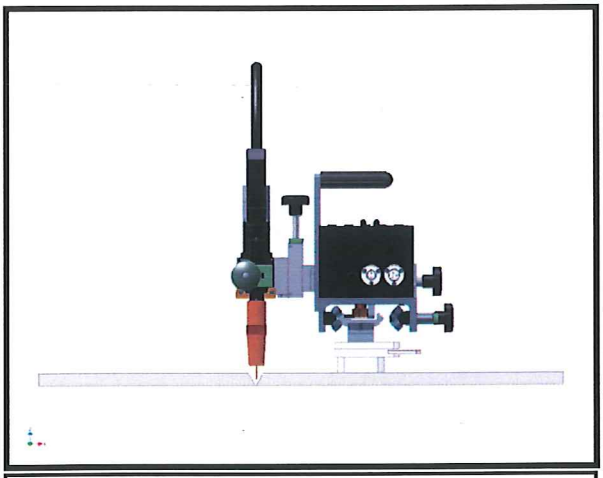
2) APPLIED MATERIALS SHAPE and POSTURE

* APPLIED MATERIALS SHAPE

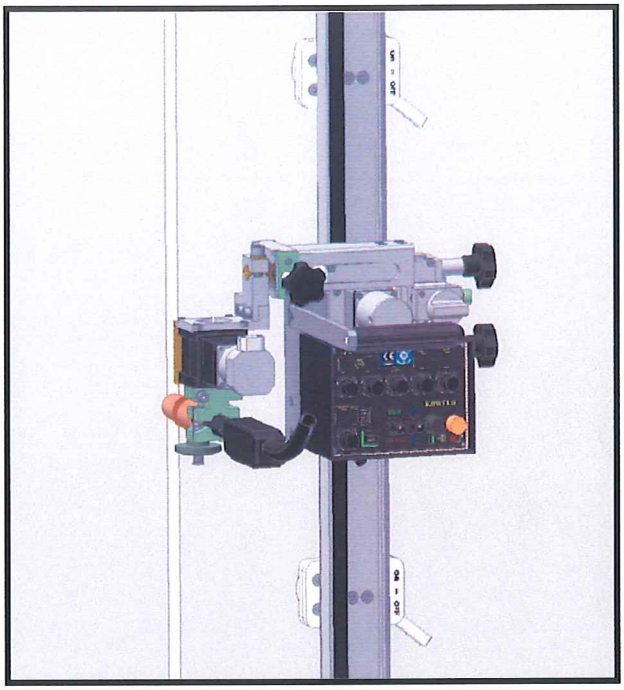
- Generally, it is applied to various Weldings of HORIZONTAL, DOWN and VERTICAL for both BUTT and FILLET Welding.



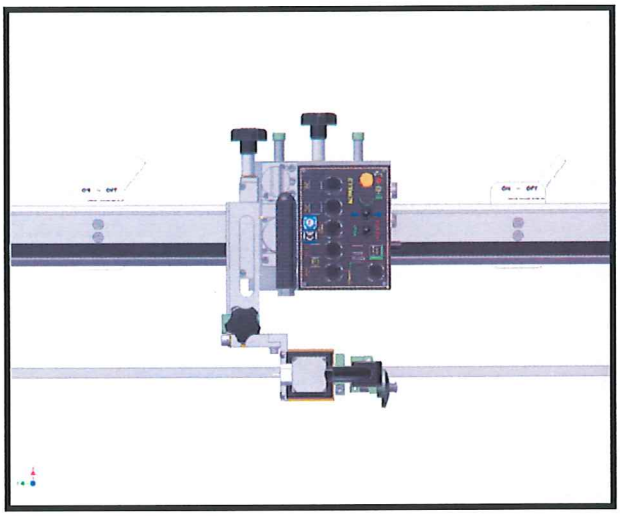
Fillet



Butt



Vertical

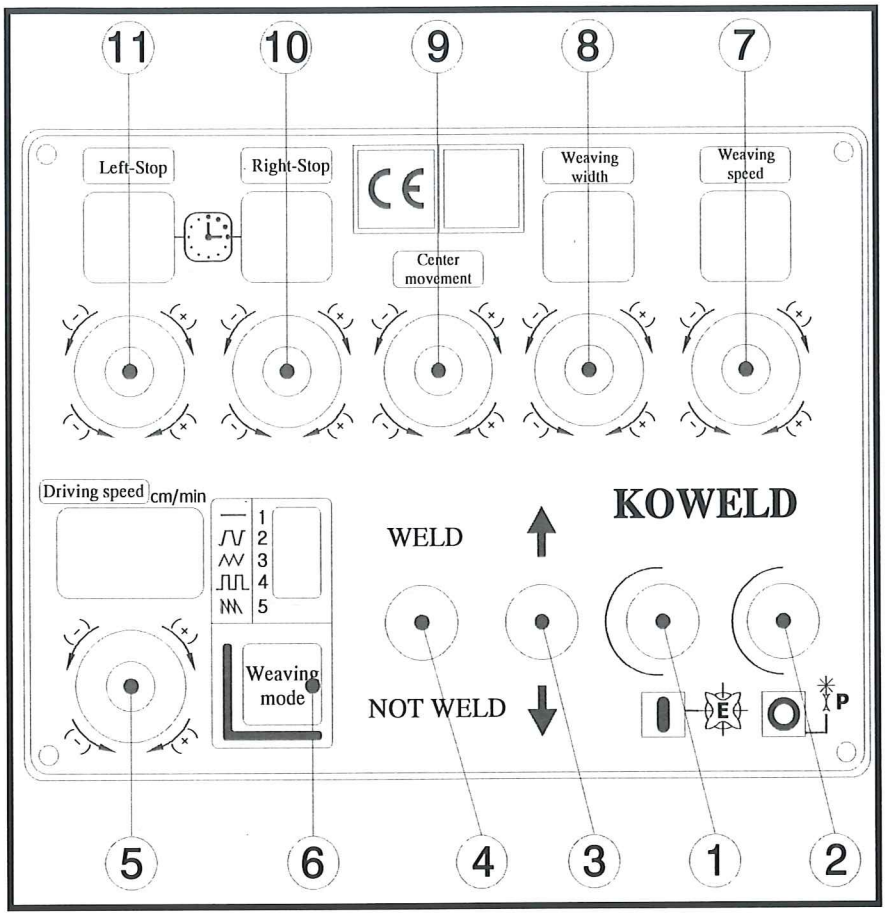


Horizontal

3) MAIN SPECIFICATIONS

Division	Configuration	Unit	Specification	Remarks
GENERAL	Model	Set	CS-100C	Carriage
	Size (WxLxH)	mm	340W) X 209(L) X 241(H)	-
	Weight	Kg	6.8 Kg	-
BODY	BODY	-	Material : AL6061	-
	Driving Motor	-	DC24V, 12W, 5000 RPM	DC Brushless motor
	Gear Ratio	-	400 : 1	-
	Driving Method	-	RACK-PINION GEAR-MOTOR Driving	-
	Input Power	-	AC 100~240V , 50-60Hz	-
	Driving Speed	cm/min	0~88 cm/min,0~ 34.7 in/min	-
X-SLIDE	STROKE	mm	60mm±5%	-
Z-SLIDE	STROKE	mm	40mm±5%	-
BODY CONTROL		-	Start, Stop,Driving Speed Adjust, Direction Change,Welding/Non-Welding,	-
WEAVER	Weaving MOTOR	-	DC24V, 12W, 5000 RPM	DC Brushless motor
	Reduction Gear Ratio		1000 : 1	-
	Weaving Width		0 ~ 360°	-
	Weaving Speed		0 ~ 5 rpm/min	-
	Weight Shift		0 ~ 360°	-
	Weaving Method			-
	Left Stop/Right Stop		0.0 ~ 9.9 (sec)	-
RAIL	Magnet	-	ND Magnet Detachment Attachment ON/OFF	Mag switch
	Material		AL6N01 (Rack Gear attached)	-
	Length		1.5 M,3-MAGNET ON/OFF	5.4kg
OTHER	Standard Supply Scope Composed Items for Equipment Warehousing	-	1.CARRIAGE /REMOTE CONTROLLER	1PC
			2.MINI RAIL 1.5M,3-MAGNET ON/OFF	1PC
			3.POWER CABLE 1.0SQ*3C*30M	1PC
			4.WEAVING CABLE	1EA
			5.WRENCH	1SET
			6.FUSE 2A	2PCS
			7.CONNECTOR 1-POWER 1-TORCH	2PCS
			8.USER MANUAL	1EA

4) CONTROL PANEL OPERATION EXPLANATION



① DRIVING START BUTTON

CARRIAGE starts operation, if BUTTON is pressed.

② DRIVING END BUTTON

All operations of CARRIAGE stop, if DRIVING END BUTTON is pressed during the operation of CARRIAGE.

③ UPWARD/DOWNWARD SELECTION SWITCH

This is a SWITCH to select the Driving Direction of the CARRIAGE.

CARRIAGE drives to upward direction if CARRIAGE is operarted after SWITCH is set to upward direction, and drives to downward direction if CARRIAGE is operated after SWITCH is set to downward direction.

④ WELDING/NON-WELDING SELECTION SWITCH

This is the WELDING/NON-WELDING SELECTION SWITHCH of theTORCH.

⑤ DRIVING SPEED ADJUSTMENT VOLUME

This is a VOLUME to adjust the DRIVING SPEED of the CARRIAGE.

DRIVING SPEED of the CARRIAGE becomes faster if VOLUME is turned clockwise.

⑥ WEAVING SELECTION BUTTON-In case Weaving Mode is needed to change

This is a BUTTON to select the kinds of WEAVING of the Torch.

If WEAVING SELECTION BUTTON is pushed to select 5 kinds of WEAVING MODE after DRIVING SPEED VOLUME is pushed to be changed into WEAVING SELECTION MODE, Welding is available in selected WEAVING PATTERN.

⑦ WEAVING SPEED ADJUSTMENT VOLUME

This ia a VOLUME to adjust the WEAVING SPEED of the Torch.

The WEAVING SPEED becomes faster if VOLUME is turned clockwise.

⑧ WEAVING WIDTH ADJUSTMENT VOLUME

This is a VOLUME to adjust the WEAVING WIDTH of the Torch

The WEAVING WIDTH of the Torch is widened if VOLUME is turned clockwise.

⑨ TORCH POSITION ADJUSTMENT VOLUME

This is an ADJUSTMENT VOLUME to move the MIDPOINT of the WEAVING of the Torch

The MIDPOINT of the WEAVING is shifted to the right direction if VOLUME is turned clockwise, and to the left direction if VOLUME is turned counter-clockwise.

⑩ RIGHT STOP TIME ADJUSTMENT VOLUME

This is a VOLUME to adjust the STOP TIME of the WEAVING OPERATION at the right end.

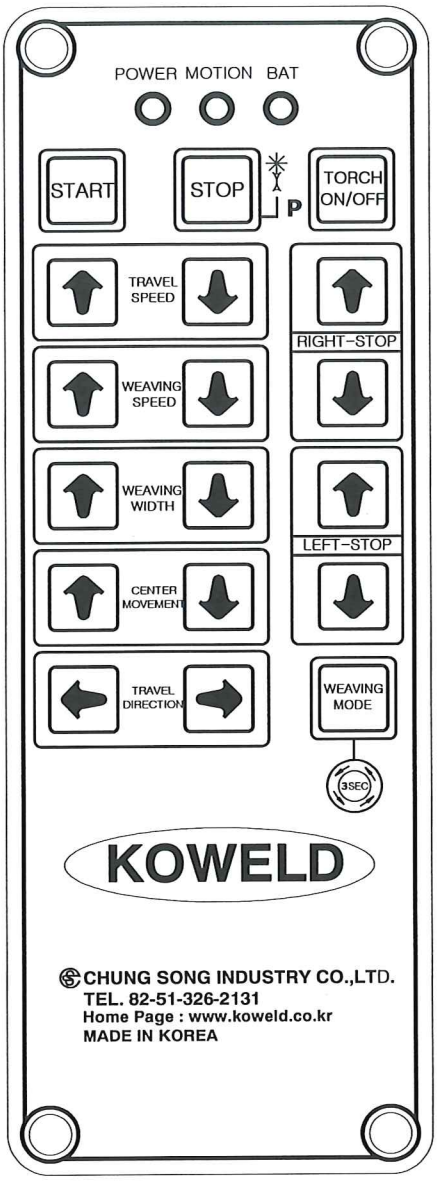
Adjusting range is 0 ~ 5 sec, and STOP TIME is prolonged if VOLUME is turned clockwise.

⑪ LEFT STOP TIME ADJUSTMENT VOLUME

This is a VOLUME to adjust the STOP TIME of the WEAVING OPERATION at the left end.

Adjusting range is 0 ~ 5 sec, and STOP TIME is prolonged if VOLUME is turned clockwise.

4-1) REMOTE CONTROLER



※ Same as the function of CONTROL PANEL

※ Tip) While pressing of travel speed button for 3 seconds, the carraige travels selected direction with high speed.

(When welding finshes it is easy to move down direction with high speed)

- Welding Selection Switch does not work.
- Driving Direction Swift Switch does not work.

4-2) CS-100C PARAMETER SETTING

****Only allowed the M/C operating after review this text first**

1.Setting Sequence: While presseing the Start Button(), Plug in the power cord.
2.Then No(0) is displaying on the FND at the Left Stop.
3.Whenever pressing Start Button( ), the fig. varies the No(n0~nd).
4.When Travel Button Volume turns to Right direction then it becomes plus(+),
and turns to Left direction it becomes minus(-) then the value can be changed.

CS-100C Parameter setting at KOWELD				
No.	Descriptions	Set range	Base fig. set at Koweld	Unit
n.0	Start vreate time	0.0 ~ 9.9	0	s
n.1	Stop create time	0.0 ~ 9.9	0.3	s
n.2	Weaving speed center return back	10 ~ 99	70	%
n.3	Max. weaving width	0 ~ 90	4	Degree
n.4	Center moving width	-	360	Degree
n.5	Variation value of center mov'ment	1 ~ 60	2	pulse
n.6	Variation value of Travel speed	0.1, 1.0, 2.0, 2.5, 5.0, 10.0	1.0	cm/min, in/min
n.7	Variation speed data, signed	1 ~ 7	7	
n.8	Auto stop time	0.0 ~ 9.9	0	s
n.9	Travel motor reducing ratio	20 ~ 200	40	Base fig. 10: 1
n.a	Weaving motor reducing ratio	20 ~ 200	100	Base fig. 10: 1
n.b	Travel gear PCD	0.0 ~ 99.9	22.5	mm
n.c	Show mode at show	off/ on	off	NOT APPLY
n.d	Speed unit of travel	U-1(cm/min), U-2(in/min)	U-2(in/min)	cm/min, in/min

5.The values will be saved when the power cord dis-pluged.

6. Converting Sequence: in/min -> cm/min, cm/min -> in/min

1)While pressing Start Button, connect the power cord.
2)Left Stop FND will show No(n0).
3)Whenever pressing Start Button(), the No(n0~nd) vary.
4)Press Start Button(), the No shall be placed nd postion.
5)When travel volume turnes to Right or Left direction, then can change U-1 or U-2 value.
U-1(cm/min), U-2(in/min)
6)The value will be saved after when discnnect the power cord.

7. Remote controller setting

1)Wireless remote controller is set while pressing Stop Button and connect the power cord, then ready to communicate between the M/C and remote controller.

2)The communication starts between the M/C and Remote controller while pressing Stop Button on the remote controller with the Power switch On. Then realted communication will start.

5) INSTALLATION AND OPERATION

(1) WELDING PREPARATION

- At first, tools for WELDING such as POWER SOURCE and WIRE FEEDER are needed.
- Welding Power Source (3Φ 440,380,220V AC) for the Driving and Control of CS-100C TYPE is needed.
- CO_2 Gas Tank for Welding is needed.
- TORCH for CO_2 Auto Welding is needed.
- Basic Preparation Tools of Welding Works are basically needed.

(2) CONNECTING METHOD of CARRIAGE

- WELDING TORCH CONDUIT CABLE of AUTO CARRIAGE should be connected to the WIRE FEEDER.
- CONNECTOR for TORCH S/W which come out of the WELDING TORCH should be connected to the MAIN CABLE CONNECTOR of the BODY.
- CONTROL CABLE should be connected to the CONTROL BOX CONNECTOR of the BODY. (OPTION)
- CONTROL POWER SOURCE CABLE should be connected to the POWER SOURCE

(3) WELDING PROCESS

- Switch ON the PRIMARY SIDE DISTRIBUTION BOARD of WELDING POWER SOURCE.
- Switch ON the CONTROL POWER SOURCE of FRONT PANEL of WELDING POWER SOURCE.
- Equip the WIRE FEEDER with WIRE, and feed it to the end of TORCH.
- Set the RAIL at the WELDING Position.
- Set the AUTO CARRIAGE at the WELDIING START POINT.
- Adjust the Target Angle and Position of the TORCH with the TORCH ADJUSTMENT SLIDER. (Fine Adjustment of the Angle and Position is possible with Screw Type.)
- Adjust the Desired WEAVING WIDTH.
- Select the Desired DWELL TIME.
- Set the Welding Condition that should be fit for a Work to the CARRIAGE.
- Check if CO_2 Gas is properly Supplied.
- Start Welding Work.

  (Start the Welding Work by pressing the ①Driving Start BUTTON after switching ON the Welding Selection Switch ④of the Control Board.)
- Press the STOP BUTTON Switch ② if Welding Work of the Materials is finished.
- Confirm the Welding End.

6) Maintenance and checking

- The auto carriage should be regularly maintained and repaired to use it safely for a long time.

1. Is there much dust on the control panel?

→ Control box, torch adjustment switch should be kept clean, and wipe floating matters off. Be sure to clean around control box.

2. Aren't deposits stuck to?

→ Remove deposits and sputters from tip, nozzle, guide roller, driving wheels, magnets and slide adjustment part. They may cause problems for travelling carriage safely.

3. Are the screws in torch clamps and guide rollers loose?

→ The loose screws may cause bad travelling or uneven bead, and therefore all the screws should be tightened. Especially, floating matters such as dust should be wiped off well.

4. Isn't there any damage on connecter, power cable, and torch cable?

→ Check if connectors are loosely connected or damaged. Or, are cable, hose, and torch disconnected or damaged.

5. Isn't there any abnormal noise or overheating?

→ Check the wheel, motor, and welding torch.

7) Breakdown and measures

: If there is any problems with auto carriage, check instructions as follows.

1. Power display light of CONTROL BOX is not turned on.

Cause	Repair measure
Bad control cable (disconnection)	CABLE change(connection)
Control box fuse disconnection	fuse change (if it still makes troubles, contact After-sales team)

2. ARC is not generated, though welding button is pressed.

Cause	Repair measure
Non-welding is selected on welding/non-welding switch	Selected welding
Loose contact of wire	Remove slag(check earthing)
Bad welding start button	Check and repair the button, wiring. Check if stop sensor works.

3. Carriage does not travel, though welding start button is pressed.

Cause	Repair measure
	Check and repair motor driving part
Bad welding start button switch	Check and repair the button, wiring. Check if stop sensor works
Bad main PCB	change, refer to After sales service.

4. Torch targets wrong position.

Cause	Repair measure
Targeting position of torch clamp is loose	Check and tighten screws and change them, if damaged.

5. Slide is hard to adjust

Cause	Repair measure
Deposits or dust are on slide part	Clean slide part and spread around oil

6. Carriage stops during automatic welding.

Cause	Repair measure
Carriage has obstacles in the rail	Remove obstacles(stop sensor operation)

7. ARC does not disappears, even though stop switch is pressed.

Cause	Repair measure
bad welding stop button switch	check the switch and change it with a new one
The switch on welding machine is on mode	change the crater switch to off mode

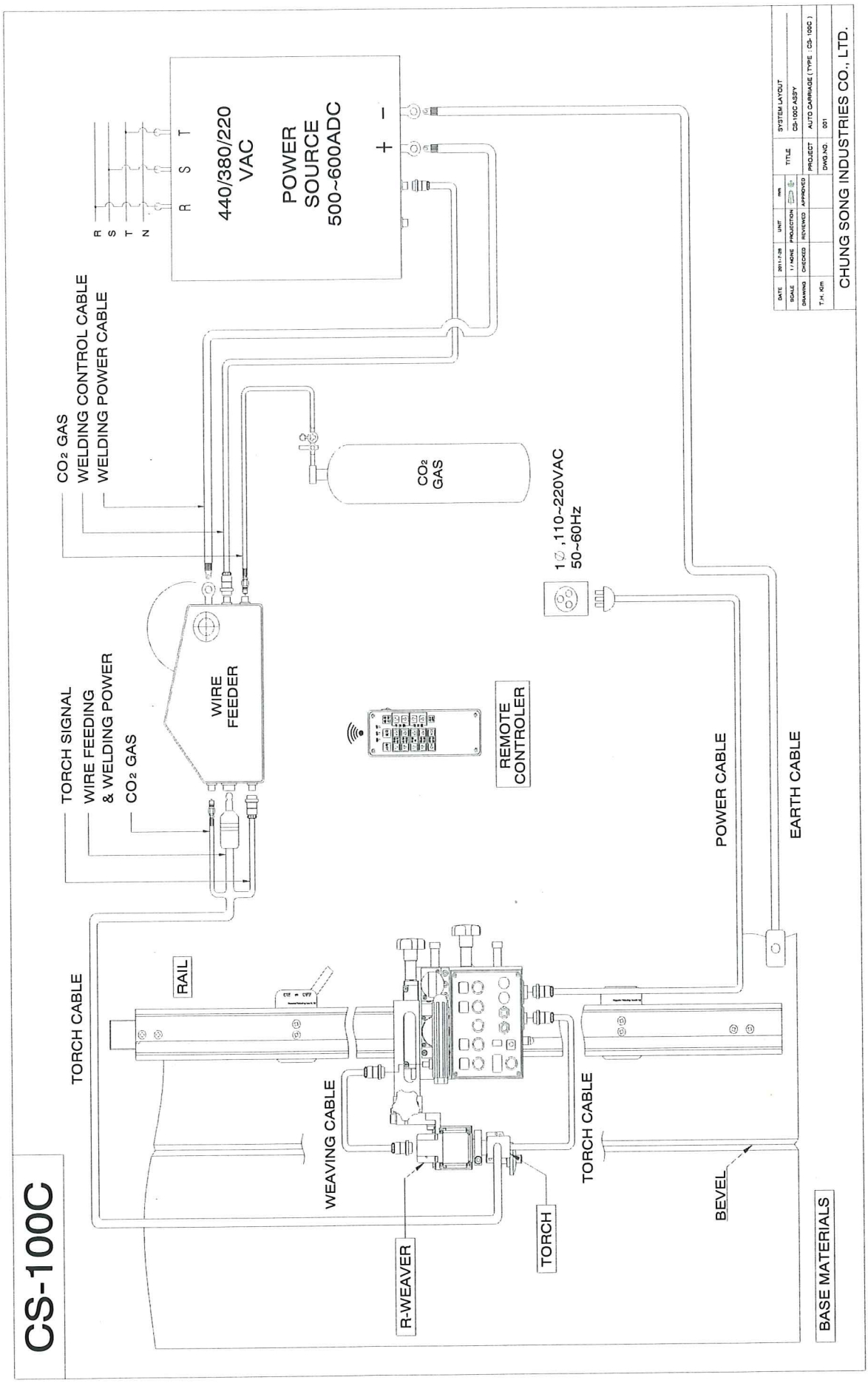
8) Part List

CS	NO.	DESCRIPTION	EA	MAT'	REMARK
BODY ASS'Y(CS-100C-MB-03)					
100C	01	BODY BASE	1	AL6061	150*170*50
100C	03	MOTOR BASE PLATE	1	AL6061	
100C	04	DU BUSH	2	STEEL	
100C	05	CLUTCH SHAFT	1	S45C	
100C	07	CLUTCH HOUSING	1	AL6061	
100C	08	CLUTCH BASE BRACKET	1	AL6061	
100C	09	CLUTCH KNOB	1	AL6061	
100C	10	MOTOR BASE BRACKET	1	AL6061	
100C	11	CLUTCH BRACKET	1	AL6061	
100C	16	BODY GUIDE BRACKET	1	AL6061	
100C	23	BOLT COVER	2	AL6N01	L25
5	04	GRIP COVER	1	RUBBER	
7	26	GRIP BRACKET	1	AL6061	8T,L205
7	27	GRIP	1	SS400	
BLDC	MOT01	DC BRUSHLESS MOTOR	2	-	12W,5000RPM
BLDC	RC05	GEARD MOTOR	1	STEEL	400:1 ⌀8
GSUB	242	DU BUSH-08	1	S70C	DB0806-15F
GSUB	596	DU BUSH-12	2	S70C	DB1208-20F
M-EG	02	GUIDE BRA-1	1	AL6061	L160
M-EG	04	GUIDE BRA-2	2	AL6061	L40
M-EG	05	GUIDE BAR PLATE	1	AL6061	2-L-TAP
M-EG	08	GUIDE SHAFT	2	S45C	⌀12-L40
M-EG	15	GUIDE SHAFT BUSH	2	AL6061	⌀15
M-EG	24	KNOB SHAFT	1	S45C	2-L-TAP,L80
M-EG	28	ROLLER	8	SCM440	JMC-CF6VUU
M-EG	88	CLUTCH SPRING	1	SP	⌀1.2-L30
V-UP	09	SPUR GEAR	1	S45C	M1.5 / Z15
5	HD	KNOB	1	PLASTIC	
GCON	1014	WEAVING CONNECTOR	1	SUS	SCK-16-6R
XZ-SLIDE ASS'Y(CS-100C-XZ-03)					
100C	18	X-SLIDE FIX BRACKET-REVERSE	1	AL6061	
100C	19	X-SLIDE_FLANGE	1	AL6N01	L111
100C	43	SLIDE BOLT	1	S45C	2-L-TAP, L147

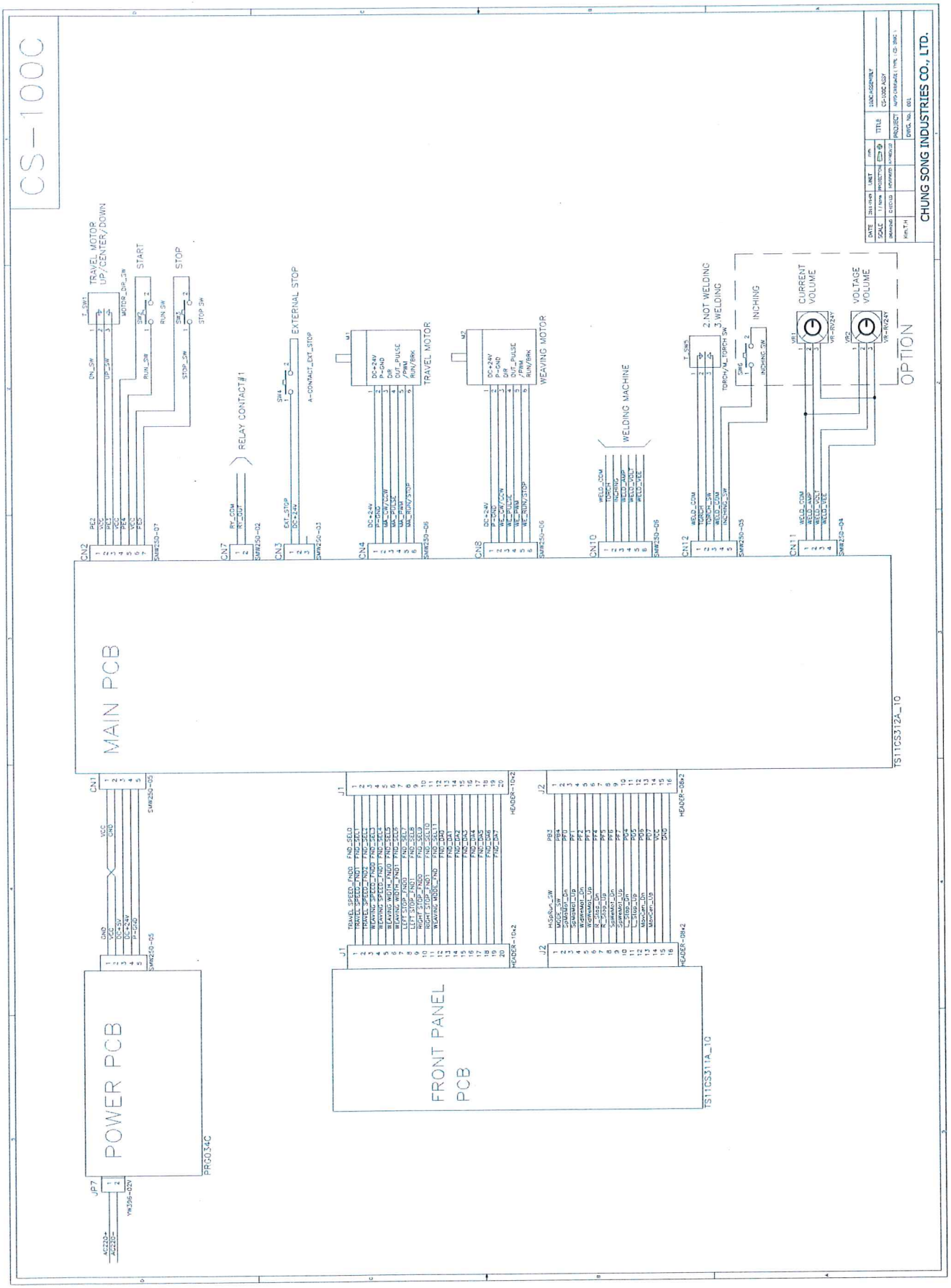
CS	NO.	DESCRIPTION	EA	MAT'	REMARK
100C	44	X-SLIDE BAR	2	S45C	L105
M-EG	72	SLIDE_SUPPORT	1	AL6061	2-L-TAP
100C	33	Z-SLIDE_FLANGE	1	AL6061	L80
100C	34	Z-SLIDE BOLT(L)	1	S45C	2-L-TAP, L123
100C	35	Z-SLIDE BOLT COVER	1	AL6061	L35
100C	36	Z-SLIDE BAR	2	SS400	L77
100C	37	Z-SLIDE_COVER	1	AL6061	
100C	48	Y-SLIDE_BRACKET(REV)	2	AL6061	
7	30	SLIDE SUPPORT	1	AL6061	2-L-TAP
7	54	Y-SLIDE BRACKET	2	STEEL	
5	HD	KNOB	2	PLASTIC	
TORCH CLAMP ASS'Y(COM51100TC)					
5	35	TORCH CLAMP(U)	1	AL6N01	
5	36	CLAMP FIXED BOLT	1	S45C	L56
5	37	CLAMP FIXED KNOB	1	AL6061	
5WB	63	TORCH CLAMP(L)	1	AL6N01	
R-WEAVING ASS'Y(CS-100C-RW-03)					
100C	25	WEAVING BRACKET	1	AL6061	
100C	26	WEAVING SLIDE CLAMP	1	AL6061	
100C	49	CONNECTOR BRK	2	AL6061	
100C	50	MOTOR CASE	1	AL6061	
100C	50-1	MOTOR CASE-1	1	AL6061	
601	W06	WEAVING SPATTER COVER	1	B.S	
7	36	BUSH	1	BAKELITE	⌀15
GCON	1014	WEAVING CONNECTOR	1	SUS	SCK-16-6R
CONTROL PANEL ASS'Y(CS-100C-CP-03)					
100C	24	MAIN PCB	1	-	
100C	06	PANEL	1	STEEL	
7WC	CB03	POWER PCB	1	-	
7WC	CB04	NAME PANEL	1	AL	
7WC	CB05	NAME PCB	1	-	
GCON	1006	POWER CONNECTOR	1	-	SCK-20-3R
GCON	1014	WEAVING CONNECTOR	1	SUS	SCK-16-6R
GCON	1016	TORCH CONNECTOR	1	-	SCK-16-2R
GE	1003	FUSE	1	PLASTIC	

CS	NO.	DESCRIPTION	EA	MAT'	REMARK
GE	1080	PUSH BUTTON COVER(BS)	2	B.S	
GE	1090	VOLUME KNOB	6	PLASTIC	
GE	1108	TOGGLE SWITCH COVER	2	RUBBER	
GE	1092	WJT-3203	2	-	WJT-3203
GE	1096	SP 103C	2	PLASTIC	SP-103C
GSUB	742	PUSH BUTTON COVER-1	2	RUBBER	BLACK
REMOTE CONTROL ASS'Y(COM51100RC)					
100C	12	REMOTE STICKER	1	AL	
RM	01	PANEL CASE	1	PLASTIC	
RM	02	NAME PANEL	1	AL	
RM	03	MAIN P.C.B	1	PLASTIC	
RM	04	BATTERY	1	-	
RM	05	SWITCH	1	PLASTIC	
RM	06	MAGNET	2	-	59X50X2
RAIL ASS'Y(COM51100RA)					
EGW	116	RAIL RACK GEAR	1	SS400	M 1.5
MAG	01	MAGSWITCH	3	-	
MAG	02	RAIL BRACKET_2	3	AL6061	
N1_EGW	01	RAIL	1	AL6061	
N1_EGW	02	RAIL FIXED BRACKET	1	AL6061	

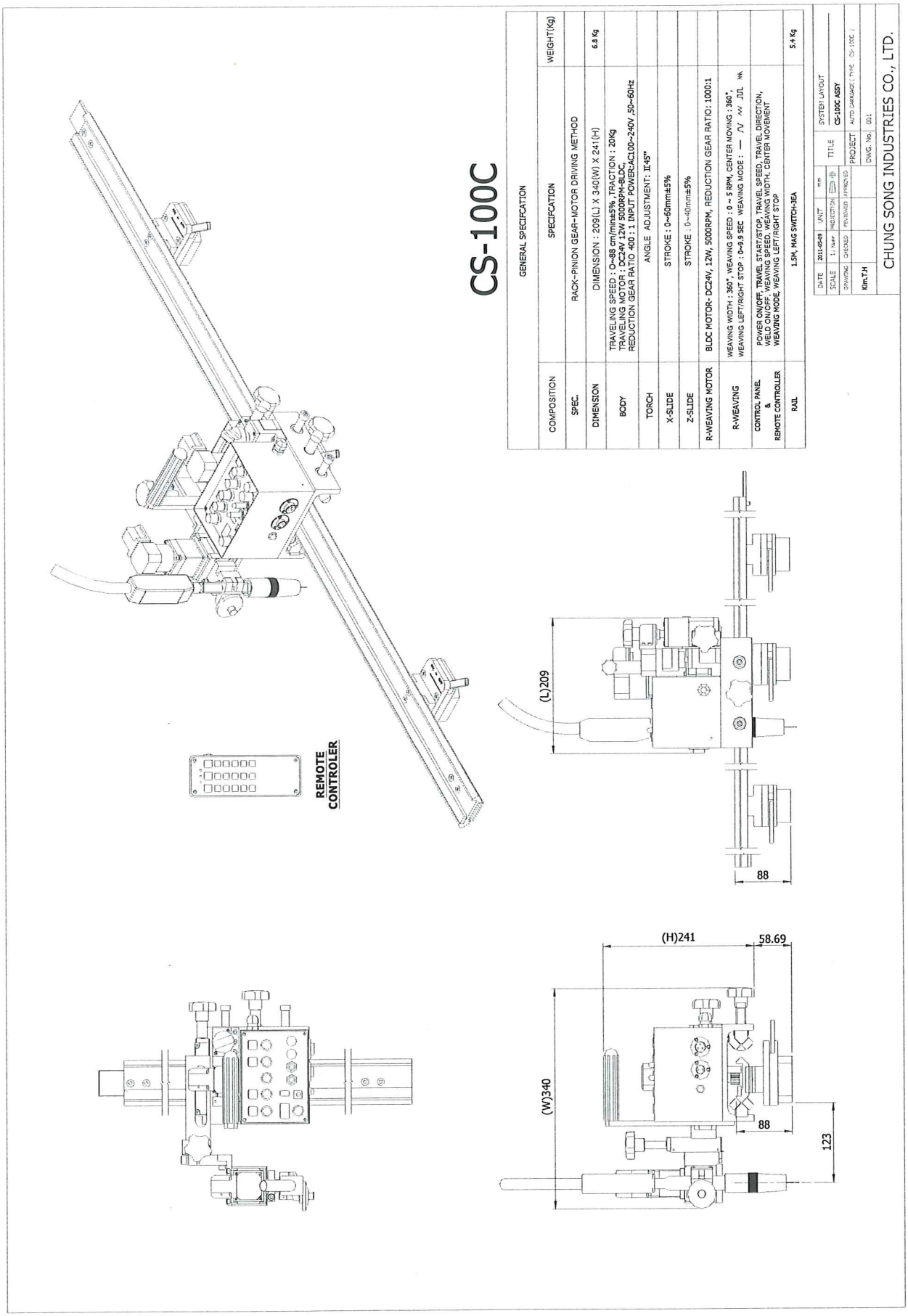
9) Block diagram



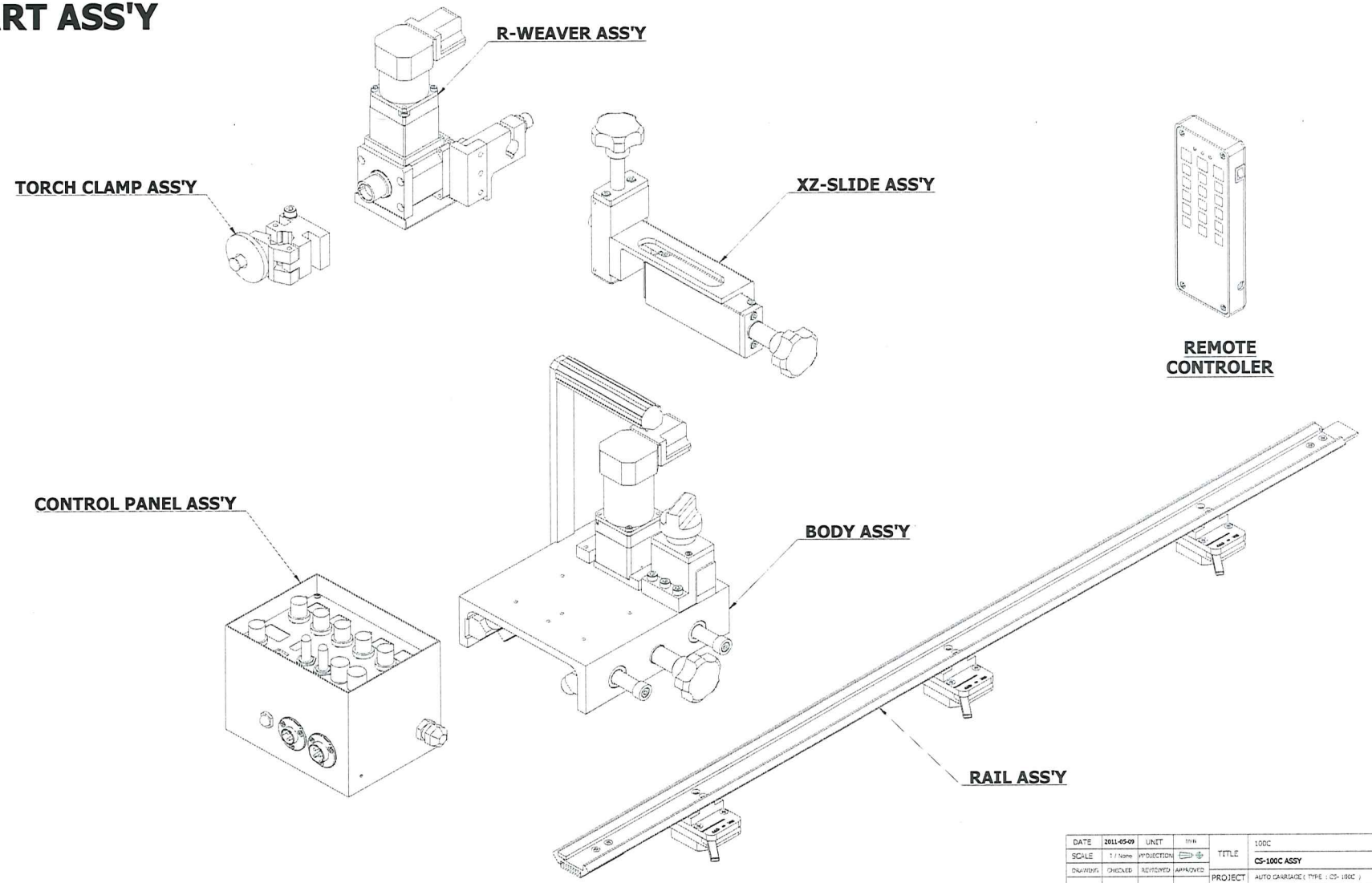
10) Circuit diagram



11) Assembly plan



CS-100C
PART ASS'Y



DATE	2011-05-09	UNIT	mm	TITLE	100C
SCALE	1 / None	PROJECTION			CS-100C ASSY
DRAWING	CHECKED	REVISIONED	APPROVED	PROJECT	AUTO CARRIAGE (TYPE : CS- 100C)
Kim.T.H				DWG. No.	002

CHUNG SONG INDUSTRIES CO., LTD.

CS-100C

RAIL

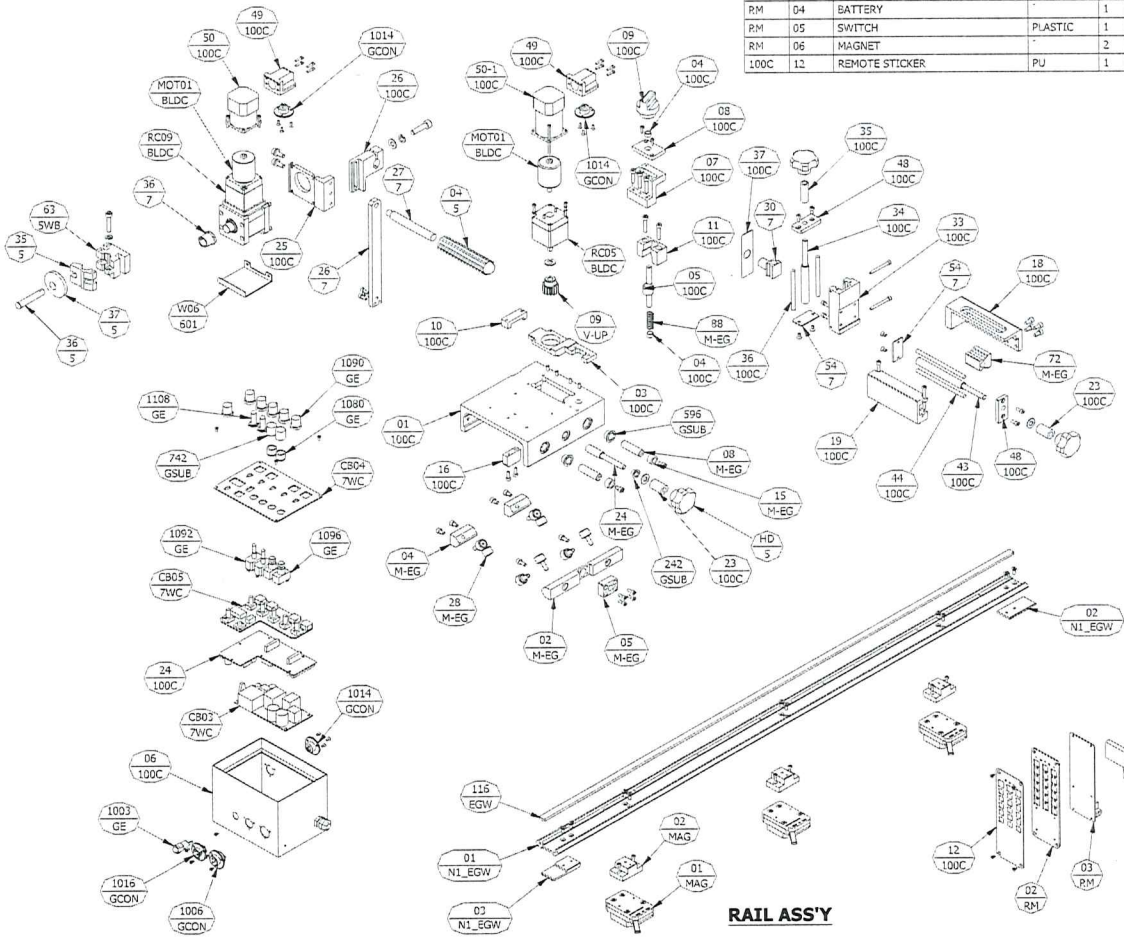
CS	NO	DESCRIPTION	MATERIAL	Q'T	COMMENTS
N1_EGW	01	RAIL	AL6061	1	
N1_EGW	02	RAIL FIXED BRACKET	AL6061	1	
N1_EGW	03	RAIL FIXED BRACKET HOUSING	AL6061	1	
MAG	01	MAGSWITCH	-	3	
MAG	02	RAIL BRACKET_2	AL6061	3	
EGW	116	RAIL RACK GEAR	SS400	1	M 1.5

Parts List

CS	NO	DESCRIPTION	MATERIAL	Q'T	COMMENTS
100C	36	Z-SLIDE BAR	SS400	2	L77
100C	37	Z-SLIDE_COVER	AL6061	1	
100C	43	SLIDE BOLT	S45C	1	2-L-TAP, L147
100C	44	X-SLIDE BAR	S45C	2	L105
100C	48	Y-SLIDE_BRACKET(REV)	AL6061	2	
100C	49	CONNECTOR BRK	AL6061	2	
100C	50	MOTOR CASE	AL6061	1	
100C	50-1	MOTOR CASE-1	AL6061	1	

REMOTE CONTROLLER

CS	NO	DESCRIPTION	MATERIAL	Q'T	COMMENTS
RM	01	R-PANEL CASE	PLASTIC	1	
RM	02	R-NAME PANEL	AL	1	
RM	03	MAIN P.C.B	PLASTIC	1	
RM	04	BATTERY	-	1	
RM	05	SWITCH	PLASTIC	1	
RM	06	MAGNET	-	2	59X50X2
100C	12	REMOTE STICKER	PU	1	



Parts List

CS	NO	DESCRIPTION	MATERIAL	Q'T	COMMENTS
V-UP	09	SPUR GEAR	S45C	1	M1.5 / Z15
M-EG	02	GUIDE BRA-1	AL6061	1	L160
M-EG	04	GUIDE BRA-2	AL6061	2	L40
M-EG	05	GUIDE BAR PLATE	AL6061	1	2-L-TAP
M-EG	08	GUIDE SHAFT	S45C	2	□12-L40
M-EG	15	GUIDE SHAFT BUSH	AL6061	2	□15
M-EG	24	KNOB SHAFT	S45C	1	2-L-TAP,L80
M-EG	28	ROLLER	SCM440	8	JMC-CF5VUU
M-EG	72	SLIDE_SUPPORT	AL6061	1	2-L-TAP
M-EG	88	CLUTCH SPRING	SP	1	□1.2-L30
GSUB	242	DU BUSH-08	S70C	1	DB0806-15F
GSUB	596	DU BUSH-12	S70C	2	DB1208-20F
GSUB	742	PUSH BUTTON COVER-1	RUBBER	2	BLACK
GE	1003	FUSE	PLASTIC	1	
GE	1080	PUSH BUTTON COVER(BS)	B.S	2	
GE	1090	VOLUME KNOB	PLASTIC	6	
GE	1092	WJT-3203	-	2	WJT-3203
GE	1096	SP 103C	PLASTIC	2	SP-103C
GE	1108	TOGGLE SWITCH COVER	RUBBER	2	
GCON	1006	POWER CONNECTOR	-	1	SCK-20-3R
GCON	1014	WEAVING CONNECTOR	SUS	3	SCK-16-6R
GCON	1016	TORCH CONNECTOR	-	1	SCK-16-2R
BLDC	MOT01	DC BRUSHLESS MOTOR	-	2	12W,5000RPM
BLDC	RC05	GEARD MOTOR	STEEL	1	400:1 □8
BLDC	RC09	R/W GEAR MOTOR	-	1	TPA050-1000
7WC	C803	POWER PCB	-	1	
7WC	C804	NAME PANEL	AL	1	
7WC	C805	NAME PCB	-	1	
7	26	GRIP BRACKET	AL6061	1	8T,L205
7	27	GRIP	SS400	1	
7	30	SLIDE SUPPORT	AL6061	1	2-L-TAP
7	36	BUSH	BAKELITE	1	□15
7	54	Y-SLIDE BRACKET	STEEL	2	
601	W06	WEAVING SPATTER COVER	B.S	1	
5WB	63	TORCH CLAMP(L)	AL6N01	1	
5	04	GRIP COVER	RUBBER	1	
5	35	TORCH CLAMP(U)	AL6N01	1	
5	36	CLAMP FIXED BOLT	S45C	1	L56
5	37	CLAMP FIXED KNOB	AL6061	1	
5	HD	KNOB	PLASTIC	3	
100C	01	BODY BASE	AL6061	1	150*170*50
100C	03	MOTOR BASE PLATE	AL6061	1	
100C	04	DU BUSH	STEEL	2	
100C	05	CLUTCH SHAFT	S45C	1	
100C	06	PANEL	STEEL	1	
100C	07	CLUTCH HOUSING	AL6061	1	
100C	08	CLUTCH BASE BRACKET	AL6061	1	
100C	09	CLUTCH KNOB	AL6061	1	
100C	10	MOTOR BASE BRACKET	AL6061	1	
100C	11	CLUTCH BRACKET	AL6061	1	
100C	16	BODY GUIDE BRACKET	AL6061	1	
100C	18	X-SLIDE FIX BRACKET-REVERSE	AL6061	1	
100C	19	X-SLIDE_FLANGE	AL6N01	1	L111
100C	23	BOLT COVER	AL6N01	2	L25
100C	24	MAIN PCB	-	1	
100C	25	WEAVING BRACKET	AL6061	1	
100C	26	WEAVING SLIDE CLAMP	AL6061	1	
100C	33	Z-SLIDE_FLANGE	AL6061	1	L80
100C	34	Z-SLIDE BOLT(L)	S45C	1	2-L-TAP, L123
100C	35	Z-SLIDE BOLT COVER	AL6061	1	L35

DATE	2011-05-09	UNIT	mm	TITLE	100C
SCALE	1 : None	PROJECTION			CS-100C ASSY
DRAWING	CHECKED	REVIEWED	APPROVED	PROJECT	AUTO GARMAGE (TYPE : CS- 100C)
Kim.T.H				DWG. No.	003

CHUNG SONG INDUSTRIES CO., LTD.