

# ACER

## OPERATION MANUAL

### High Precision Surface Grinder

Model: Supra 818II                      Supra 818HII  
          Supra 818AHII                  Supra 818AHRII  
          Supra 818AHDII

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# I . INSTALLATION OF MACHINE

## 1. DIMENSION & FLOOR REQUIREMENT:

The minimum space for machine:

For your convenience to operate, please take the walkway into consideration. Therefore, the ideal space for machine should be:

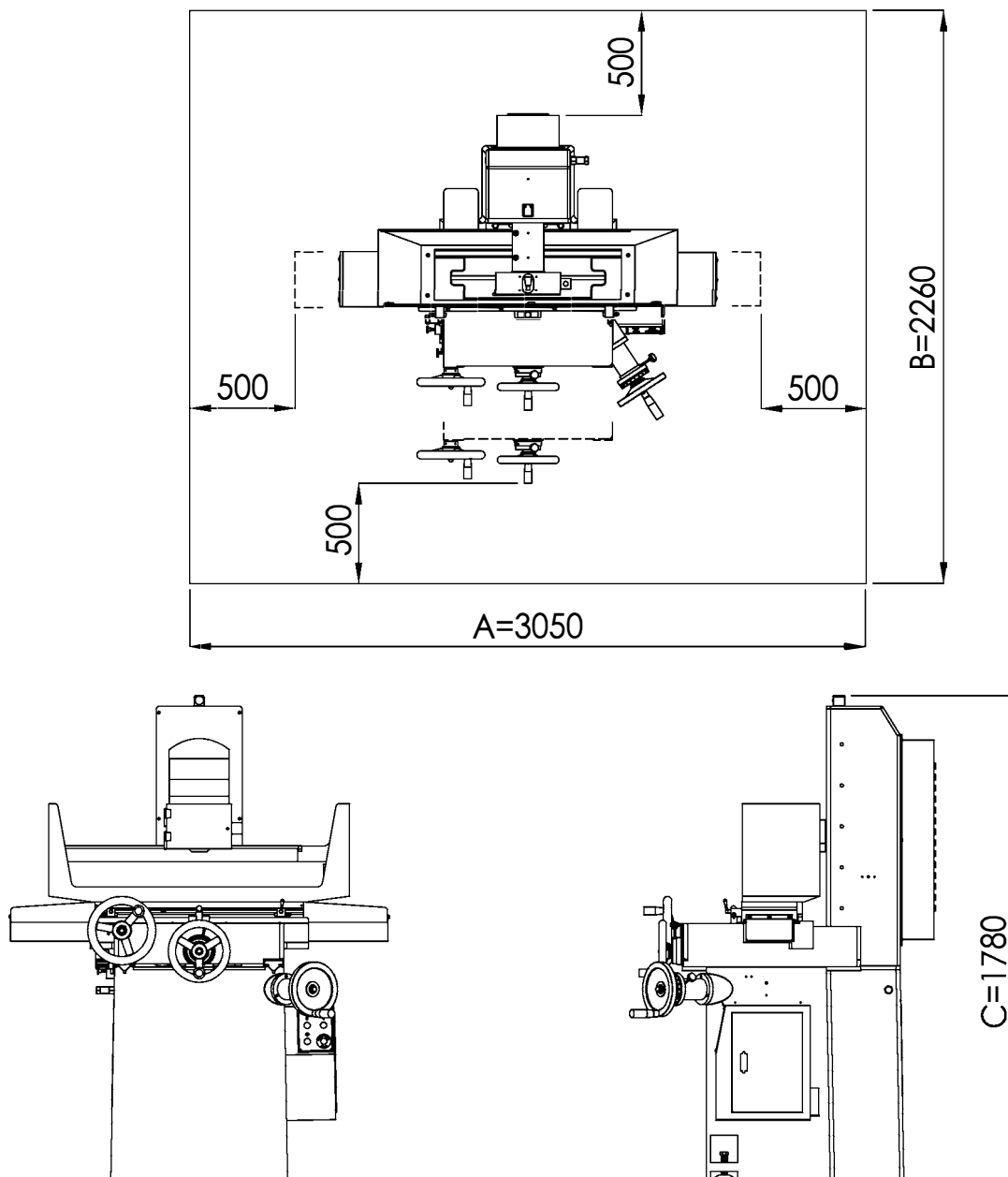
SUPRA-818 SERIES:

A - 3050MM (120")

B - 2260MM ( 89")

C - 1780MM ( 70")

Note: Keep the machine away from the environment which might cause any explosion.



# I . INSTALLATION OF MACHINE

## 2. REQUIREMENT OF THE GROUND:

Firm, steady, well constructed ground, and a well adjusted levelness of machine are the essential elements for precision grinding. The heat from the sunshine, and any vibration might also influence the precision.

The foundation for the machine needs:

- (1)The bearing strength for machine should be more than 2 tons/m<sup>2</sup>.
- (2)Avoid the sun shining directly on the grinder.
- (3)Avoid locating machine near other machines, such as Press or EDM.
- (4)Good ventilation.
- (5)Please install your machine based on the foundation plan.
- (6)Foundation drawing please refer to the following:

## 3. REQUIREMENT OF THE ENVIROMENT:

As there's no anti-explosive electrical device, this machine cannot be operated in a potentially explosive environment. The requirement of the environment for this machine is as the below:

- (1)Temperature: 5~40°C; However, if you're doing very precise grinding, please keep the temperature around 20°C.
- (2)Relative humidity: 30%-95%, no dew allowed.
- (3)Atmosphere: don't allow dust, corrosive fumes, salt, or acidic air in the neighborhood.
- (4)Avoid any vibrating environment.
- (5)Avoid sun shining directly on the machine.
- (6)Avoid the disturbance from electromagnetism.

Light level: above 200 Lux.

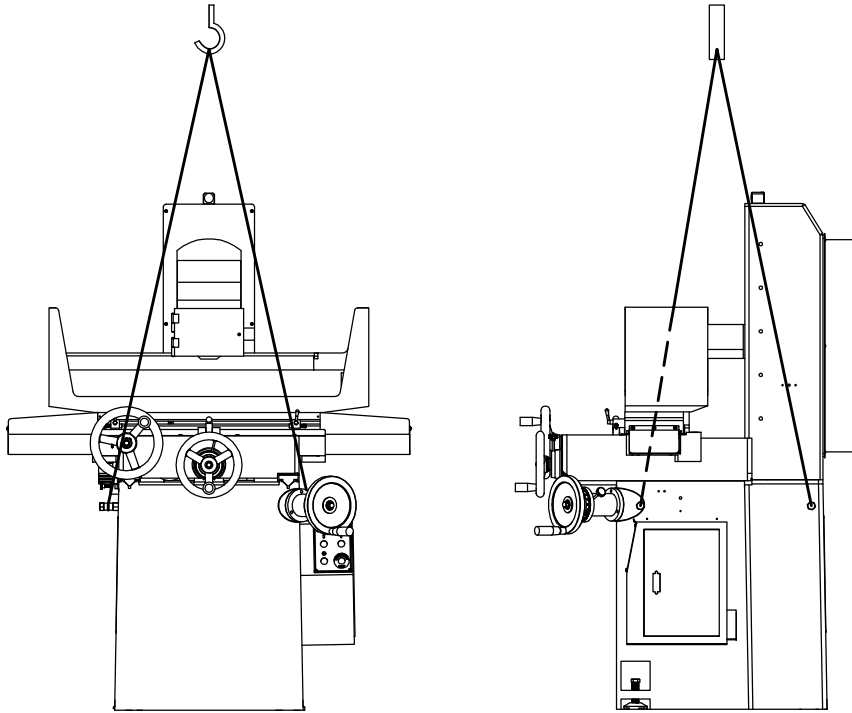
# I . INSTALLATION OF MACHINE

## 4. TRANSPORTATION OF MACHINE:

N.W: 820~1010 KGS; G.W: 920~1110 KGS

(1) CRANE LIFTING: Use steel cable or belt for hanging.

(As shown on the below drawing.)

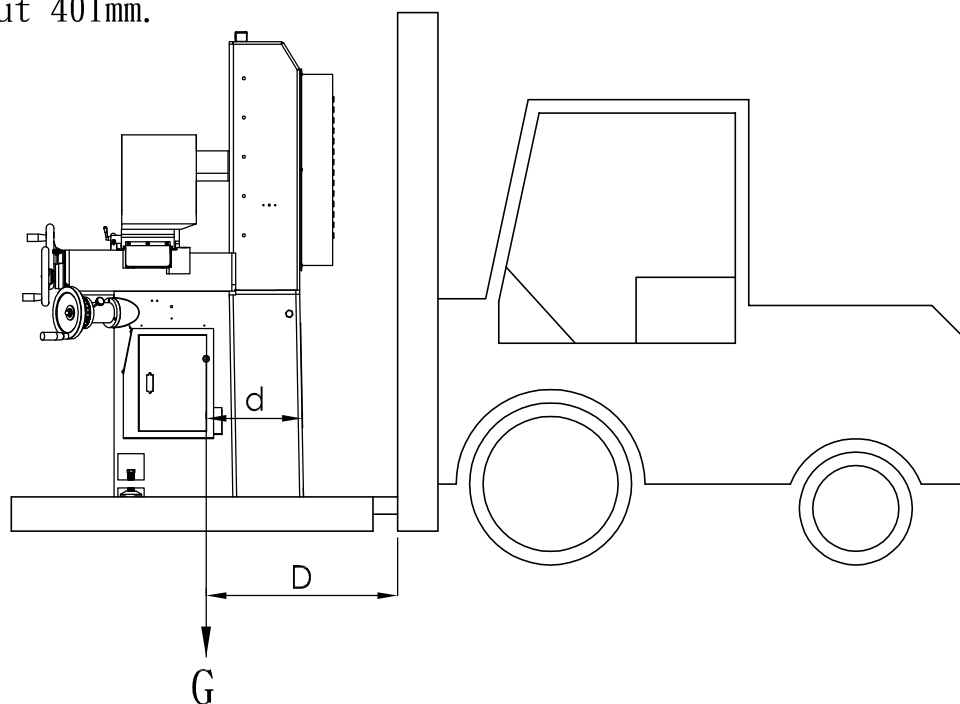


(2) FORK LIFTING: Use the fork lift for transportation.

D: Distance the shorter the better.

G: Center of gravity.

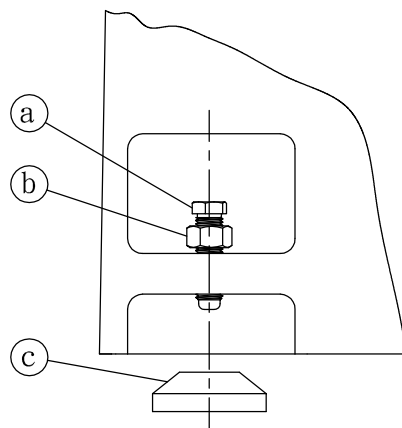
d: About 401mm.



# I . INSTALLATION OF MACHINE

## 5. LEVELING BOLT & PAD

- (1) Lock the leveling bolts and nuts onto the basement, and put the leveling pads under the machine. Lay down the machine carefully and adjust the leveling bolt to set at the center of the leveling pad.
- (2) Follow the above to locate every leveling bolt on each pad, but leave the nuts un-tightened.

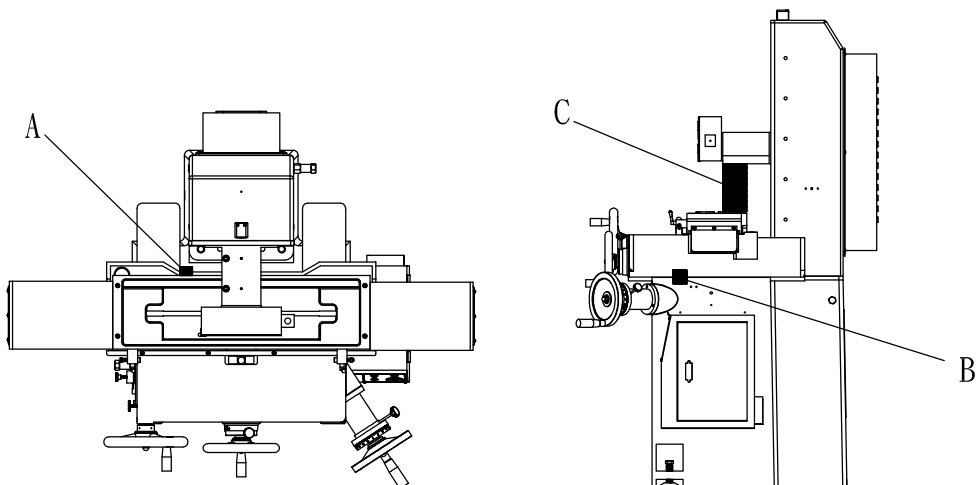


- a. Leveling bolt
- b. Screw nut
- c. Leveling pad

## 6. REMOVE THE CLAMPS

When the machine is fixed on the required location, please remove the clamps. Do not cast away the clamps, they could be prepared for next transportation.

- NOTE: (1) Before dismantling the crossfeed (B) and longitudinal (A) fixing blocks, please don't operate the handwheels to move the machine in case of any damage.
- (2) Using the vertical feed handwheel to move the spindle upward to take off the fixing wooden block (C).



# I . INSTALLATION OF MACHINE

## 7. REMOVE DESICCANT & CLEAN THE ANTI-RUST OIL:

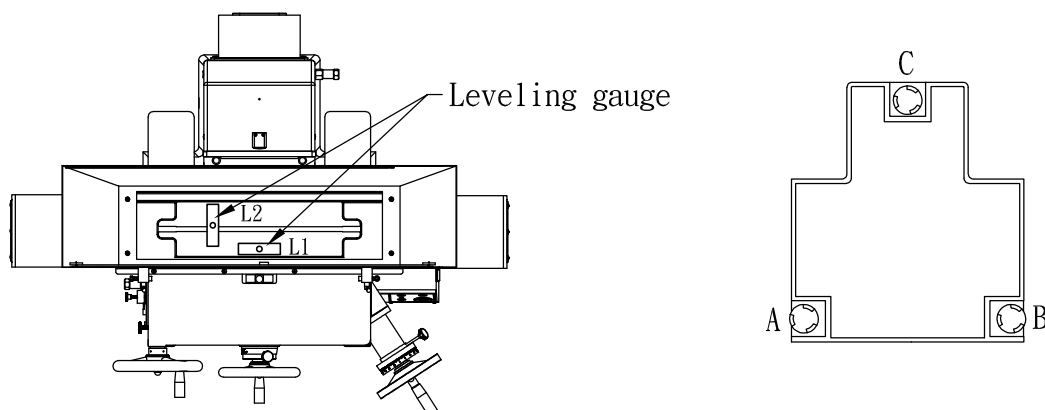
The machine has coated with the anti-rust oil and hanged desiccant to prevent rusting.

The brown cream on the surface of machine is anti-rust oil.

We coated the anti-rust oil on the table, spindle nose....., etc., and the desiccant will be put inside the electrical box, or hang on the table....., etc. After installation, please take off the desiccant and use cleaning rag with diesel to wipe off the anti-rust oil. Do not use any liquid that might corrode metal to do the job.

## 8. LEVELNESS ADJUSTMENT:

- (1) Necessary tools: Leveling gauge x 2 sets (Tolerance: 0.02mm);  
Spanner x 2 sets ( M26 & M32 ).
- (2) Clean up the table surface or magnetic chuck, and put 2 sets of leveling gauge on by crosswise and longitudinal direction (L1 & L2).
- (3) First, adjust the leveling bolts A & B to set the leveling bubble of leveling gauge L1 at the center (tolerance maintains within 1 scale). Secondly adjust the leveling bolt C to keep the bubble of the leveling gauge L2 at the center (tolerance maintains within 1 scale).  
Repeat the adjustment methods until the tolerance of both leveling gauges satisfy the precision requirement.
- (4) After the adjustment, tighten the screw nuts.
- (5) Newly set up machine should check the levelness once in a week.  
And after that, check up should be made every six months.





# I. INSTALLATION OF MACHINE

## 9. HYDRAULIC SYSTEM (818HIII~818AHDII)

- (1)Hydraulic oil tank capacity: about 50 liters (13 Gallon)
- (2)Please check the drawing below about the oil inlet and outlet of hydraulic system. First, please locate the oil tank in the right and beside the machine. Secondly, connect the oil pipes according to the tags attached on them and the oil tank. Thirdly, fill in sufficient oil with recommended oil brand. The oil level must maintain within the required amount shown on the oil gauge.
- (3)Connect the power cable into the electrical box by the labels on them.

To ensure the performance of hydraulic system, please obey the below:

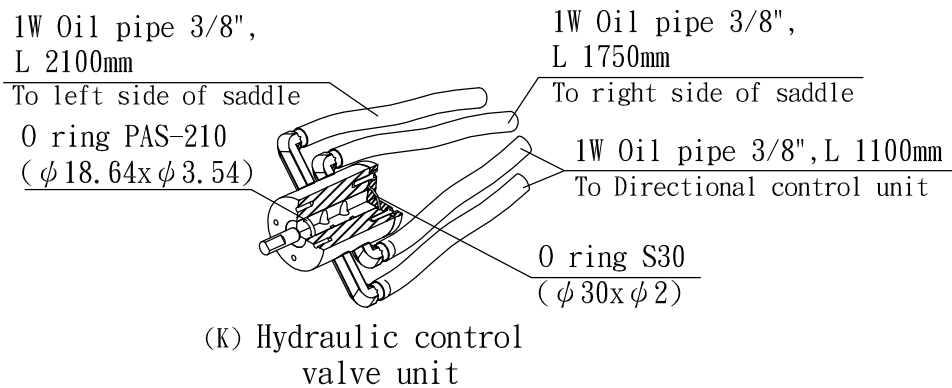
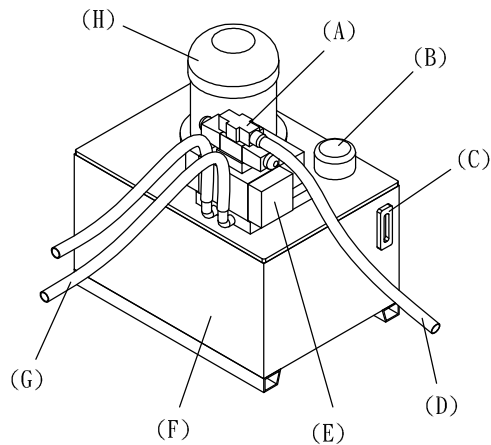
- (1)First-time oil replacement should be done after 3 months operation.
  - (2)Replace the oil and the filter at an interval of 6 months after the first replacement.
  - (3)Check the pressure for pump within 10~12 Kg/cm<sup>2</sup>.
- \*Hydraulic system is properly adjusted before the shipment. Unless it's necessary, please don't re-adjust it casually.
- \*Clean the filter of hydraulic tank every 6 months. Please discard the waste material according to the government sanitation or enviromental laws.

Please be sure to fill in the following suggested oil:

BRAND	TYPE	BRAND	TYPE
ESSO	NUTO H32	MOBIL	D. T. E 24
BP	EVERGOL HLP32	TEXACO	LUBE TAC #2
SHELL	TELUS 32	ARAL	VITAM GF 32

# I. INSTALLATION OF MACHINE

- (A) Magnetic control valve
- (B) Oil inlet
- (C) Oil gauge
- (D) Power cable
- (E) Directional control unit
- (F) Hydraulic tank
- (G) Oil pipe
- (H) Hydraulic motor
- (K) Hydraulic control valve unit



## 10. AUTO LUBRICATION OIL CIRCULATION SYSTEM:

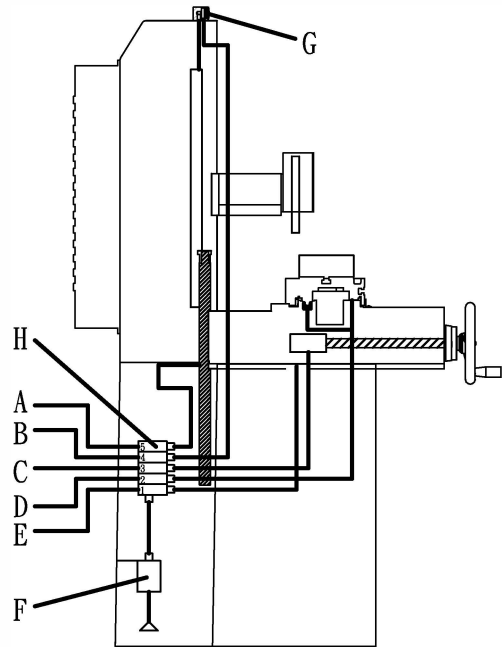
- (1) With the spindle activation, this system starts immediately to constantly deliver the lubrication oil to necessary guide ways for smoothness and prevent wear out.
- (2) A lubrication oil gauge (G) mounted on the top of the column for monitoring. Whenever the machine is on, it's obvious to check the oil from this gauge.
- (3) Recommended oil brand: CPC #32 SLIDEWAY OIL or ISO #G68 Mobil Vactra Waylube #2
- (4) Oil capacity: 4 liters.

# I . INSTALLATION OF MACHINE

## 10. AUTO LUBRICATION OIL CIRCULATION SYSTEM:

(5)Parts list:

- A. Vertical feed screw
- B. Vertical slideways
- C. Cross feed screw
- D. Longitudinal slideways
- E. Cross slideways
- F. Lubrication oil pump
- G. Lubrication oil gauge
- H. Oil distributor



Note: Diseases of the skin may be caused by continuous contact with the oil, particularly with neat oil, and also with soluble oil. The following precautions should be taken:

- 1.: Avoid unnecessary contact with the oil.
- 2.: Wear protective clothing.
- 3.: Use protective shields.
- 4.: Do not wear oil soaked or contaminated clothing.
- 5.: After work thoroughly wash all parts of the body that has contact with the oil.
- 6.: Change the oil regularly.
- 7.: Dispose the oil correctly and properly.

# I . INSTALLATION OF MACHINE

## 11. REQUIREMENT OF THE ELECTRICITY:

- (1)Voltage: 3 Phases, AC voltage which is decided by customers, rated voltage: 0.9~1.1.
- (2)Frequency: 50/60Hz, 0.99~1.01 rated frequency.
- (3)Voltage for electromagnetic chuck: Max. DC 110V (optional accessory).
- (4)Electricity consumption: 3.5 KVA.
- (5)Connecting wire: 2mm (R, S, T, E)
- (6)Check the rotation direction of the spindle motor, hydraulic motor and so on after the wire connection.  
Make sure all the motors rotation is by clockwise.  
We've done the test before the shipment, if one of the motors rotation is normal, the rest will be the same.

## II. SAFETY PRECAUTIONS

### Safety first!

We're glad to provide the information for using machines safely, to assist and keep safety while you're working, and to help avoiding any damage to the machine. We present this manual for your reference.

Please check if there's any pages missing in your manual as soon as you receive the machine. Let us or the agent nearby know if there's any insufficiency.

Put your manual near the machine in case you want to read it. Also keep the manual carefully so that you'll be able to read it any time you want.

Please use your experience and the information from this manual to get the most secure working environment.

### 1. GENERAL OPERATING SAFETY PRECAUTIONS:

- 1.1.: Machine usage - Obey every message and instructions you learn from the manual.
- 1.2.: Only an operator who is well trained for grinding machines should operate and maintain the machine.
- 1.3.: Please read and understand the manuals before using the machines.
- 1.4.: Keep the working area clean, and leave no oil spot.
- 1.5.: Do not wear gloves while operating machines.
- 1.6.: Please wear suitable outfit while operating machines.  
Tie up your sleeve links and don't wear any necktie.
- 1.7.: Do not touch any moving or rotating parts of the machine.
- 1.8.: Do not touch or open the parts where we have the electrical signs on, such as electrical box.
- 1.9.: Turn off the power before maintenance or leaving machine unattended.
- 1.10.: Make sure you have enough light in your working area.

## II. SAFETY PRECAUTIONS

### 1. GENERAL OPERATING SAFETY PRECAUTIONS:

- 1.11. : Prepare non-electric-conductor fire extinguisher (dry powder) in case of any fire danger.
- 1.12. : Stop the machine immediately if anything unexpected happens.

### 2. SAFETY PRECAUTIONS FOR OPERATING MACHINE:

For using this machine safely, please ask every operator, maintenance technician or any other people to obey the safety precautions. To obey the safety precautions below will reduce the danger of any possible damage.

- 2.1. : This machine can only grind metal workpiece. But do not grind magnesium or magnesium alloy.
- 2.2. : This machine cannot be used in a place where there's gas which is easy to burn or explode.
- 2.3. : Do not disassemble any protective guard before using.
- 2.4. : Please read and understand your manual before operation.
- 2.5. : Check the position of emergency stop buttons and other stop button before operation.
- 2.6. : Confirm the function of the buttons before operation.
- 2.7. : Wear safety glasses.
- 2.8. : Make sure every switch is in the position of "OFF" before operation.
- 2.9. : Require people with experiences to balance and install the grinding wheel.
- 2.10. : Check the running direction of the grinding wheel before operating.
- 2.11. : Turn on the power to rotate the grinding wheel about five minutes at least, then start to work.
- 2.12. : Check if the workpiece is secure on the table or magnetic chuck and is very steady before operation.
- 2.13. : Stop the movement of the table before adjusting the travel of cross and longitudinal movement.

## II . SAFETY PRECAUTIONS

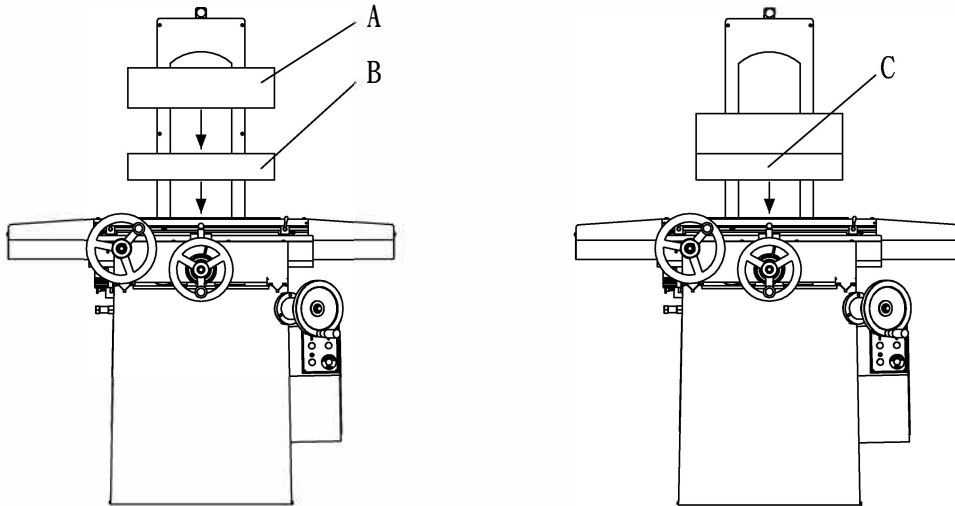
### 2. SAFETY PRECAUTIONS FOR OPERATING MACHINE:

- 2.14. :Before changing the procedure of grinding, make sure the machine stops completely.
- 2.15. :Never use any coolant liquid that is easy to burn or poisonous.
- 2.16. :The grinding wheel of this machine should be able to handle at least 2000M/min. speed.
- 2.17. :Do not grind on the side of the grinding wheel.
- 2.18. :Do not change any electrics or parts of machine.
- 2.19. :Require qualified people to maintain the electrical parts of machine.
- 2.20. :Do not tear off the warning signs on the machine. If they are not clear or damaged, please contact your agent or our sales department for replacement.
- 2.21. :Never mount on a workpiece too large for the machine.
- 2.22. :Use the correct lifting equipment for handling.
- 2.23. :Never use excessive depth of grinding or feed rate.
- 2.24. :Do not run the machine unattended.
- 2.25. :Turn off the coolant before stopping wheel.
- 2.26. :Do not grind the material for which the wheel is not designed.
- 2.27. :Dress the wheel regularly to avoid loading.

## II. SAFETY PRECAUTIONS

### 3. TABLE LOADING CAPACITY:

A = Workpiece weight: 160KGS, B = Magnetic chuck weight: 30KGS,  
C = A+B Total weight: 190KGS    1KG =2.2 lbs



### 4. GENERAL GRINDING:

- (1).Grinding volume:If it's for mass grinding volume, it's recommended choosing low grain size grinding wheel (about #30~#36), and set the dressing speed fast.
- (2)If it's for smooth/polishing surface grinding, it's recommended choosing high grain size grinding wheel (about #46~#80), and set the dressing speed low.
- (3)Table deforming: Mostly, the reason for this is set the grinding value too much, grinding face gets worn out or less of cooling. Find the reason and fix it.
- (4)Workpiece burnt out: if this happens, mostly the reason is the grinding wheel gets worn out or too much chips stuck in the grinding wheel.

NOTE: Correctly choosing suitable grinding wheel and proper operation has effective influence on the grinding performance.



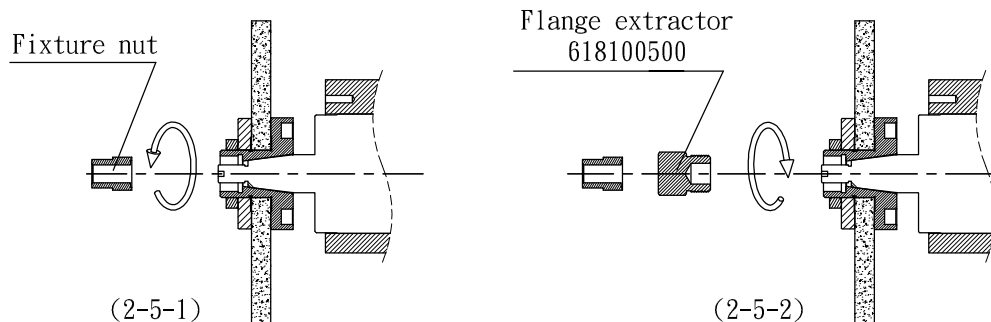
## II. SAFETY PRECAUTIONS

### 5. GRINDING WHEEL ASSEMBLY:

- (1) Choosing correct grinding wheel and do the sound test to decide which grinding wheel is suitable for your production. Please check the below:
  - a. Check if there's any crack, damage or notch in the wheel. Abandon the wheel with any of the above problem.
  - b. See if there's any label or paper on the wheel, and don't tear them off.
  - c. Check if there's anything between flange and the wheel. Clean it up before set up.
  - d. See if the wheel got deformed. If it is, abandon it.
- (2) Tap the wheel with a wooden hammer, listen if there's any metal sound, and also change the places you tap to listen if there's any different sound. Cracks of the wheel will reveal by different sound.
- (3) After using the grinding wheel for a period of time, check and tighten the wheel with the flange again.

### 6. GRINDING WHEEL ENGAGE/DISENGAGE PROCEDURE:

- ENGAGE:(a) Clean the contact surface of the spindle taper and the I.D. of wheel flange, and apply some oil on. Then it's OK to put the wheel & flange set onto the spindle.
- (b) Screw up the fixture nut by counter-clockwise direction to fasten the wheel & flange set on the spindle. (2-5-1)
- DISENGAGE: Loosen the fixture nut and take it off. Then screw in the flange extractor to draw out the wheel & flange set from the spindle. (2-5-2)

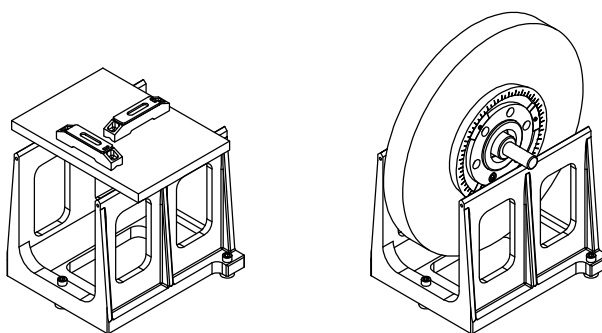


## II. SAFETY PRECAUTIONS

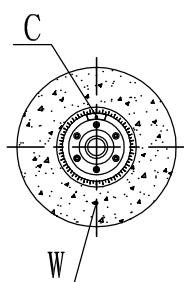
### 7. GRINDING WHEEL BALANCING ADJUSTMENT:

In order to obtain fine surface finish, the grinding wheel must be checked and re-balanced periodically. A standard and well balanced grinding wheel is supplied from the grinder manufacturer. Please note the following procedure for balancing.

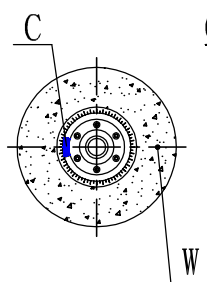
- (1) Put the balancing stand on a steady table or ground, and use the leveling gauge to adjust the levelness of the balancing stand. (2-6-1)
- (2) Let the wheel roll freely on the stand to find out its gravity center "W" and mark it on the wheel. (2-6-2)
- (3) Insert a balancing block into the opposite side as "C", and rotate the wheel 90 degrees to check which side is heavier. (2-6-3)
- (4) Insert another balancing block on heavier side as "K", in which is on the same arc from "C" point. (2-6-4)
- (5) Turn the wheel 90 degrees to check the balance of the wheel. If it's still not well balanced, repeat the above method until the wheel balance is done. If it requires to do the grinding on different workpiece material, it's better to change the wheel with the flange set to save time for balancing. (2-6-5)



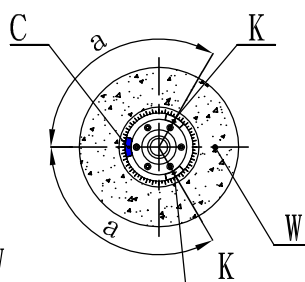
(2-6-1)



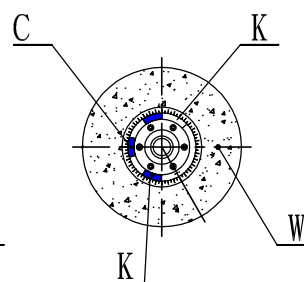
(2-6-2)



(2-6-3)



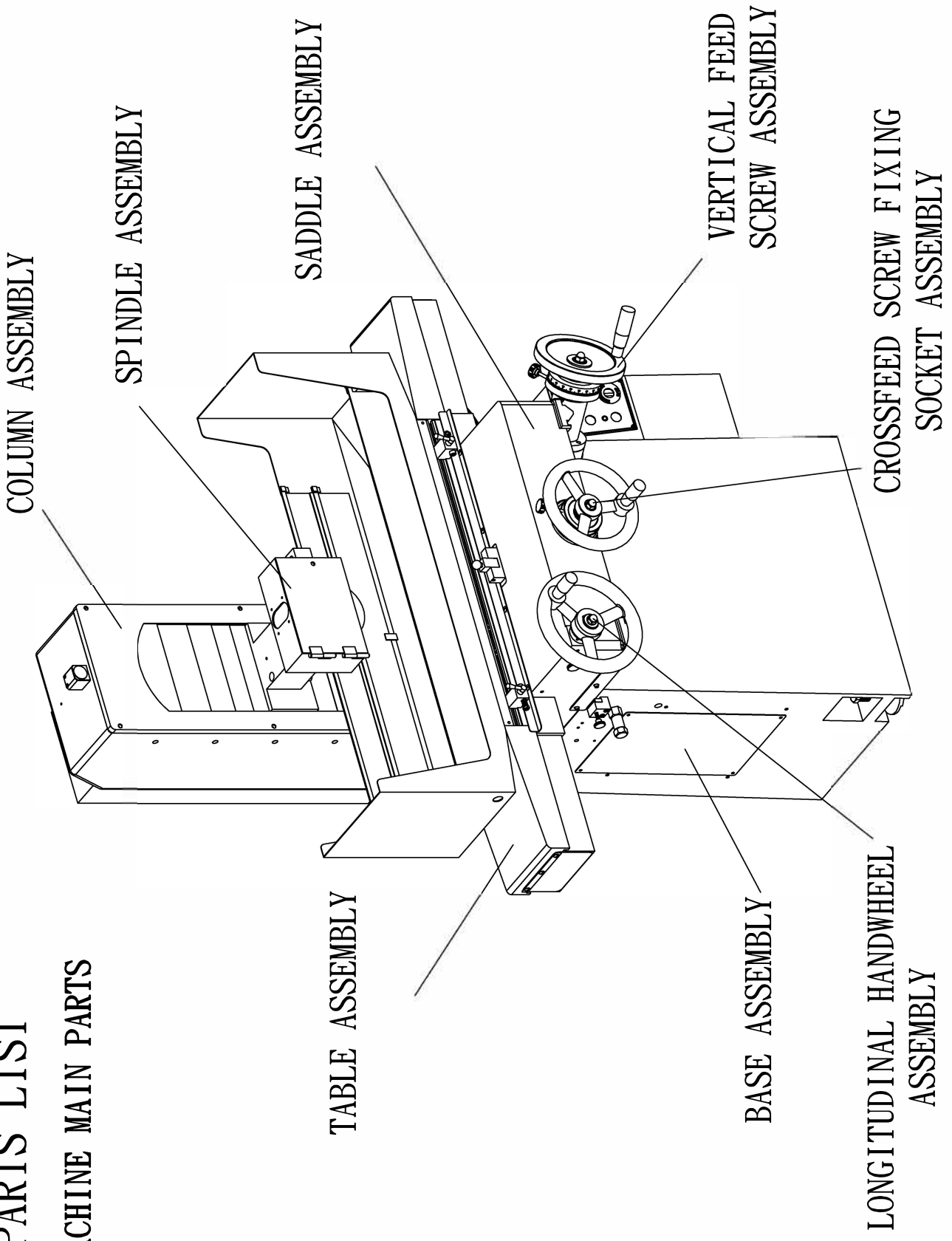
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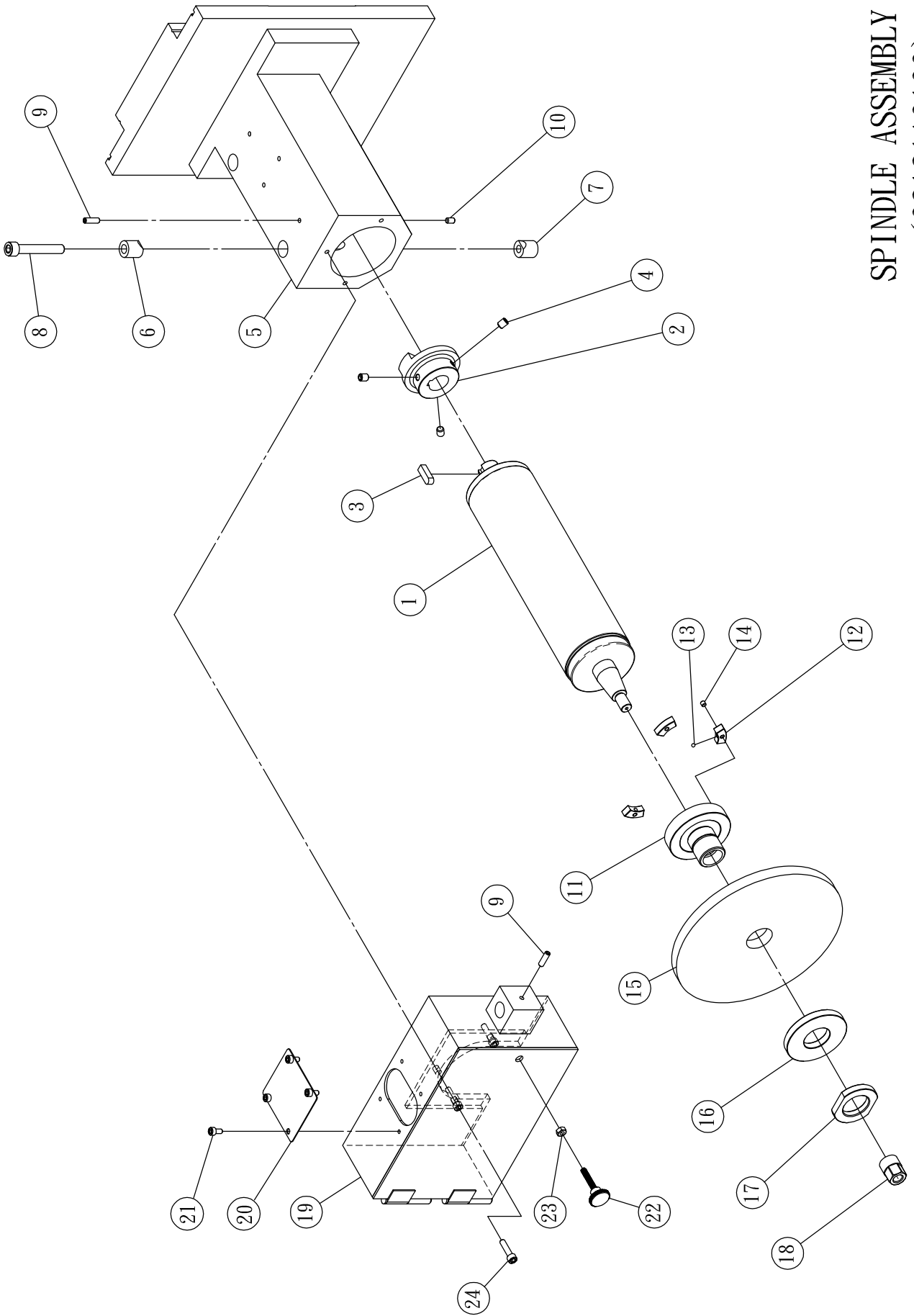
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# III. PARTS LIST

## MACHINE MAIN PARTS



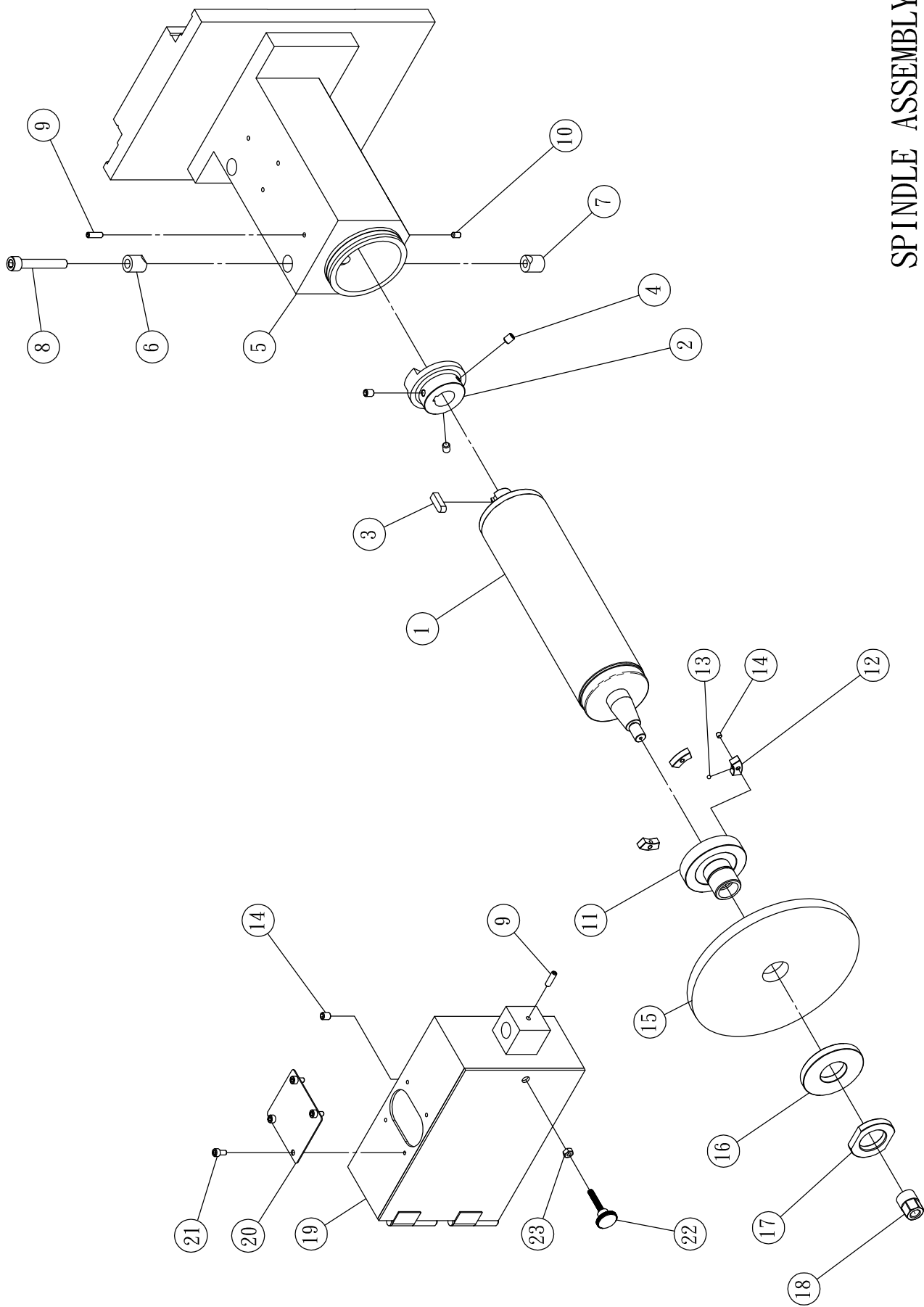
SPINDLE ASSEMBLY  
(08181A0100)



## SPINDLE ASSEMBLY (08181A0100)

NO.	DRAWING NO. /SPEC.	DESCRIPTION	QTY	NOTE
1	08181A0100	Spindle	1	
2	0618101100	Motor coupling	1	
3	KEYS080725	Pin	1	8x7x25
4	BHU0081210	Inner hexagonal headless screw	3	M8-10L
5	081810010A	Spindle housing	1	
6	06181010A0	Spindle fixing ring A	2	
7	06181010B0	Spindle fixing ring B	2	
8	BH00101560	Inner hexagonal screw	2	M10x1.5Px60L
9	BHU0061020	Inner hexagonal headless screw	3	M6-20L
10	BHU0061010	Inner hexagonal headless screw	2	M6-10L
11	FA0010A350	Wheel flange	1	
12	FA0010B350	Balancing block	3	
13	SB00000004	Steel ball	3	∅ 4
14	BHU0050805	Inner hexagonal headless screw	3	M5-5L
15	WH00205130	Grinding wheel	1	
16	FA0010C350	Flange spacer	1	
17	FA0010D350	Flange fixing ring	1	
18	FA0010E350	Tightening nut	1	
19	0618100100	Wheel guard	1	
20	06181001B0	Wheel guard top cover	1	
21	BH00050810	Inner hexagonal screw	4	M5x0.8Px10L
22	3060405400	Fixing knob	1	
23	FA0010E350	Nut	1	M6
24	BH00061025	Inner hexagonal screw	3	M6x1.0Px25L

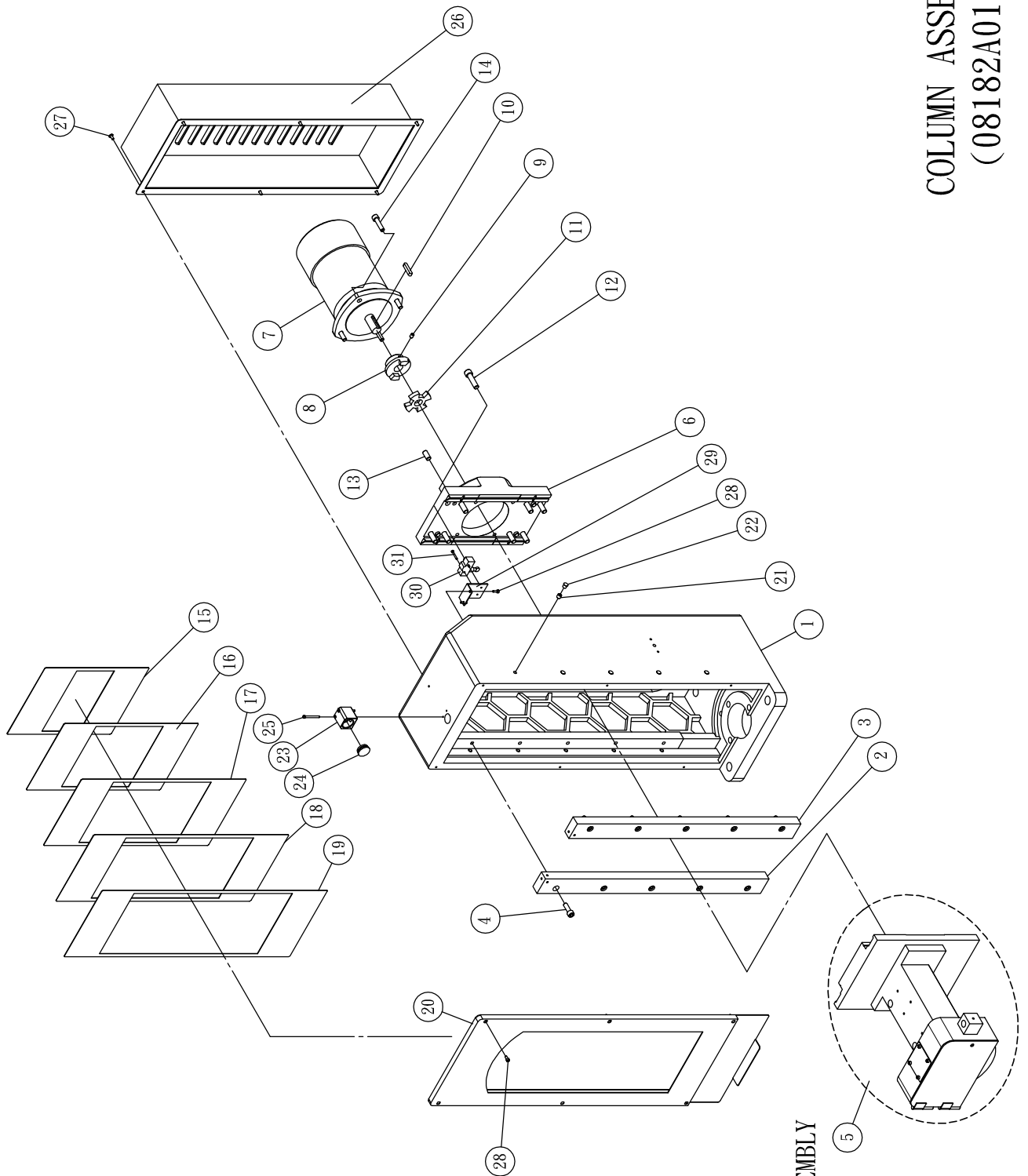
SPINDLE ASSEMBLY  
(08181A0200)



## SPINDLE ASSEMBLY (08181A0200)

NO.	DRAWING NO. /SPEC.	DESCRIPTION	QTY	NOTE
1	08181A0100	Spindle	1	
2	0618101100	Motor coupling	1	
3	KEYS080725	Pin	1	8x7x25
4	BHU0081210	Inner hexagonal headless screw	3	M8-10L
5	081810010B	Spindle housing	1	
6	06181010A0	Spindle fixing ring A	2	
7	06181010B0	Spindle fixing ring B	2	
8	BH00101560	Inner hexagonal screw	2	M10x1.5Px60L
9	BHU0061020	Inner hexagonal headless screw	3	M6-20L
10	BHU0061010	Inner hexagonal headless screw	2	M6-10L
11	FA0010A350	Wheel flange	1	
12	FA0010B350	Balancing block	3	
13	SB00000004	Steel ball	3	∅4
14	BHU0050805	Inner hexagonal headless screw	4	M5-5L
15	WH00205130	Grinding wheel	1	
16	FA0010C350	Flange spacer	1	
17	FA0010D350	Flange fixing ring	1	
18	FA0010E350	Tightening nut	1	
19	0618100200	Wheel guard	1	
20	06181001B0	Wheel guard top cover	1	
21	BH00050810	Inner hexagonal screw	4	M5x0.8Px10L
22	3060405400	Fixing knob	1	
23	FA0010E350	Nut	1	M6

COLUMN ASSEMBLY  
(08182A0100)



SPINDLE ASSEMBLY



## COLUMN ASSEMBLY (08182A0100)

NO.	DRAWING NO. /SPEC.	DESCRIPTION	QTY	NOTE
1	0618201300	Column	1	
2	06182012A0	Vertical rail (L)	1	
3	06182012B0	Vertical rail (R)	1	
4	BH00101530	Inner hexagonal screw	10	M10x1.5Px30L
5	08181A0100	Spindle assembly	1set	(ACER)
6	0818200200	Motor fixing board	1	
7	MS01362346	Motor	1	230/460V , 60HZ , 3HP 3 $\phi$ 2P
8	0618101100	Coupling	1	
9	BHU0081210	Inner hexagonal headless screw	3	M8-10L
10	KEYD080840	Pin	1	8x8x40
11	0618101200	Rubber coupling	1	
12	BH00121745	Inner hexagonal screw	8	M12x1.75Px45L
13	BHU0121725	Inner hexagonal headless screw	4	M12-25L
14	BH00101550	Inner hexagonal screw	4	M10x1.5Px50L
15	0618200400	Dust proof sheet	1	
16	0618200500	Dust proof sheet	1	
17	0618200600	Dust proof sheet	1	
18	0618200700	Dust proof sheet	1	
19	0618200800	Dust proof sheet	1	
20	0618200300	Front cover plate	1	
21	BHU0101510	Inner hexagonal headless screw	10	M10-10L
22	HP0000HP09	Plug	10	HP-09
23	0618202300	Lubrication oil gauge	1	
24	OLG00000029	Lubrication oil gauge glass	1	$\phi$ 29
25	BH00040745	Inner hexagonal screw	2	M4x0.7Px45L
26	0818200300	Rear cover plate	1	
27	BRC0050812	Cross round head screw	6	M5x0.8Px12L

COLUMN ASSEMBLY (08182A0100)

NO.	DRAWING NO. /SPEC.	DESCRIPTION	QTY	NOTE
28	BH00050810	Inner hexagonal screw	8	M5x0.8Px10L
29	3060211900	Vertical adjustment switch fixing board	1	3A-ASD
30	SM00AM1307	Limit switch	1	3A-ASD / AM-1307
31	BH00040720	Inner hexagonal screw	2	3A-ASD / M4x0.7Px20L

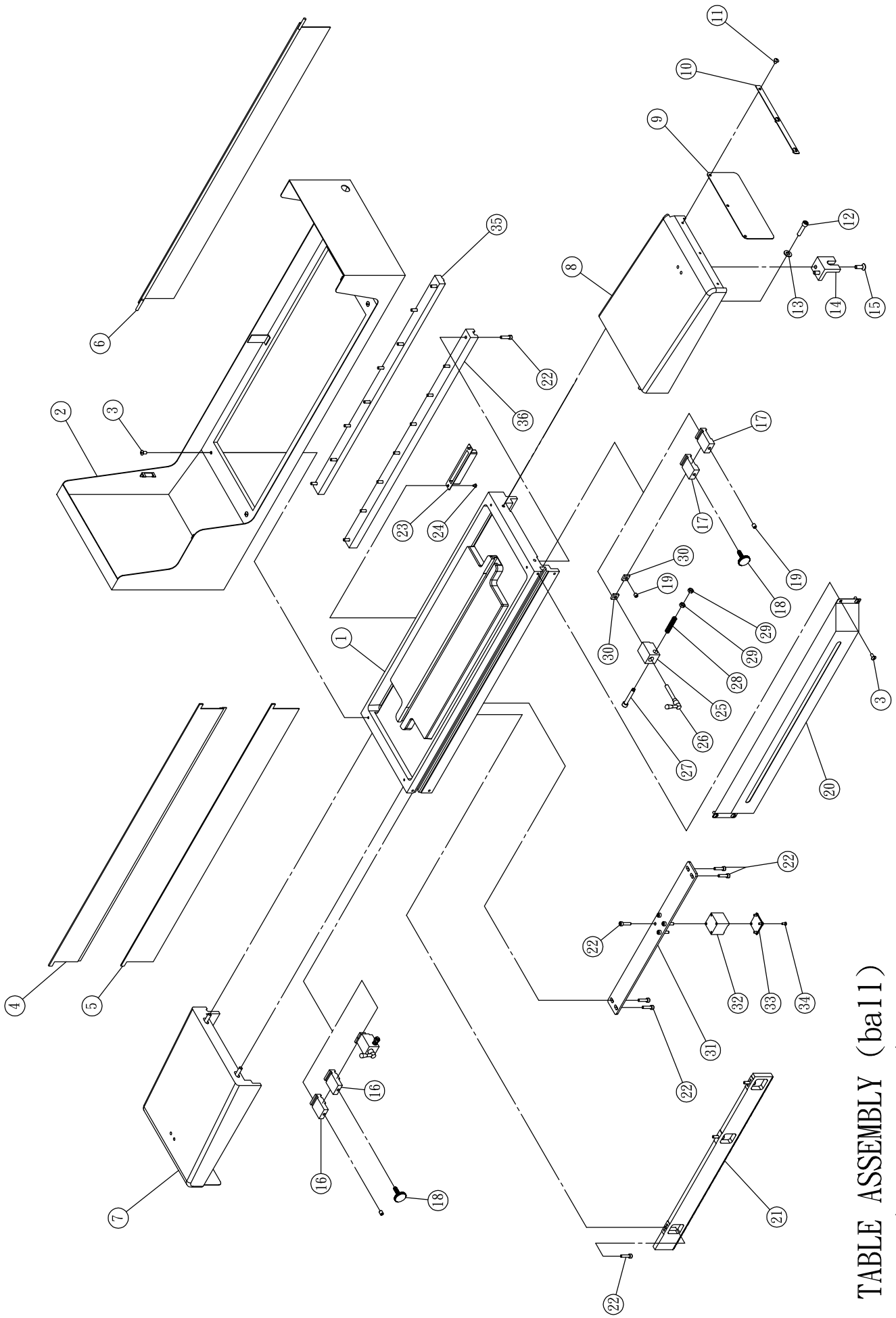


TABLE ASSEMBLY (ba11)  
(08183A0100)

TABLE ASSEMBLY ( ball 08183A0100 )

NO.	DRAWING NO. /SPEC.	DESCRIPTION	QTY	NOTE
1	08183001B0	Table (ball)	1	
2	0818301000	Splash guard	1	
3	BRC0061012	Cross head screw	8	M6x1. 0Px12L
4	06181002A0	Coolant guarding board A (Rear)	1	
5	06181002B0	Coolant guarding board B (Rear)	1	
6	06181002C0	Coolant guarding board C (Front)	1	
7	08183003L0	Table wing (L)	1	0818300200 (For 818M)
8	08183003R0	Table wing (R)	1	0818300200 (For 818M)
9	0818300900	Rubber plate	2	
10	0818300600	Fixing bar	2	
11	BRC0061008	Cross round head screw	6	M6x1. 0Px8L
12	BH00081235 BH00081220	Inner hexagonal screw	4	M8x1. 25Px35L (For Hydraulic) M8x1. 25Px20L (For 818M)
13	WP00081602	Washer	4	8x16x2
14	06183035M0	Cylinder rack	2	For Hydraulic
15	BHP0081220	Flat head inner hexagonal screw	4	
16	06183044M0	Sensor block (L)	2	(For Hydraulic)
17	06183045M0	Sensor block (R)	2	(For Hydraulic)
18	0618405200	Fixing knob	2	D-8070-30-M8-30 (For Hydraulic)
19	BHU0081210	Inner hexagonal headless screw	2	M8-8L
20	06184035A0	Longitudinal travel adjustor cover (Hydraulic)	1	(For Hydraulic)
21	0618303300	Gear bar	1	(For Hydraulic)
22	BH00061025	Inner hexagonal screw	27	M6x1. 0Px25L (For Hydraulic)
23	06183032M0	Coolant guiding block	1	
24	BRC0040706	Cross round head screw	2	M4x0. 7Px6L
25	06183020A0	Adjustor block(R)	2	
26	HF00450850	Adjusting knob	2	
27	BH00081250	Inner hexagonal screw	2	M8x1. 25Px50L (For 818M)

TABLE ASSEMBLY ( ball 08183A0100 )

NO.	DRAWING NO. /SPEC.	DESCRIPTION	QTY	NOTE
28	SC00854516	Spring	2	(For 818M)
29	NH000014M8	Nut	4	M8 (For 818M)
30	0618302600	Fixing nut	4	(For 818M)
31	0818302000	Longitudinal belt fixed block	1	(For 818M)
32	0818302100	Timing belt seat	1	(For 818M)
33	0618402100	Timing belt fixing board	1	(For 818M)
34	BHP0040708	Inner hexagonal screw	4	M4x0.7Px8L (For Hydraulic)
35	0618300400	Convex table rail	1	
36	0618300500	Concave table rail	1	

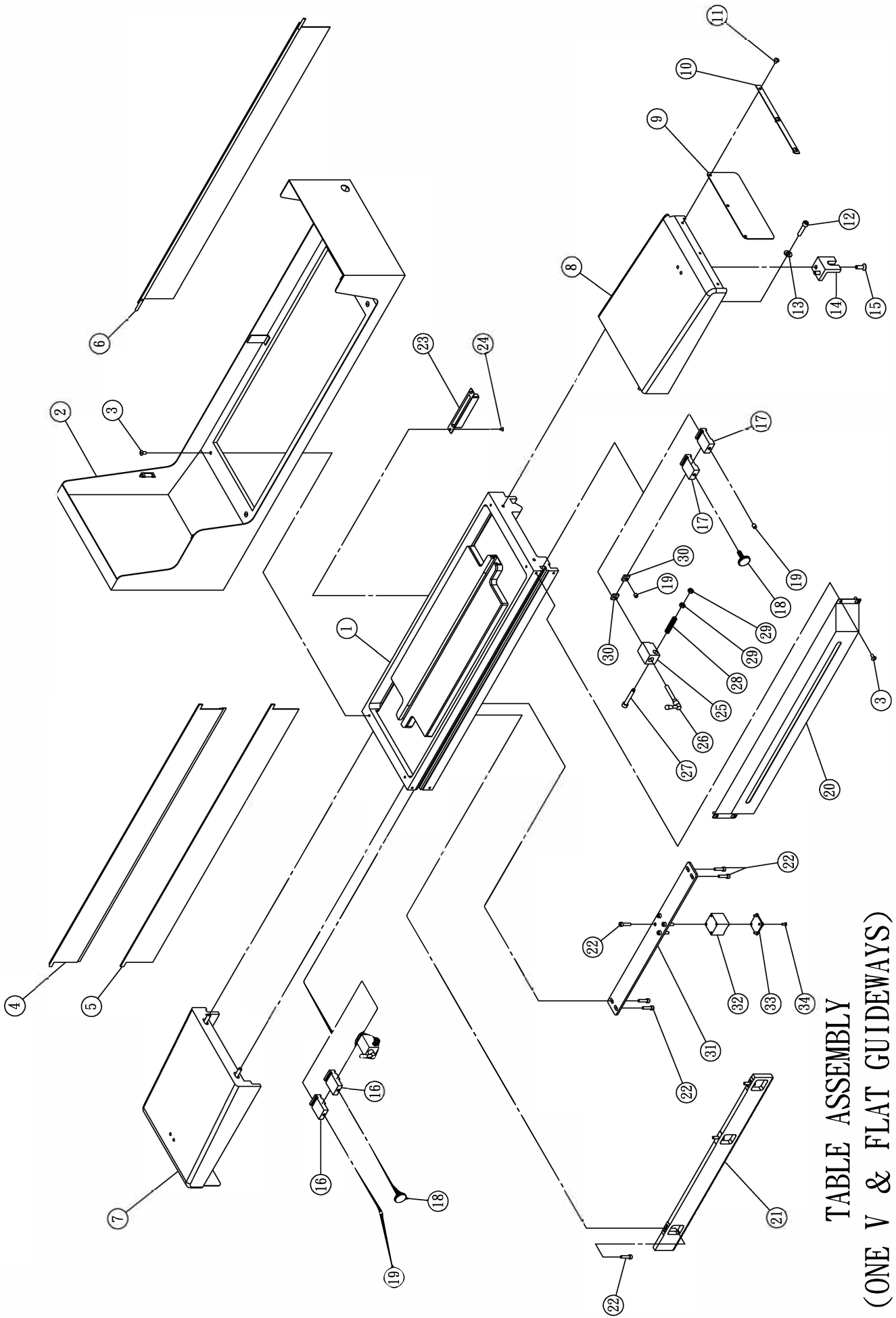


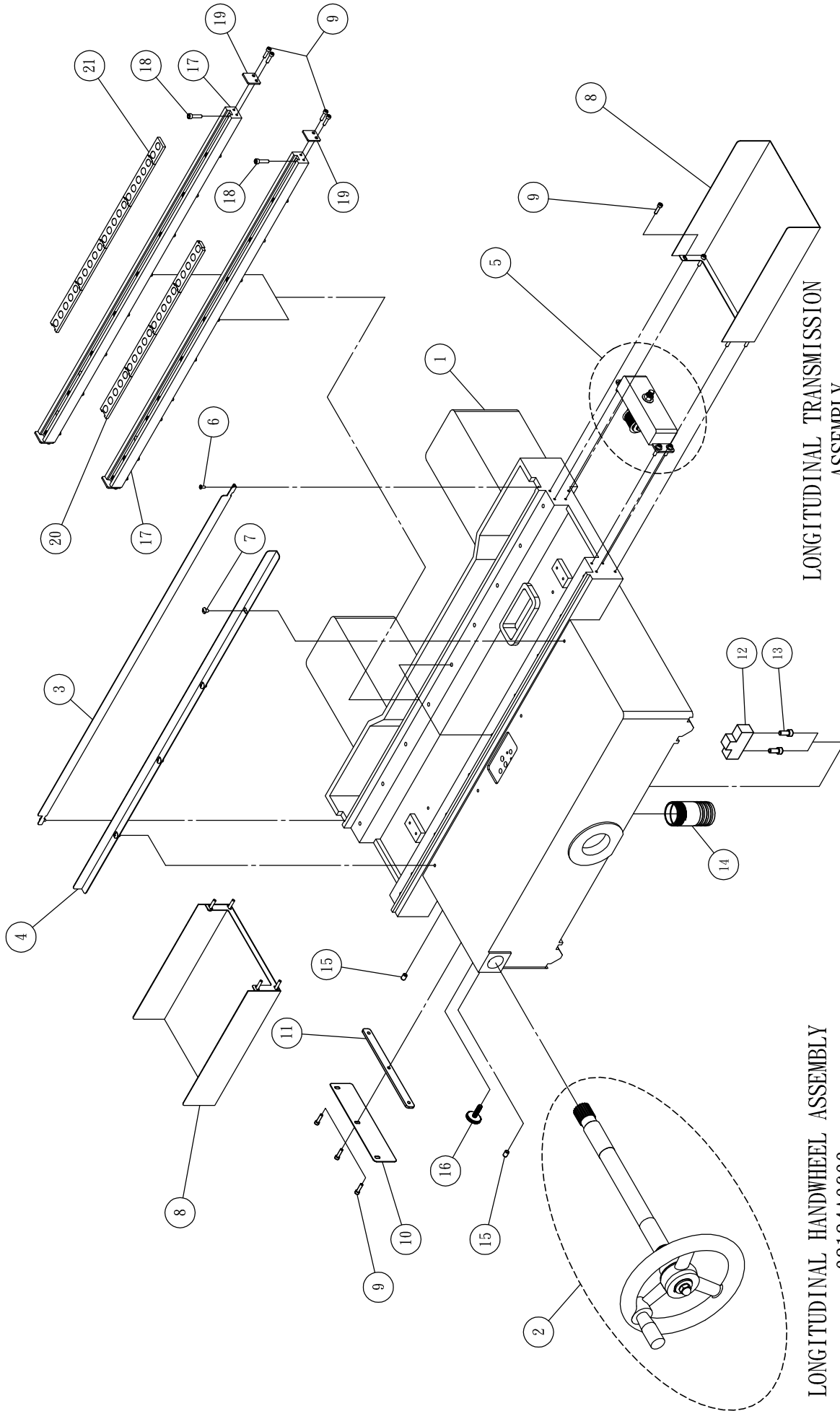
TABLE ASSEMBLY  
 (ONE V & FLAT GUIDEWAYS)  
 (08183A0200)

TABLE ASSEMBLY ( ONE V & FLAT GUIDEWAYS 08183A0200

NO.	DRAWING NO. /SPEC.	DESCRIPTION	QTY	NOTE
1	08183001V0	Table	1	
2	0818301000	Splash guard	1	
3	BRC0061012	Cross head screw	8	M6x1. 0Px12L
4	06181002A0	Coolant guarding board A (Rear)	1	
5	06181002B0	Coolant guarding board B (Rear)	1	
6	06181002C0	Coolant guarding board C (Front)	1	
7	08183003L0	Table wing (L)	1	0818300200 (For 818M)
8	08183003R0	Table wing (R)	1	0818300200 (For 818M)
9	0818300900	Rubber plate	2	
10	0818300600	Fixing bar	2	
11	BRC0061008	Cross round head screw	6	M6x1. 0Px8L
12	BH00081235 BH00081220	Inner hexagonal screw	4	M8x1. 25Px35L (For Hydraulic) M8x1. 25Px20L (For 818M)
13	WP00102302	Washer	4	10x23x2
14	06183035M0	Cylinder rack	2	(For Hydraulic)
15	BHP0081220	Flat head inner hexagonal screw	4	M8x1. 25Px25L (For Hydraulic)
16	06183044M0	Sensor block (L)	2	(For Hydraulic)
17	06183045M0	Sensor block (R)	2	(For Hydraulic)
18	0618405200	Fixing knob	2	D-8070-30-M8-30 (For Hydraulic)
19	BHU0081210	Inner hexagonal headless screw	4	M8-8L
20	06184035A0	Longitudinal travel adjustor cover (Hydraulic)	1	(For Hydraulic)
21	0618303300	Gear bar	1	(For Hydraulic)
22	BH00061025	Inner hexagonal screw	11	M6x1. 0Px25L (For Hydraulic)
23	06183032M0	Coolant guiding block	1	
24	BRC0040706	Cross round head screw	2	M4x0. 7Px6L
25	06183020A0	Right adjustor block(R)	2	
26	HF00450850	Adjusting knob	2	
27	BH00081250	Inner hexagonal screw	2	M8x1. 25Px50L (For 818M)







LONGITUDINAL TRANSMISSION  
ASSEMBLY

08184A0800

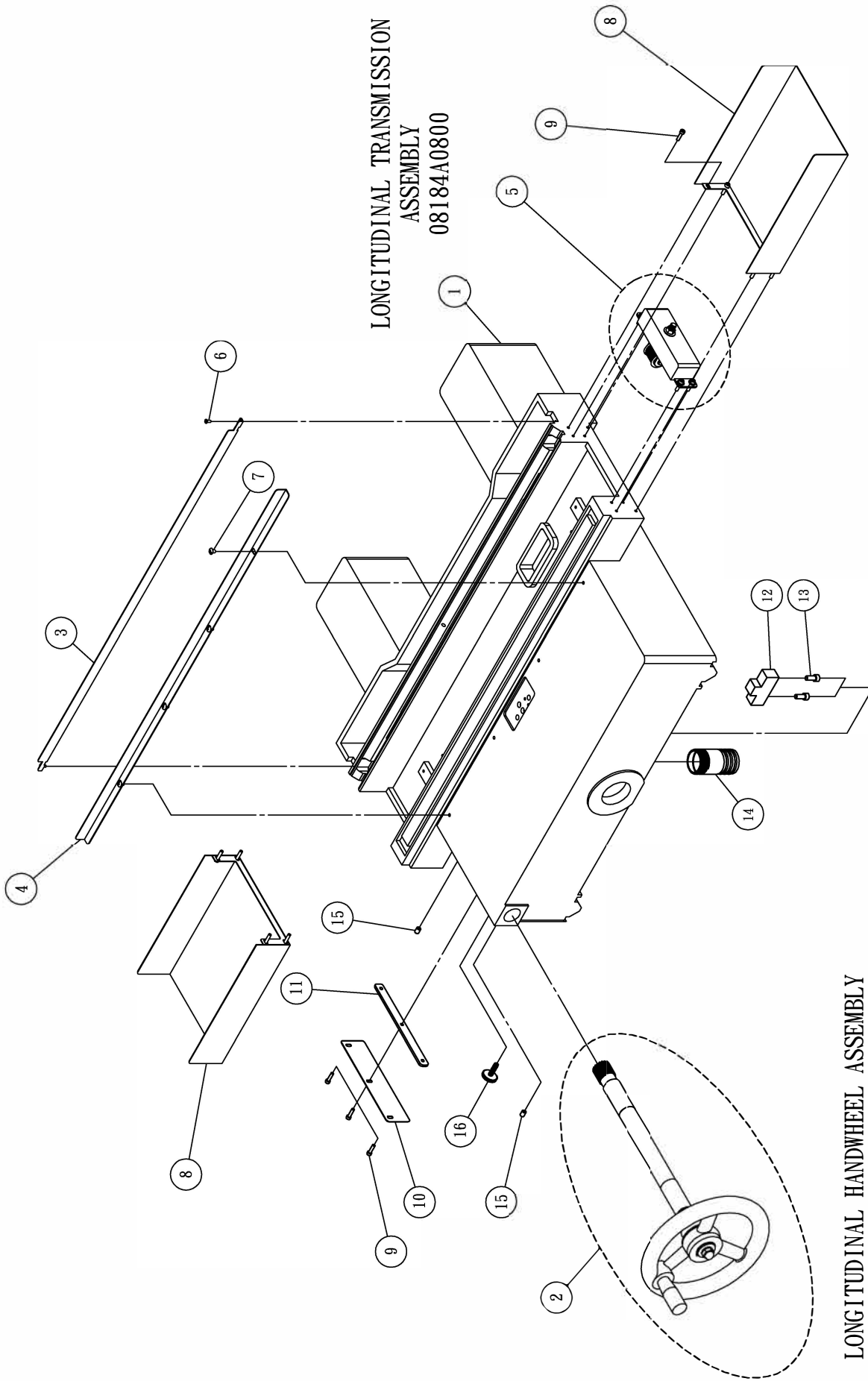
SADDLE ASSEMBLY  
(FOR BALL WAYS)  
(08184A0100)

LONGITUDINAL HANDWHEEL ASSEMBLY

08184A0600

SADDLE ASSEMBLY ( ball 08184A0100 )

NO.	DRAWING NO. /SPEC.	DESCRIPTION	QTY	NOTE
1	08184001B0	Saddle	1	
2	08184A0600	Longitudinal handwheel assembly	1set	
3	0818401800	Dust proof bar(rear)	1	
4	0818401700	Dust proof bar(front)	1	
5	08184A0800	Longitudinal transmission assembly	1set	
6	BPC0040708	Flat head screw	2	M4x0. 7Px8L
7	BRC0061008	Cross round head screw	4	M6x1. 0Px8L
8	0818401100	Dust proof plate	2	
9	BH00050820	Inner hexagonal screw	19	M5x0. 8Px20L
10	0818401400	Crossfeed locking bar (outer)	1	
11	0818401300	Crossfeed locking bar (inner)	1	
12	0818401600	Longitudinal fixed stroke block	1	
13	BH00081220	Inner hexagonal screw	2	M8x1. 25Px20L
14	CONA01123E	Pipe	1	1½ " x 3 inch E
15	BHU0050812	Inner hexagonal headless screw	2	M5x12L
16	0618405200	Handwheel handle	1	D-8070-30-M8-30
17	0818400800	Longitudinal steel rail (concave)	2	
18	BH00061025	Inner hexagonal screw	19	M6x1. 0Px25L
19	0618400800	Protection plate	4	
20	0618420500	Steel ball retainer (F)	1	20pcs 5/8" steel ball
21	0618422500	Steel ball retainer (R)	1	22pcs 5/8" steel ball



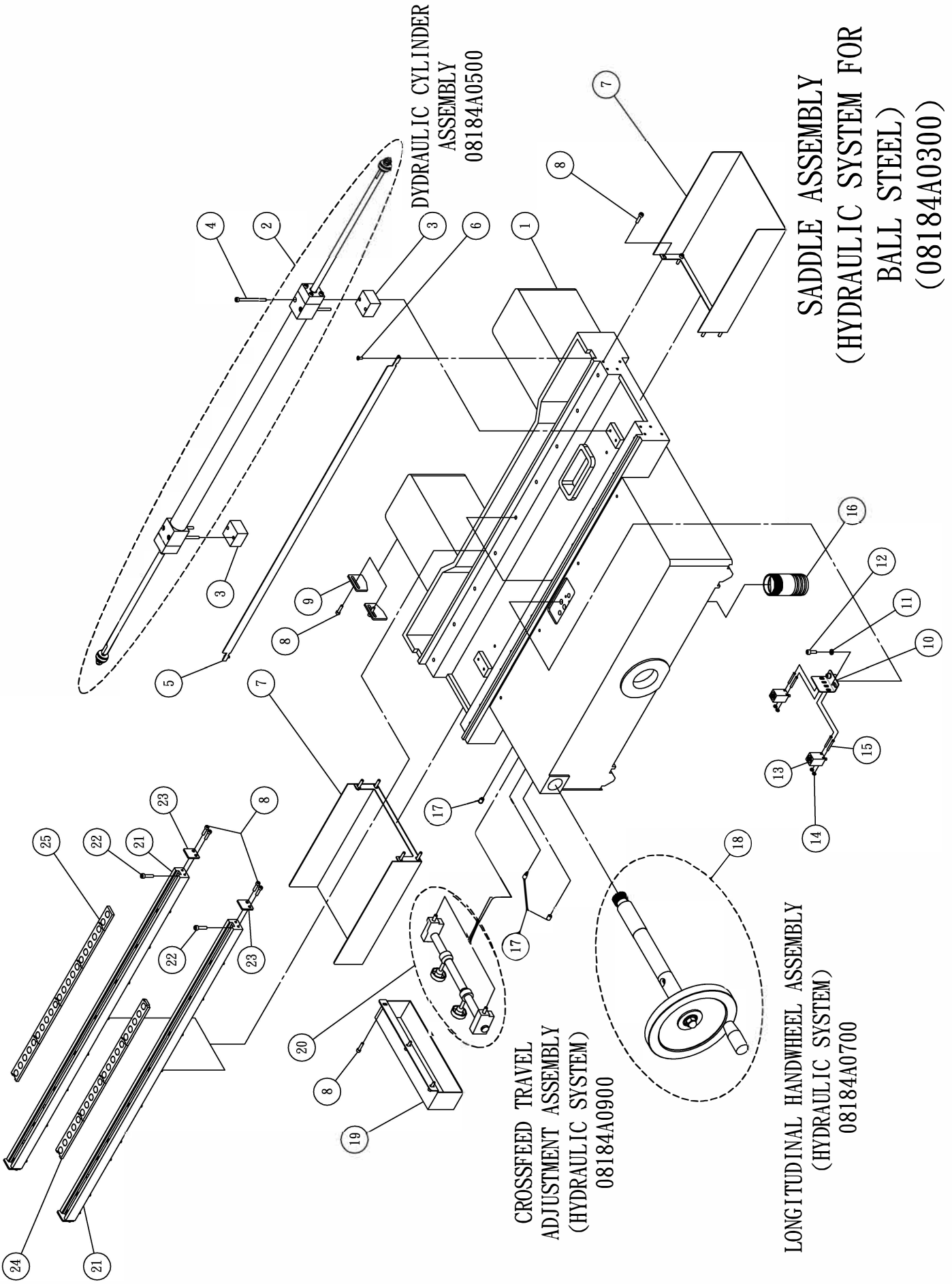
LONGITUDINAL TRANSMISSION  
ASSEMBLY  
08184A0800

LONGITUDINAL HANDWHEEL ASSEMBLY  
08184A0600

SADDLE ASSEMBLY  
(ONE V & FLAT GUIDEWAYS FOR 818II )  
(08184A0200)

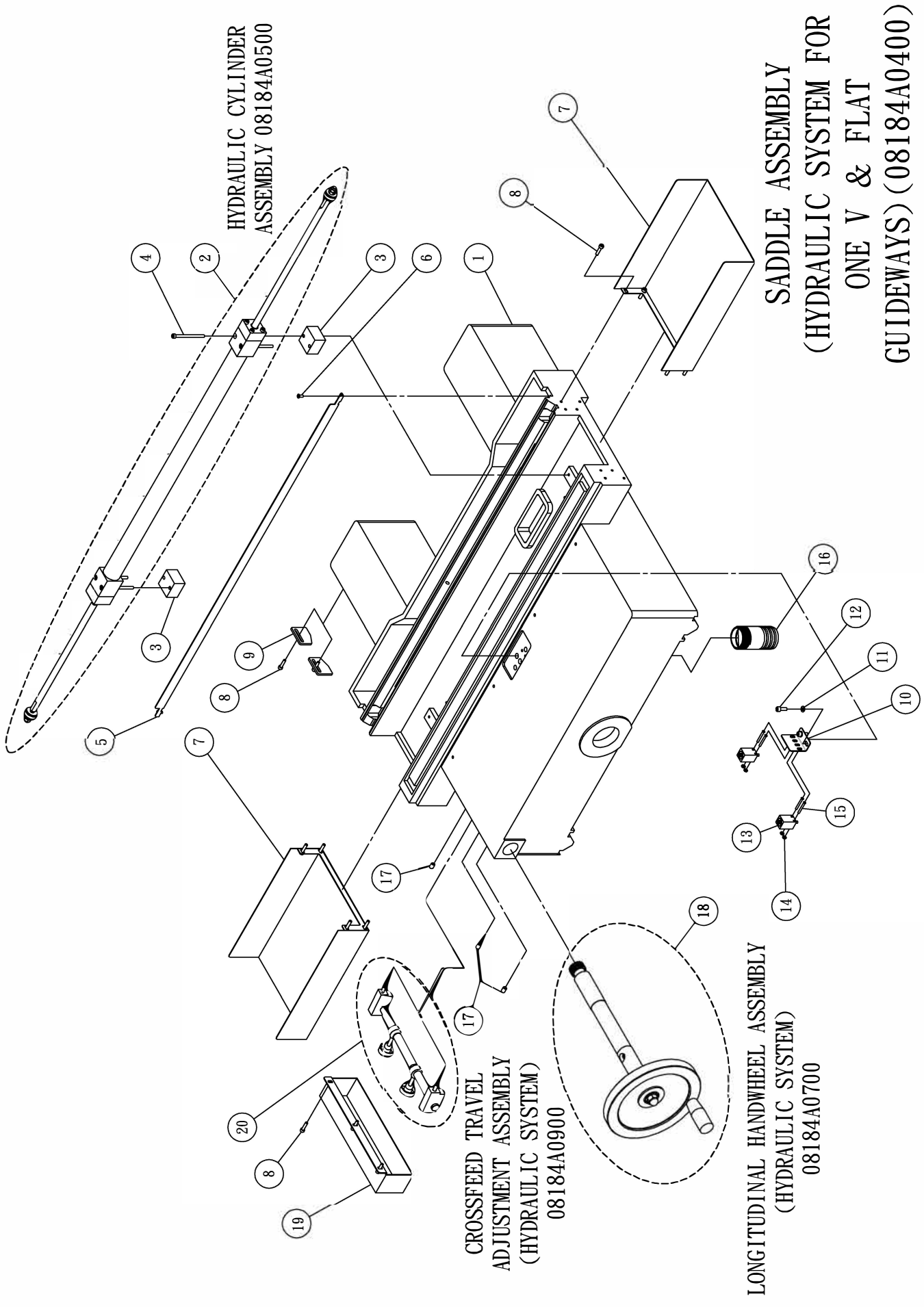
SADDLE ASSEMBLY (ONE V & FLAT GUIDEWAYS FOR 818II 08184A0200)

NO.	DRAWING NO. /SPEC.	DESCRIPTION	QTY	NOTE
1	08184001V0	Saddle	1	
2	08184A0600	Longitudinal handwheel assembly	1set	
3	0818401800	Dust proof bar(rear)	1	
4	0818401700	Dust proof bar(front)	1	
5	08184A0800	Longitudinal transmission assembly	1set	
6	BPC0040708	Flat head screw	2	M4x0. 7Px8L
7	BRC0061008	Cross round head screw	4	M6x1. 0Px8L
8	0818401100	Dust proof plate	2	
9	BH00050820	Inner hexagonal screw	11	M5x0. 8Px20L
10	0818401400	Crossfeed locking bar (outer)	1	
11	0818401300	Crossfeed locking bar (inner)	1	
12	0818401600	Longitudinal fixed stroke block	1	
13	BH00081220	Inner hexagonal screw	2	M8x1. 25Px20L
14	CONA01123E	Pipe	1	1½ " x 3 inch E
15	BHU0050812	Inner hexagonal headless screw	2	M5x12L
16	0618405200	Handwheel handle	1	D-8070-30-M8-30



SADDLE ASSEMBLY ( HYDRAULIC SYSTEM FOR BALL STEEL 08184A0300 )

NO.	DRAWING NO. /SPEC.	DESCRIPTION	QTY	NOTE
1	08184001B0	Saddle	1	
2	08184A0500	Cylinder set	1set	
3	0818401500	Cycinder block	2	
4	BH00050840	Inner hexagonal screw	4	M5x0. 8Px40L
5	0818401800	Dust proof bar(Rear)	1	
6	BPC0040708	Flat head screw	2	M4x0. 7Px8L
7	0818401100	Dust proof plate	2	
8	BH00050820	Inner hexagonal screw	21	M5x0. 8Px20L
9	0618503900	F/R Limited block	2	
10	0618404700	Switch fixing seat	1	
11	WP00051201	Washer	2	5x12x1
12	BH00050815	Inner hexagonal screw	2	M5x0. 8Px15L
13	SPC0DC35NC	Longitudinal proximity switch	2	TL-B5NE1
14	NH000000M3	Nut	4	M3
15	BRC0030525	Cross round head screw	4	M3x0. 5Px25L
16	CONA01123E	Pipe	1	1½ " x 3 inch E
17	BHU0050812	Inner hexagonal headless screw	3	M5x12L
18	08184A0700	Longitudinal handwheel assembly	1set	
19	0818400900	F/R Limited cover	1	
20	08184A0900	Micro switch assembly	1set	
21	0818400800	Longitudinal steel rail (concave)	2	
22	BH00061025	Inner hexagonal screw	19	M6x1. 0Px25L
23	0618400800	Protection plate	4	
24	0618420500	Steel ball retainer (F)	1	20pcs 5/8" steel ball
25	0618422500	Steel ball retainer (R)	1	22pcs 5/8" steel ball



HYDRAULIC CYLINDER  
ASSEMBLY 08184A0500

SADDLE ASSEMBLY  
(HYDRAULIC SYSTEM FOR  
ONE V & FLAT  
GUIDEWAYS) (08184A0400)

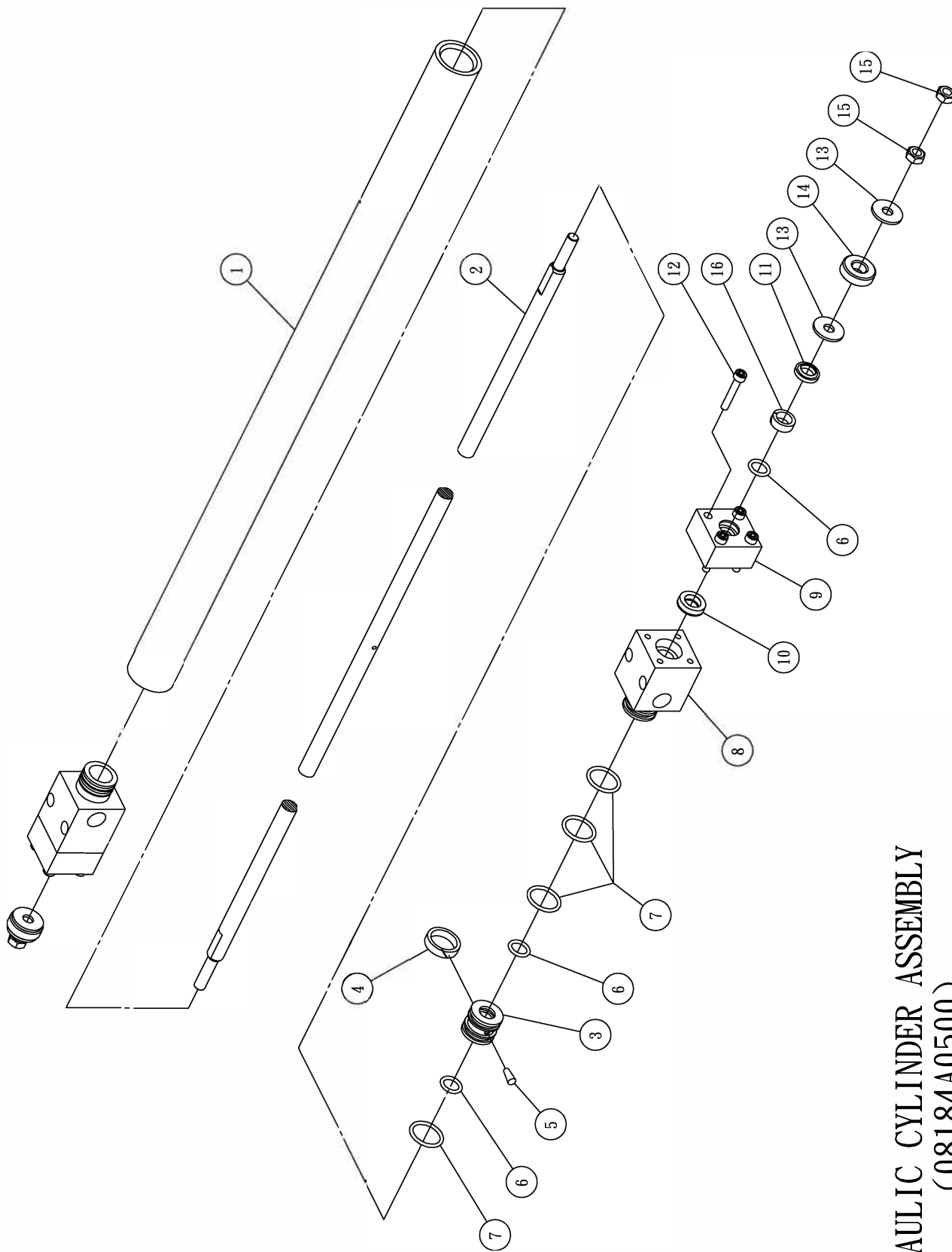
CROSSFEED TRAVEL  
ADJUSTMENT ASSEMBLY  
(HYDRAULIC SYSTEM)  
08184A0900

LONGITUDINAL HANDWHEEL ASSEMBLY  
(HYDRAULIC SYSTEM)  
08184A0700

SADDLE ASSEMBLY ( HYDRAULIC SYSTEM FOR ONE V & FLAT GUIDEWAYS 08184A0400 )

NO.	DRAWING NO. /SPEC.	DESCRIPTION	QTY	NOTE
1	08184001V0	Saddle	1	
2	08184A0500	Cylinder set	1set	
3	0818401500	Hydraulic cylinder block	2	
4	BH00050840	Inner hexagonal screw	4	M5x0. 8Px40L
5	0818401800	Dust proof bar(Rear)	1	
6	BPC0040708	Flat head screw	2	M4x0. 7Px8L
7	0818401100	Dust proof plate	2	
8	BH00050820	Inner hexagonal screw	13	M5x0. 8Px20L
9	0618503900	F/R Limited block	2	
10	0618404700	Switch fixing seat	1	
11	WP00051201	Washer	2	5x12x1
12	BH00050815	Inner hexagonal screw	2	M5x0. 8Px15L
13	SPC0DC35NC	Longitudinal proximity switch	2	TL-B5NE1
14	NH000000M3	Nut	4	M3
15	BRC0030525	Cross round head screw	4	M3x0. 5Px25L
16	CONA01123E	Pipe	1	1½ " x 3 inch E
17	BHU0050812	Inner hexagonal headless screw	3	M5x12L
18	08184A0700	Longitudinal handwheel assembly	1set	
19	0818400900	F/R Limited cover	1	
20	08184A0900	Micro switch assembly	1set	



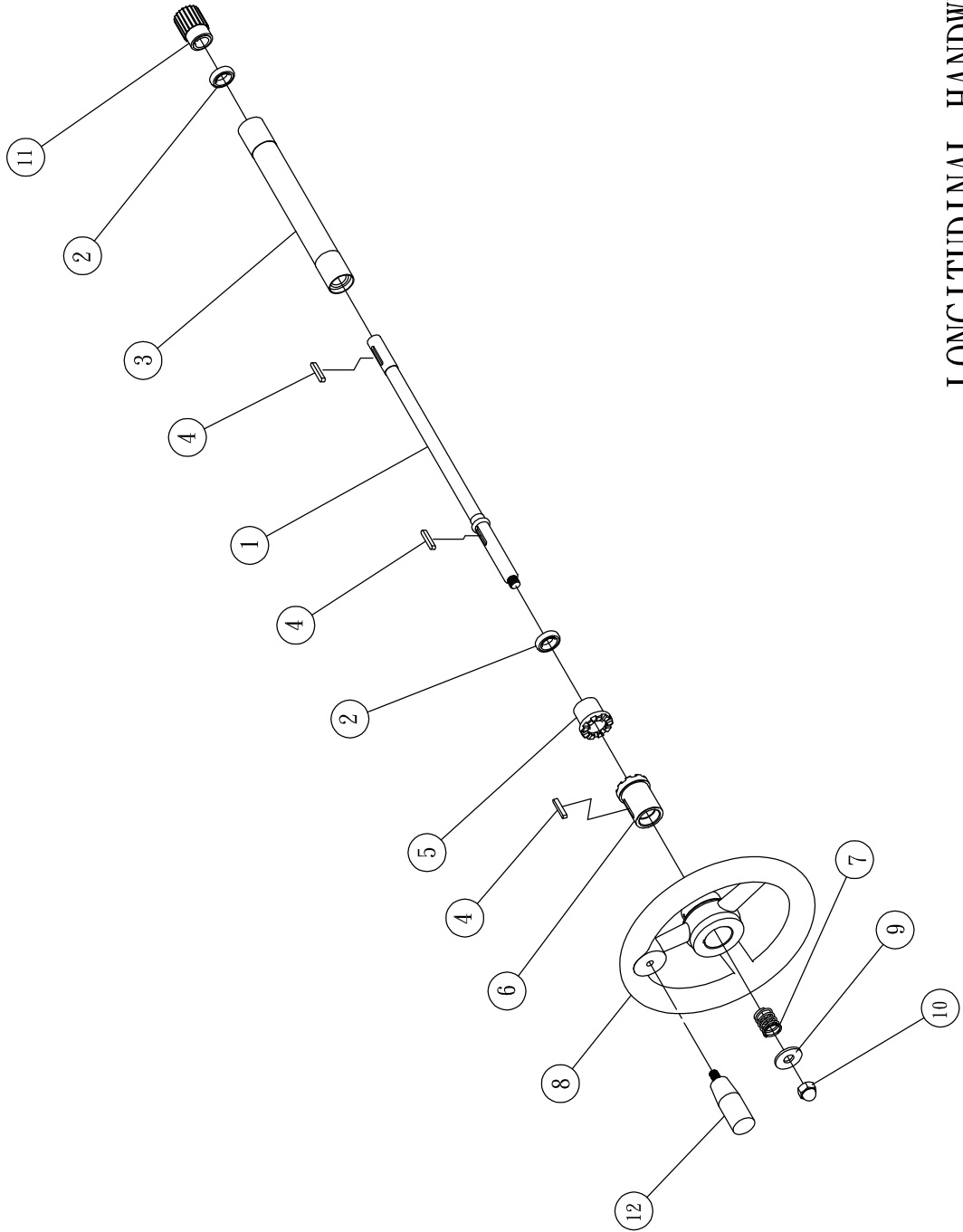


HYDRAULIC CYLINDER ASSEMBLY  
(08184A0500)

HYDRAULIC CYLINDER ASSEMBLY (08184A0500)

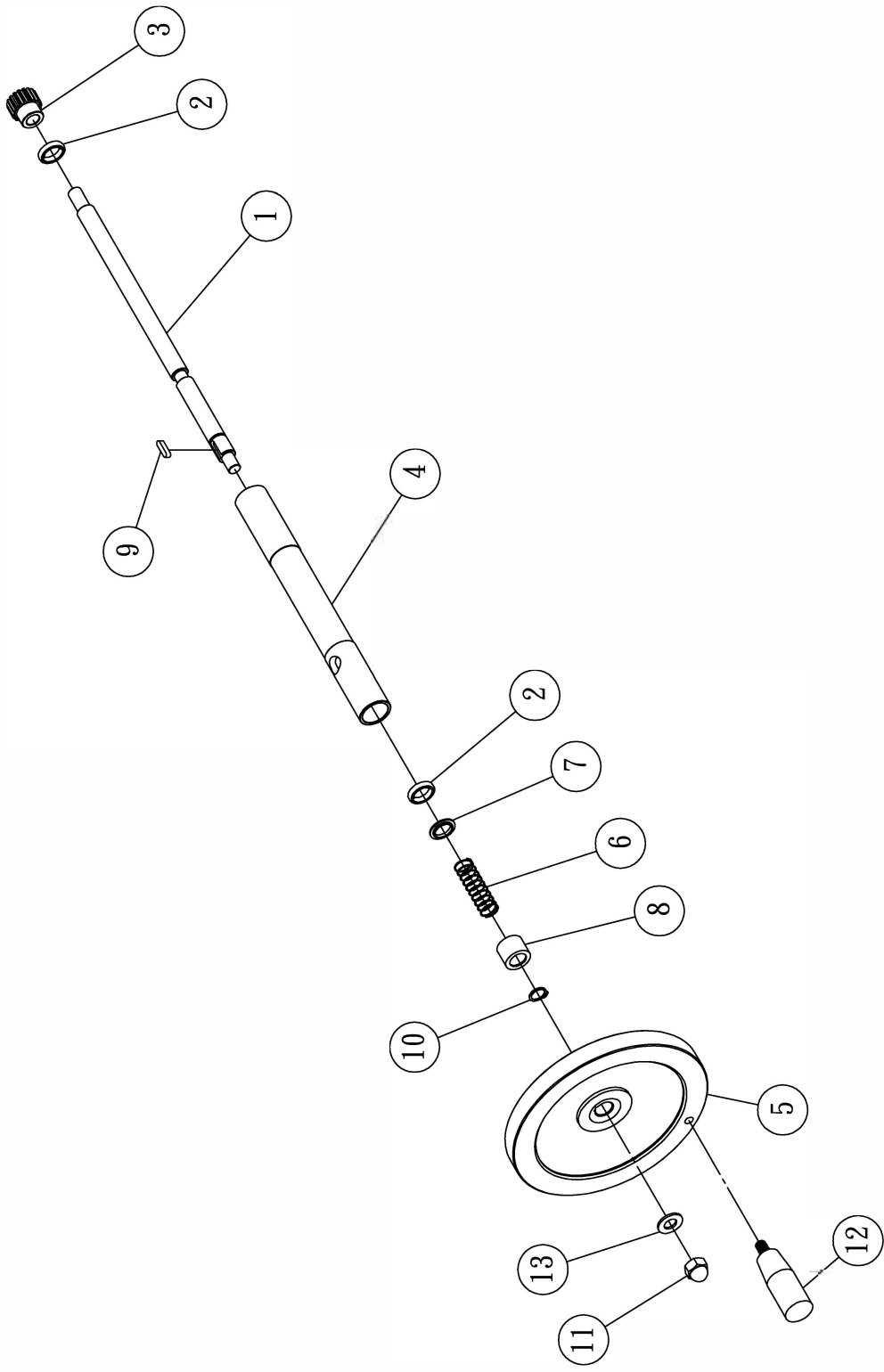
NO.	DRAWING NO. /SPEC.	DESCRIPTION	QTY	NOTE
1	0818410100	Hydraulic pipe	1	
2	0818410200	Piston rod	1	
3	0818410300	Piston	1	
4	RG02250006	Turcite B	1	WRS-6x2.5Tx72Lmm
5	PINT004018	Taper pin	1	4# x 25L
6	RG00000P12	O-ring	4	P12
7	RG00000P21	O-ring	6	P21
8	0818410400	Piston seat	2	
9	0818410500	Dust ring cover	2	
10	SE00US1012	Oil seal	2	USI 12x20x5
11	RG01LBH012	Dust ring	2	LBH 12
12	BH00050830	Inner hexagonal screw	8	M5x0.8Px30L
13	WP00082302	Washer	4	8x23x2
14	0618410600	Cushioning pad	2	
15	NH000014M8	Nut	4	M8
16	RG02250006	Turcite B	2	WRS-6x2.5Tx44Lmm

LONGITUDINAL HANDWHEEL ASSEMBLY  
(08184A0600)



# LONGITUDINAL HANDWHEEL ASSEMBLY (08184A0600)

NO.	DRAWING NO. /SPEC.	DESCRIPTION	QTY	NOTE
1	08184005B0	Transmission shaft	1	
2	B0006903ZZ	Bearing	2	6903ZZ(17x30x7)
3	08184004B0	Shaft housing	1	
4	KEYD050530	Pin	3	5x5x30L
5	06184002A0	Gear	1	
6	06184003B0	Gear	1	
7	SC00176522	Spring	1	
8	WH00KSP250	Handwheel	1	
9	WP00122502	Washer	1	12x25x2
10	NE00000M12	Nut	1	M12
11	06184006A0	Gear (For one V one flat type)	1	0618400600 Gear-M
12	HE00G90M10	Handle	1	FG90-M10

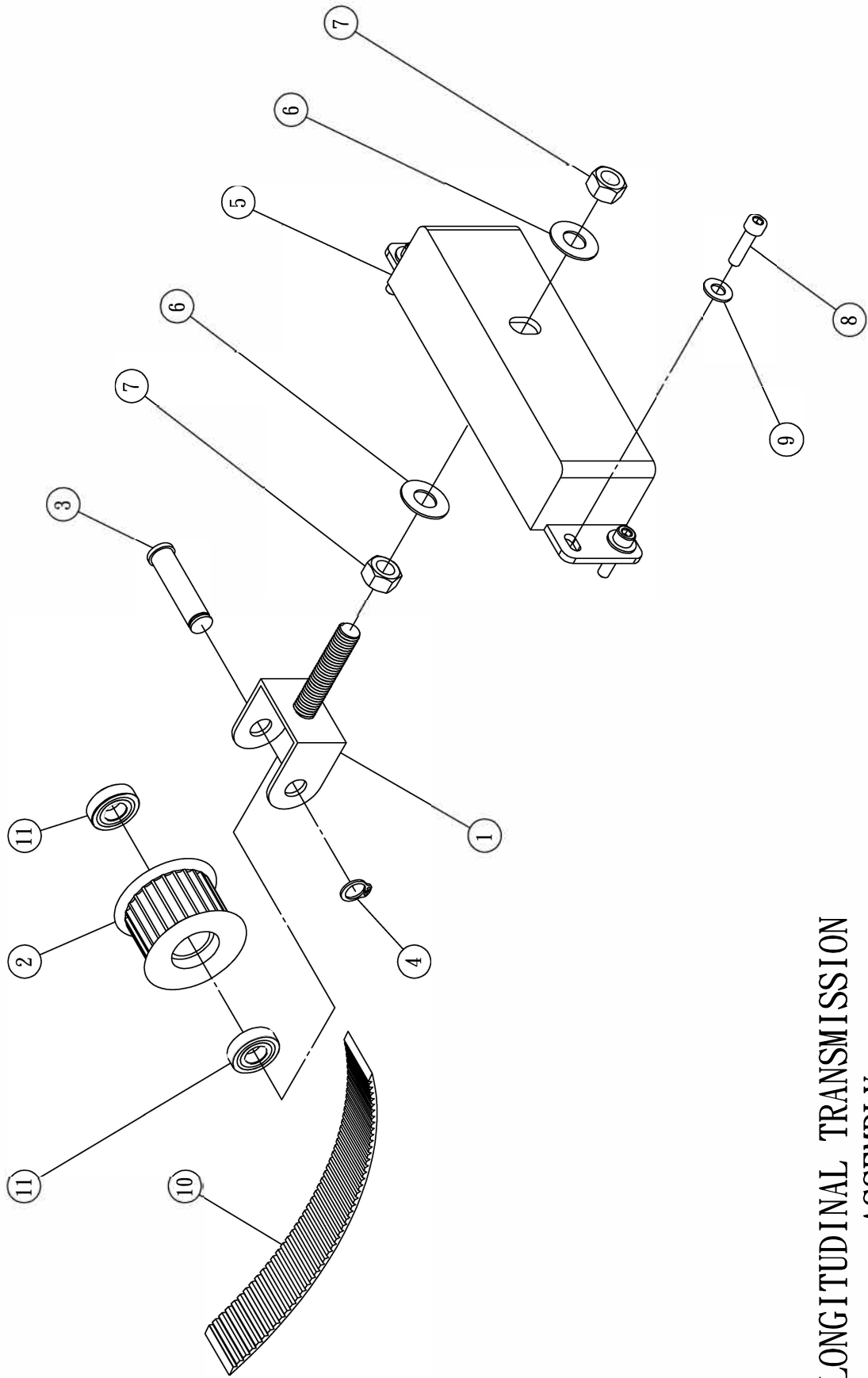


LONGITUDINAL HANDWHEEL ASSEMBLY  
 (HI I ~ AHD II)  
 (08184A0700)

## LONGITUDINAL HANDWHEEL ASSEMBLY (HII~AHDII)

(08184A0700)

NO.	DRAWING NO. /SPEC.	DESCRIPTION	QTY	NOTE
1	08184007H0	Transmission shaft	1	
2	B0006803ZZ	Bearing	2	6803ZZ(17x26x5)
3	0618401500	Gear	1	
4	08184006H0	Shaft housing	1	
5	WH00KRA200	Handwheel	1	KRA200
6	SC00176522	Spring	1	
7	0618406100	Spring washer	1	
8	0618406000	Spring seat	1	
9	KEYD050520	Pin	1	5x5x20L
10	CL00000015	C clip	1	STW-15
11	NE000000M12	Nut	1	M12
12	HE00G90M10	Handle	1	FG90-M10
13	WP00122502	Washer	1	12x25x2

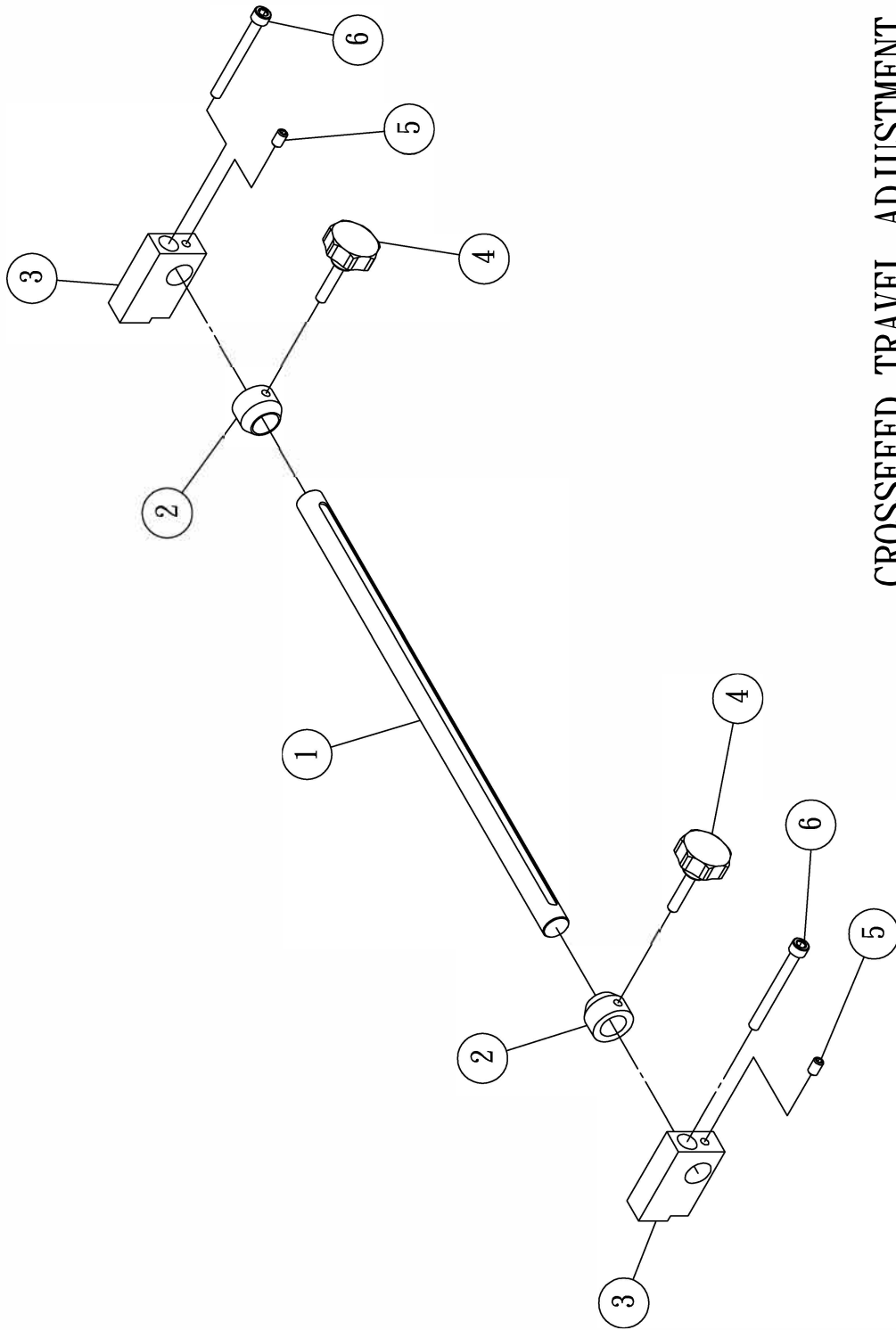


LONGITUDINAL TRANSMISSION  
ASSEMBLY  
(08184A0800) 818II

## LONGITUDINAL TRANSMISSION ASSEMBLY 818II (08184A0800)

NO.	DRAWING NO. /SPEC.	DESCRIPTION	QTY	NOTE
1	0618401700	Gear fixing seat	1	
2	0618401600	Gear	1	
3	0618402300	Fixing shaft	1	
4	CL00000010	Ring	1	S10
5	0818401000	Gear fixing case	1	
6	WP00102302	Washer	2	10x23x2
7	NH00014M10	Nut	2	M10
8	BH00050820	Inner hexagonal screw	4	M5x0. 8Px20L
9	WP00051201	Washer	4	5x12x1
10	BS00250630	Timing belt	1	XL-630-25W
11	B0006900ZZ	Bearing	2	6900ZZ



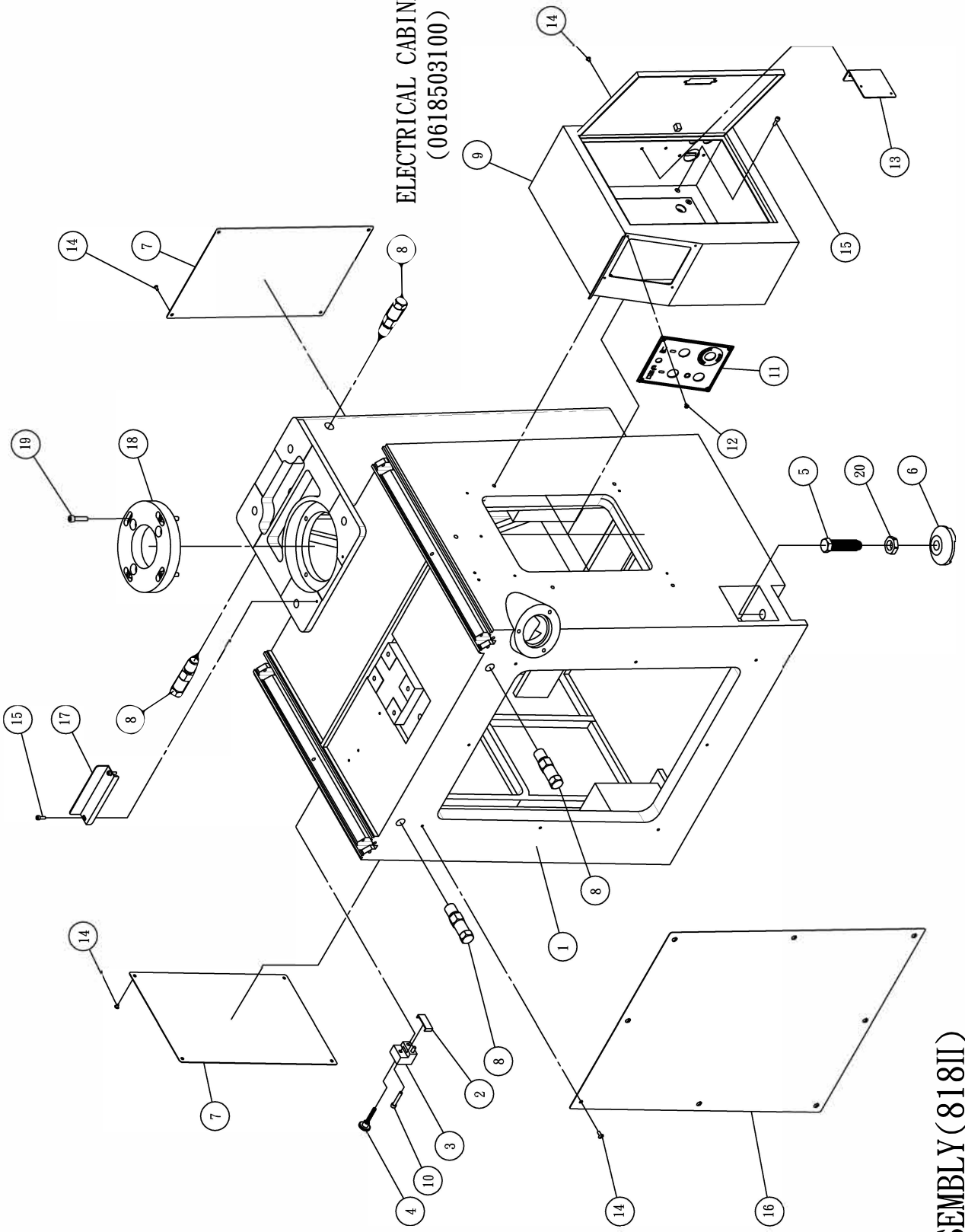


CROSSFEED TRAVEL ADJUSTMENT ASSEMBLY  
 (AHI~AHDII)  
 (08184A0900)

### CROSSFEED TRAVEL ADJUSTMENT ASSEMBLY(AHII ~AHDII) (08184A0900)

NO.	DRAWING NO. /SPEC.	DESCRIPTION	QTY	NOTE
1	0818401200	Cross adjustment rail	1	
2	0618400400	Cross adjustment ring	2	
3	0618400200	Cross adjustment rail fixing seat	2	
4	SS0000M620	Hand knob	2	6050-32-M6-30
5	BHU0061010	Inner hexagonal headless screw	2	M6-10L
6	BH00061035	Inner hexagonal screw	2	M6x1.0Px35L

ELECTRICAL CABINET  
(0618503100)

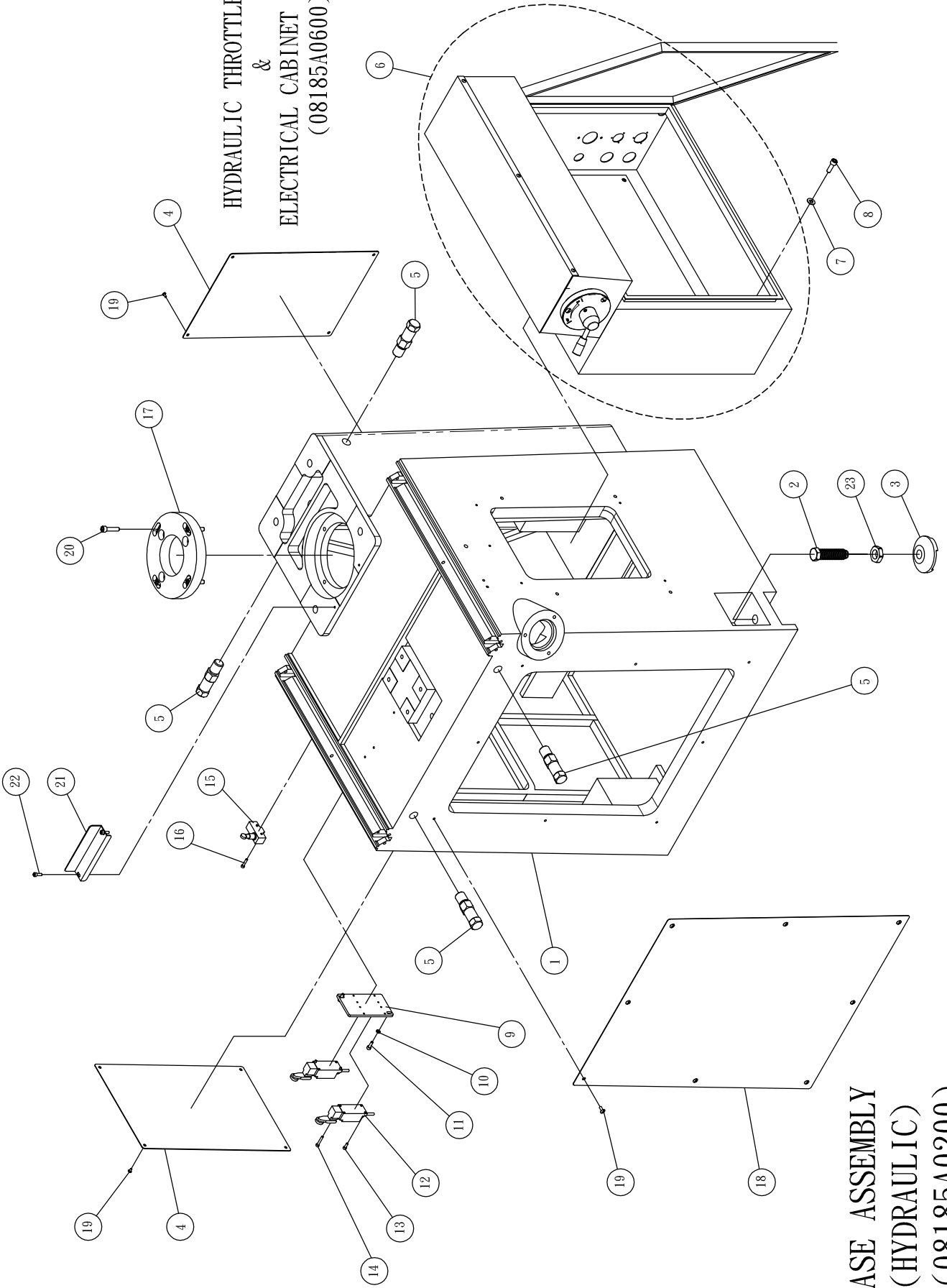


BASE ASSEMBLY (818II)  
(08185A0100)

## BASE ASSEMBLY ( 818II 08185A0100 )

NO.	DRAWING NO. /SPEC.	DESCRIPTION	QTY	NOTE
1	08185001A0	Base (flat)	1	08185001B0 (concave)
2	0618504500	Fixing plate	1	
3	0618503000	Fixing seat	1	
4	3060405500	Fixing screw (adjustable)	1	
5	0618502400	Leveling bolt	3	
6	0618501200	Leveling block	3	
7	0618504300	Side cover	2	
8	0618504900	Lifting bolt	4	
9	0618503100	Electrical cabinet (R)	1	818II (L) 0618503200
10	BH00061035	Inner hexagonal screw	2	M6x1. 0Px35L
11	0618504600	Control panel	1	
12	BRC0040706	Cross round head screw	4	M4x0. 7Px6L
13	0618505400	Switch fixed seat	1	
14	BRC0050810	Cross round head screw	18	M5x0. 8Px10L
15	BH00050810	Inner hexagonal screw	6	M5x0. 8Px10L
16	08185002A0	Base cover (flat)	1	08185003B0 (concave)
17	0818200400	Column cover	1	
18	3060501200	Lift fixed plates	1	
19	BH00081235	Inner hexagonal screw	4	M8x1. 25Px35L
20	0618502500	Adjustment nut	3	7/8" - 9 UNS

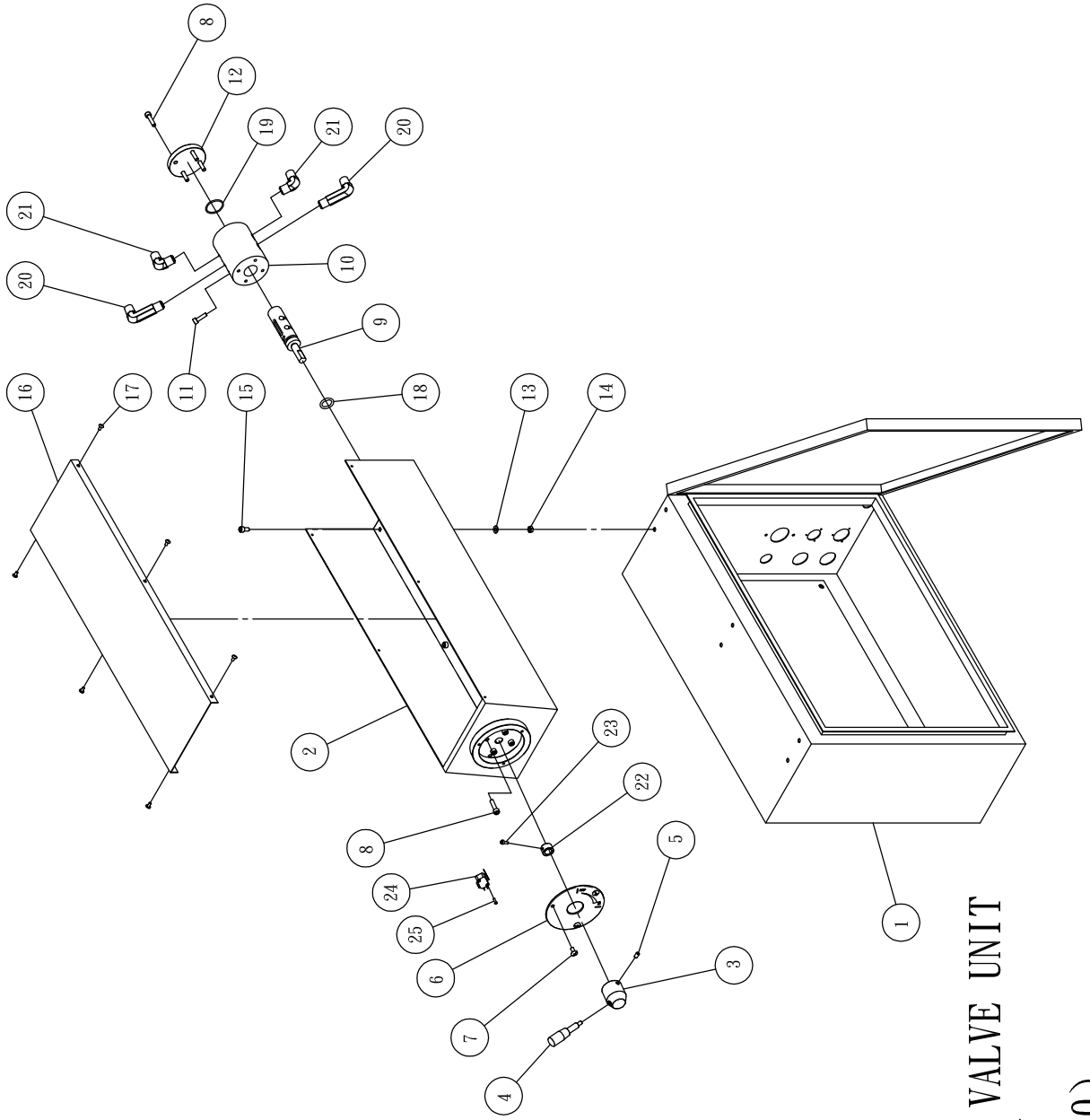
HYDRAULIC THROTTLE VALVE  
&  
ELECTRICAL CABINET ASSEMBLY  
(08185A0600)



BASE ASSEMBLY  
(HYDRAULIC)  
(08185A0200)

## BASE ASSEMBLY ( HYDRAULIC 08185A0200 )

NO.	DRAWING NO. /SPEC.	DESCRIPTION	QTY	NOTE
1	08185001A0	Base (flat)	1	08185001B0 (concave)
2	0618502400	Leveling bolt	3	
3	0618501200	Leveling block	3	
4	0618504300	Side cover	2	
5	0618504900	Lifting bolt	4	
6	08185A0600	Hydraulic throttle valve unit assembly	1set	
7	WP00081602	Washer	4	8x16x2
8	BH00081225	Inner hexagonal screw	4	M8x1.25Px25L
9	0618500100	F/R Micro switch fixed plates	1	
10	WP00051001	Washer	2	5x10x1
11	BH00050812	Inner hexagonal screw	2	M5x0.8Px12L
12	SL00AH8104	Limited switch	2	AH-8104
13	BH00040712	Inner hexagonal screw	2	M4x0.7Px12L
14	BH00040725	Inner hexagonal screw	2	M4x0.7Px25L
15	SM00AM1307	Micro switch	1	AM-1307
16	BH00040720	Inner hexagonal screw	2	M4x0.7Px20L
17	3060501200	Lift fixed plates	1	
18	08185002A0	Base cover (flat)	1	08185003B0 (concave)
19	BC00050812	Cross round head screw	16	M5x0.8Px12L
20	BH00081235	Inner hexagonal screw	4	M8x1.25Px35L
21	0818200400	Column cover	1	
22	BH00050812	Inner hexagonal screw	2	M5x0.8Px10L
23	0618502500	Adjustment nut	3	7/8" - 9 UNS



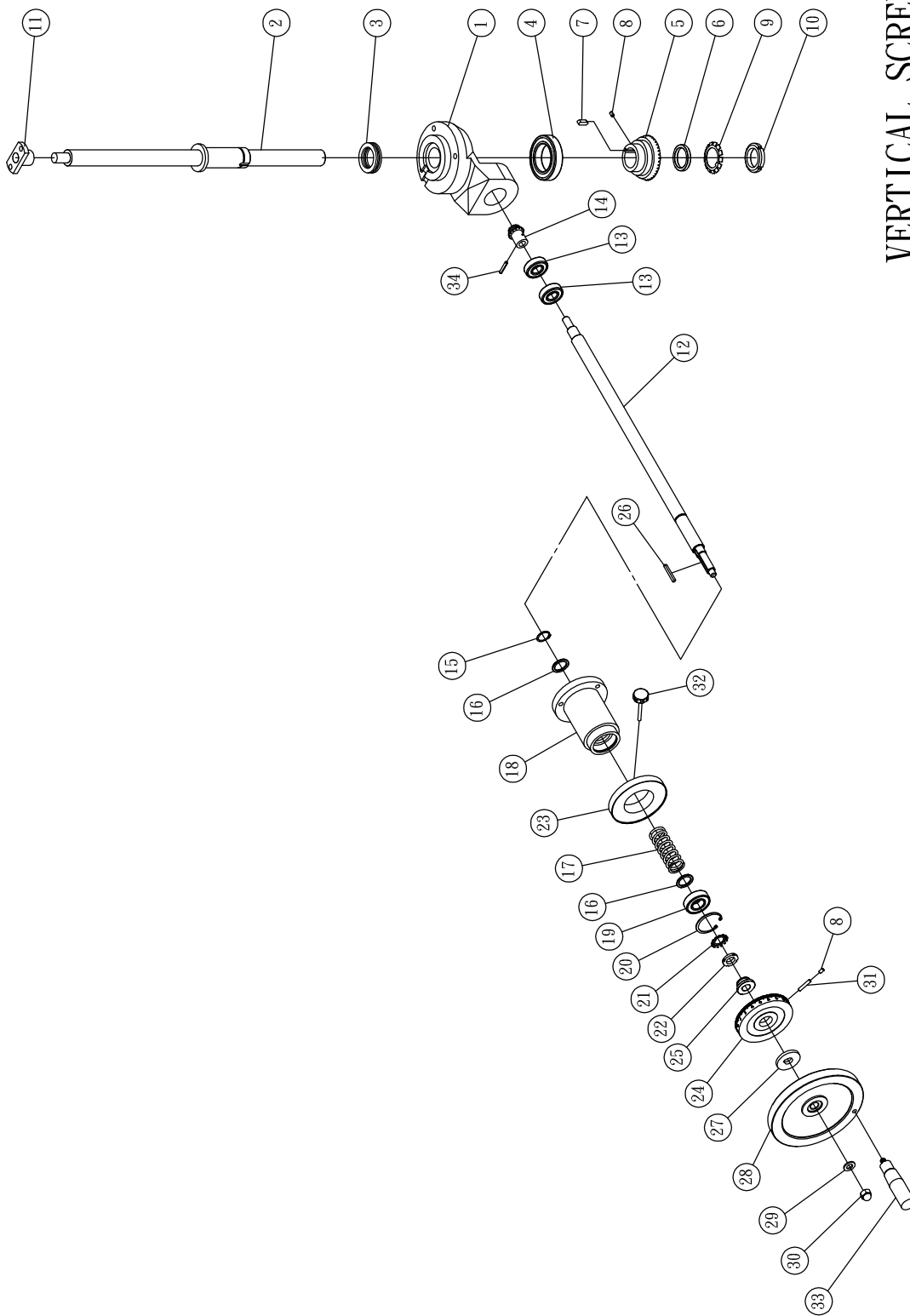
HYDRAULIC THROTTLE VALVE UNIT  
 ASSEMBLY  
 (08185A0600)

## HYDRAULIC THROTTLE VALVE ASSEMBLY (08185A0600)

NO.	DRAWING NO. /SPEC.	DESCRIPTION	QTY	NOTE
1	06185A0420	Electrical cabinet	1	0618A042C0(AHDII, AH II) 0618A023M0(MPG)
2	0618A40000	Hydraulic control valve unit	1	
3	0818510400	Hydraulic control block	1	
4	0618503700	Hydraulic control handle	1	
5	BHU0061010	Inner hex headless screw	1	M6-10L
6	3060405000	Hydraulic control panel	1	
7	BRC0061012	Cross round head screw	3	M6x1.0Px12L
8	BH00061025	Inner hexagonal screw	8	M6x1.0Px25L
9	0818510200	Throttle valve shaft	1	
10	0818510100	Throttle valve unit	1	
11	BH00061016	Inner hexagonal screw	1	M6x1.0Px16L
12	0818510300	Throttle valve cover	1	
13	WP00061301	Washer	6	6.5x13x1
14	NH000000M6	Nut	6	M6
15	BH00061012	Inner hexagonal screw	6	M6x1.0Px12L
16	06185040B0	Throttle valve cover	1	
17	BRC0040708	Cross round head screw	6	M4x0.7Px8L
18	RG00PAS210	O ring	1	PAS-210
19	RG00000S30	O ring	1	S30
20	CON038T38H	90° connector	2	3/8" T x 3/8" H
21	CONL38T38H	90° connector	2	3/8" T x 3/8" H
22	0618503800	Limit switch block	1	
23	BH00040712	Inner hexagonal screw	1	M4x0.7Px12L
24	SM00V1521A	Limit switch	1	V-152-1A5
25	BRC0030512	Cross round head screw	2	M3x0.5Px12L



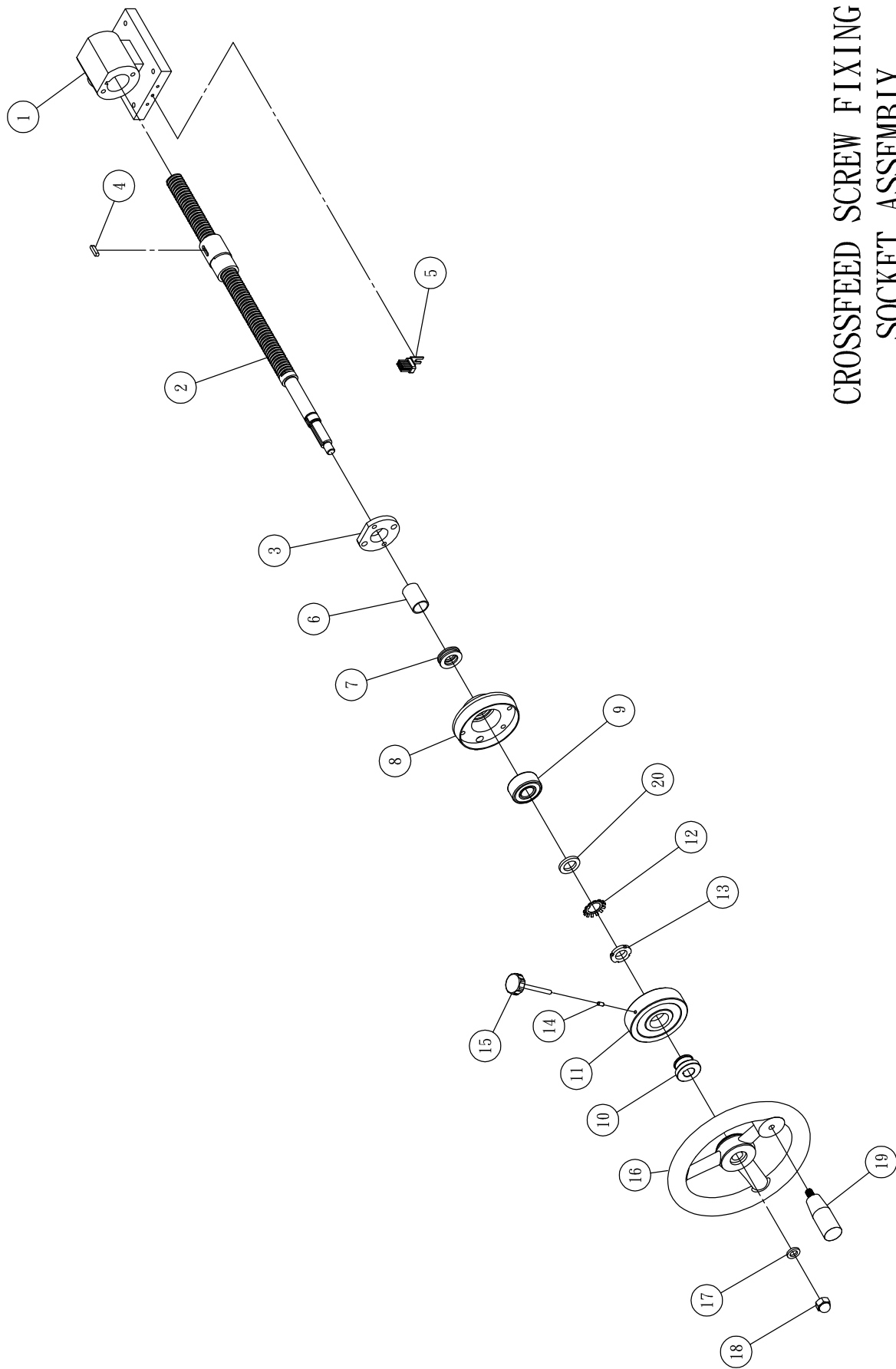
# VERTICAL SCREW ASSEMBLY (08185A0300)



VERTICAL SCREW ASSEMBLY (08185A0300)

NO.	DRAWING NO. /SPEC.	DESCRIPTION	QTY	NOTE
1	0618201000	Vertical screw nut seat	1	
2	06185011N0	Vertical screw	1	06185011C0(P3)
3	B000051108	Bearing	1	51108(40x42x60x13)
4	B00006011Z	Bearing	1	6011Z(55x90x18)
5	06182014N1	Vertical gear	1	06182014C1(mm)
6	0618502300	Spacer	1	
7	KEYD070625	Pin	1	7x6x25
8	BHU0061008	Inner hexagonal headless screw	2	M6-8L
9	AW08000M40	Serrate washer	1	AW08
10	AN08M40P15	Nut	1	AN08(M40x1.5P)
11	0618501300	Vertical screw top seat	1	
12	0818500500	Vertical transmission shaft	1	
13	B00006204Z	Bearing	2	6204Z(20x47x14)
14	06182009N2	Vertical gear	1	06182009C2(mm)
15	CL00000025	Snap ring	1	S25
16	0618501700	Spacer	2	
17	0618501900	Spring	1	
18	0618500700	Vertical transmission shaft seat	1	
19	B000001205	Bearing	1	1205(25x52x15)
20	CL01000052	Fixing ring	1	R52
21	AW04000M20	Serrate washer	1	AW04
22	AW04M20P15	Nut	1	AN04(M20x1.0P)
23	0618500500	Vertical indication ring	1	06185005A0(in)-ACER
24	06185004N0	Vertical graduation ring	1	06185004C0(mm) 06185004A0(in)-ACER
25	0618501800	Indication ring sleere	1	
26	KEYD050540	Pin	1	5x5x40
27	0618501600	Spacer	1	

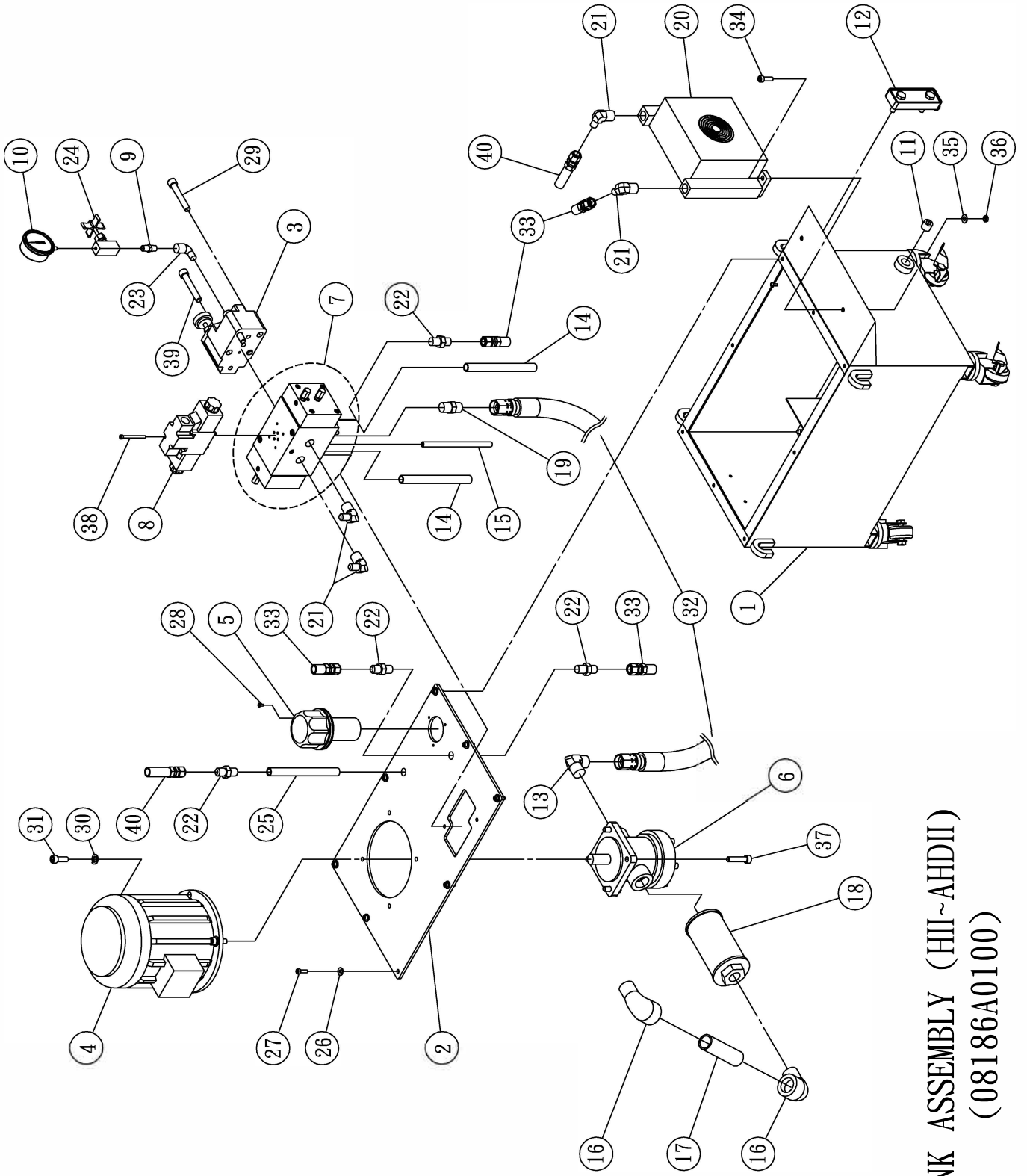




CROSSFEED SCREW FIXING  
 SOCKET ASSEMBLY  
 (08185A0500)

CROSSFEED SCREW FIXING SOCKET ASSEMBLY (08185A0500)

NO.	DRAWING NO. /SPEC.	DESCRIPTION	QTY	NOTE
1	06185011A0	Crossfeed screw fixing socket	1	
2	08185002C0(公)	Crossfeed screw	1	08185002N0(in)
3	0618500900	Crossfeed nut adjusting ring	1	
4	KEYD050520	Pin	1	5x5x20
5	0618501500	Brush fixing pin	1	
6	0618402500	Ring	1	
7	B000051104	Bearing	1	51104(20x21x35x10)
8	0618400700	Crossfeed indication ring	1	
9	B00005204Z	Bearing	1	5204Z(20x47x20.6)
10	0618405400	Crossfeed indication ring sleeve	1	
11	06184004C0(公)	Crossfeed graduation ring	1	06184004N0(in)
12	AW04000M20	Serrate washer	1	AW04
13	AN04M20P15	Nut	1	AN04(M20x1.0P)
14	PIN0005030	Pin	1	5x30L
15	SS0000M620	Hand knob	1	M6x20L
16	WH00KSP200	Handwheel	1	KSP200(hollow)
17	WP00122003	Washer	1	12x20x3
18	NE00000M12	Nut	1	M12
19	HE00G90M10	Handle	1	FG90-M10
20	3060415700	Crossfeed screw washer	1	



TANK ASSEMBLY (HII~AHDII)  
(08186A0100)

## TANK ASSEMBLY (HII-AHDII 08186A0100)

NO.	DRAWING NO. /SPEC.	DESCRIPTION	QTY	NOTE
1	0818600100	Oil tank	1	
2	0818600500	Oil tank cover	1	
3	LOV0000003	Pressure-regulating valve	1	
4	MOT0162346	Oil motor	1	230/460V, 1HP, 3 $\phi$
5	F000316726	Oil-feeding filter	1	
6	PUMPF14220	Oil pump	1	
7	08186A0200	Table reversing arrangement	1set	
8	SDV0G02C4A	Solenoid valve	1	
9	CON114T14T	Straight connection	1	1/4T x 1/4T
10	PG0014LA70	Pressure gauge	1	
11	PLUG000012	Hole plug	1	
12	OLTG000003	Oil level gage	1	
13	CON034T34H	90° Connection	1	
14	CONB38T180	Straight connection pipe	2	
15	CONB18T180	Straight connection pipe	1	
16	CONM10T10T	90° Inner&out connection	2	
17	CONB10T120	Straight connection pipe	1	
18	SUFT00MF08	Oil filter	1	
19	CON112T34H	Straight connection	1	
20	CLAW4074CA	Air cooler	1	For SV
21	CON012T38H	90° Connection	4	For SV ; HII-AHDII two pcs
22	CON112T38H	Straight connection	4	For SV ; HII-AHDII two pcs of BH0A00PT03
23	CONM14T14T	90° Inner&out connection	1	
24	NV00000002	Stop valves	1	
25	CONB12T180	Straight connection pipe	1	For SV
26	WP00061302	Flat washer	8	6x13x2
27	BH00061020	Inner hexagonal screw	8	M6x1.0Px20L

## TANK ASSEMBLY (HII-AHDII 08186A0100)

NO.	DRAWING NO. /SPEC.	DESCRIPTION	QTY	NOTE
28	BRC0050808	Cross round head screw	3	M5x0.8Px8L
29	BH00121770	Inner hexagonal screw	2	M12x1.75Px70L
30	WS00000M10	Spring washer	4	M10
31	BH00101530	Inner hexagonal screw	4	M10x1.5Px30L
32	HH1W340550	Oil pipe	1	1w x 3/4" x 550L
33	HH1W380300	Oil pipe	2	For SV (1Wx3/8" x300L)
34	BH00081225	Inner hexagonal screw	2	For SV (M8x1.25Px25L)
35	WP00081602	Flat washer	2	8x16x2
36	NH000000M8	Nut	2	M8
37	BH00101540	Inner hexagonal screw	4	M10x1.5Px40L
38	BH00050845	Inner hexagonal screw	4	M5x0.8Px45L
39	BH00121790	Inner hexagonal screw	2	M12x1.75Px90L
40	HH1W380350	Oil pipe	1	For SV(1Wx3/8" x350L)



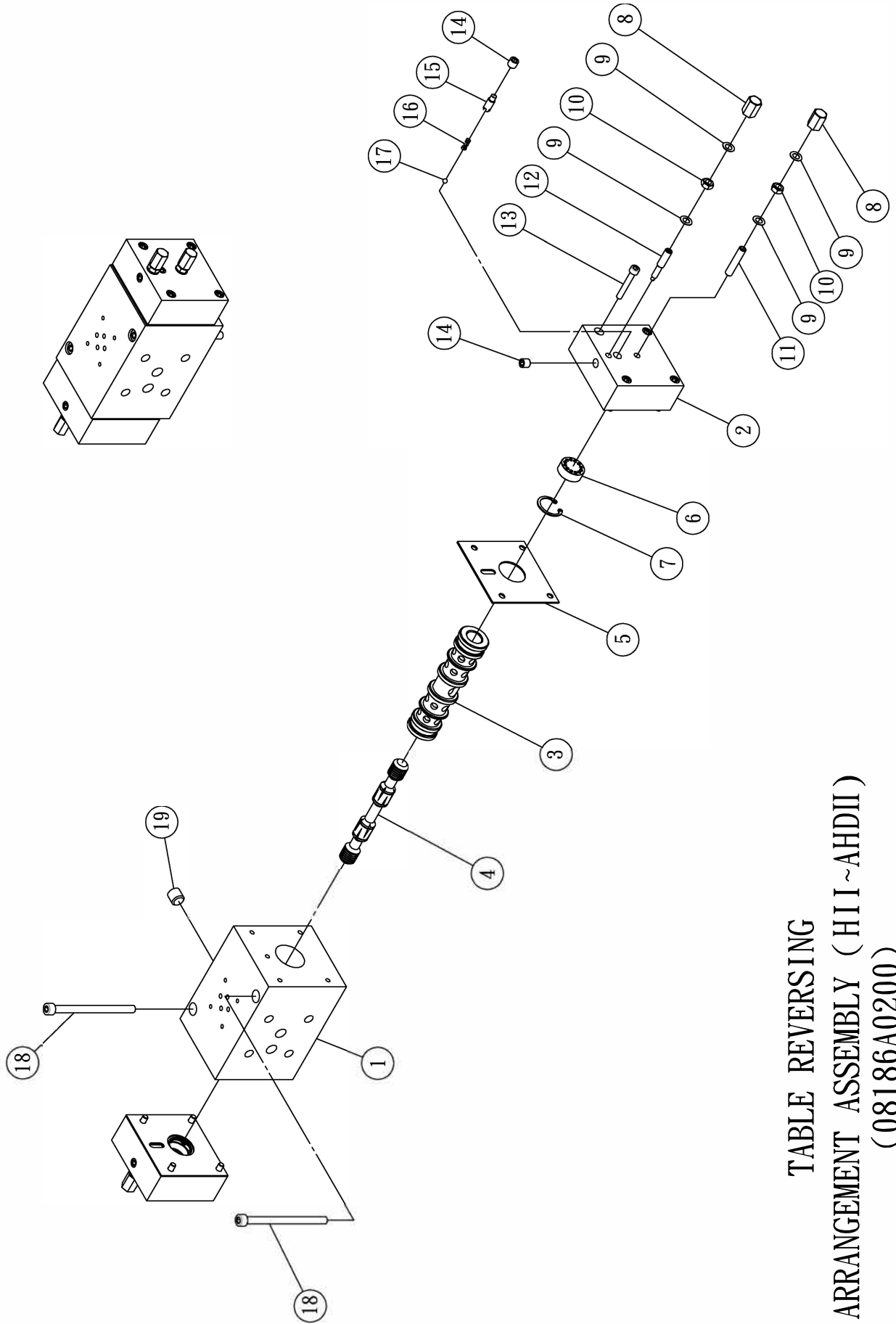
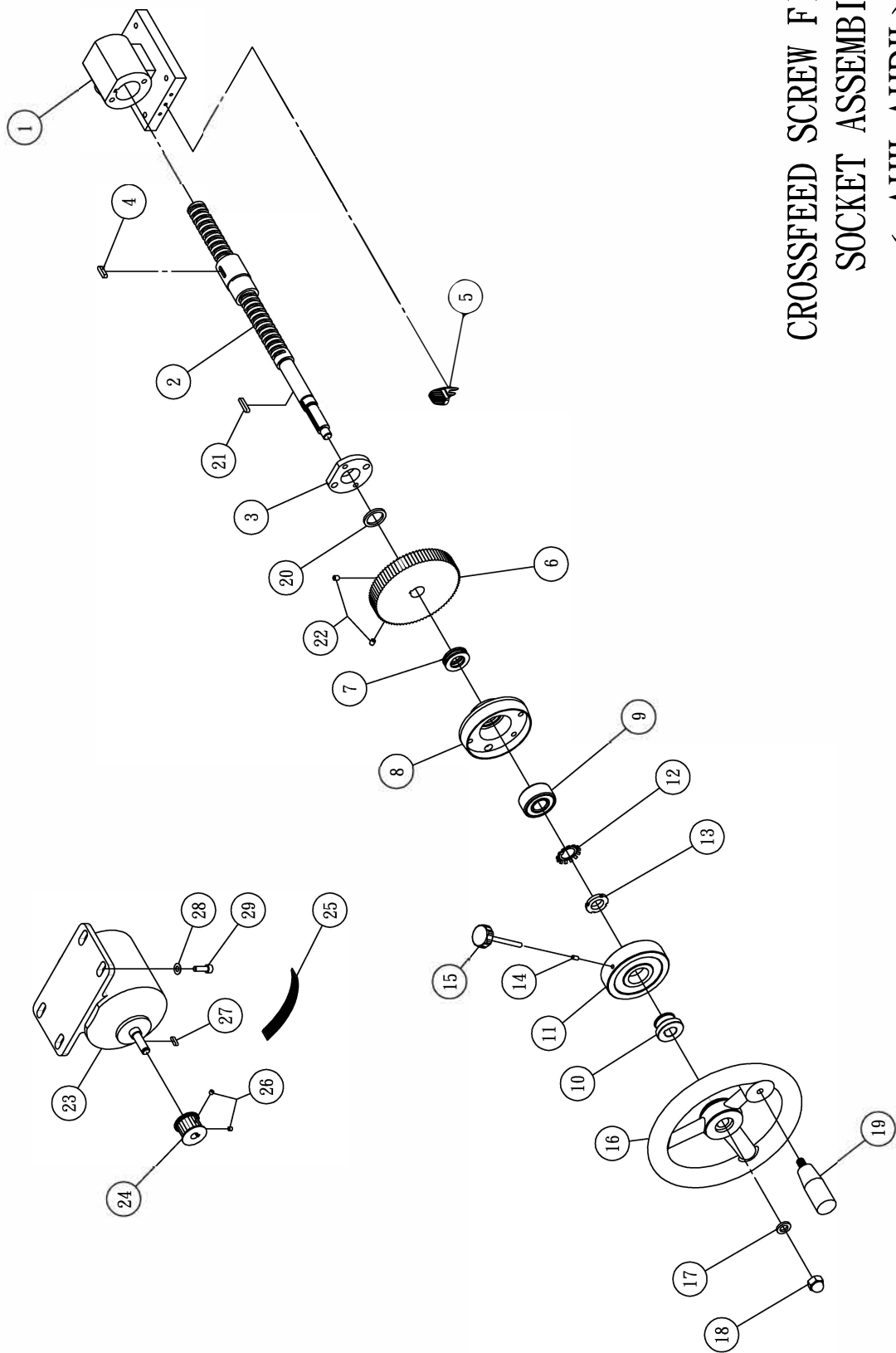


TABLE REVERSING  
 ARRANGEMENT ASSEMBLY (HI I~AHDII)  
 (08186A0200)

TABLE REVERSING ARRANGEMENT ASSEMBLY (HII~AHDII 08186A0200)

NO.	DRAWING NO. /SPEC.	DESCRIPTION	QTY	NOTE
1	0818602000	Reversing body	1	
2	30606004A0	Side cover of reversing body	2	
3	3060600200	Reversing shaft sleeve	1	
4	3060600300	Reversing shaft	1	
5	3060600600	Asbestos gasket	2	
6	3060600500	Cushioning sleeve	2	
7	CL01000028	Inner retaining ring	2	R28
8	3060600800	Leak-proof nut	4	
9	3060601200	CU Washer	8	φ14 OD x φ8 ID x2.0t
10	NH000014M8	Nut	4	M8
11	BHU0081240	Headless screw	2	M8x40L
12	3060601100	Adjustment screw	2	
13	BH00061040	Inner hexagonal screw	8	M6x1.0Px40L
14	PLUG000018	Hole plug	4	1/8PT
15	3060601000	Spring seat	2	
16	SC00542003	Spring	2	φ5 ID x 20L x P4.0 x φ0.3
17	SB00000005	Ball stell	2	φ5
18	BH00080110	Inner hexagonal screw	2	M8x1.25Px100L
19	PLUG000014	Hole plug	1	1/4PT

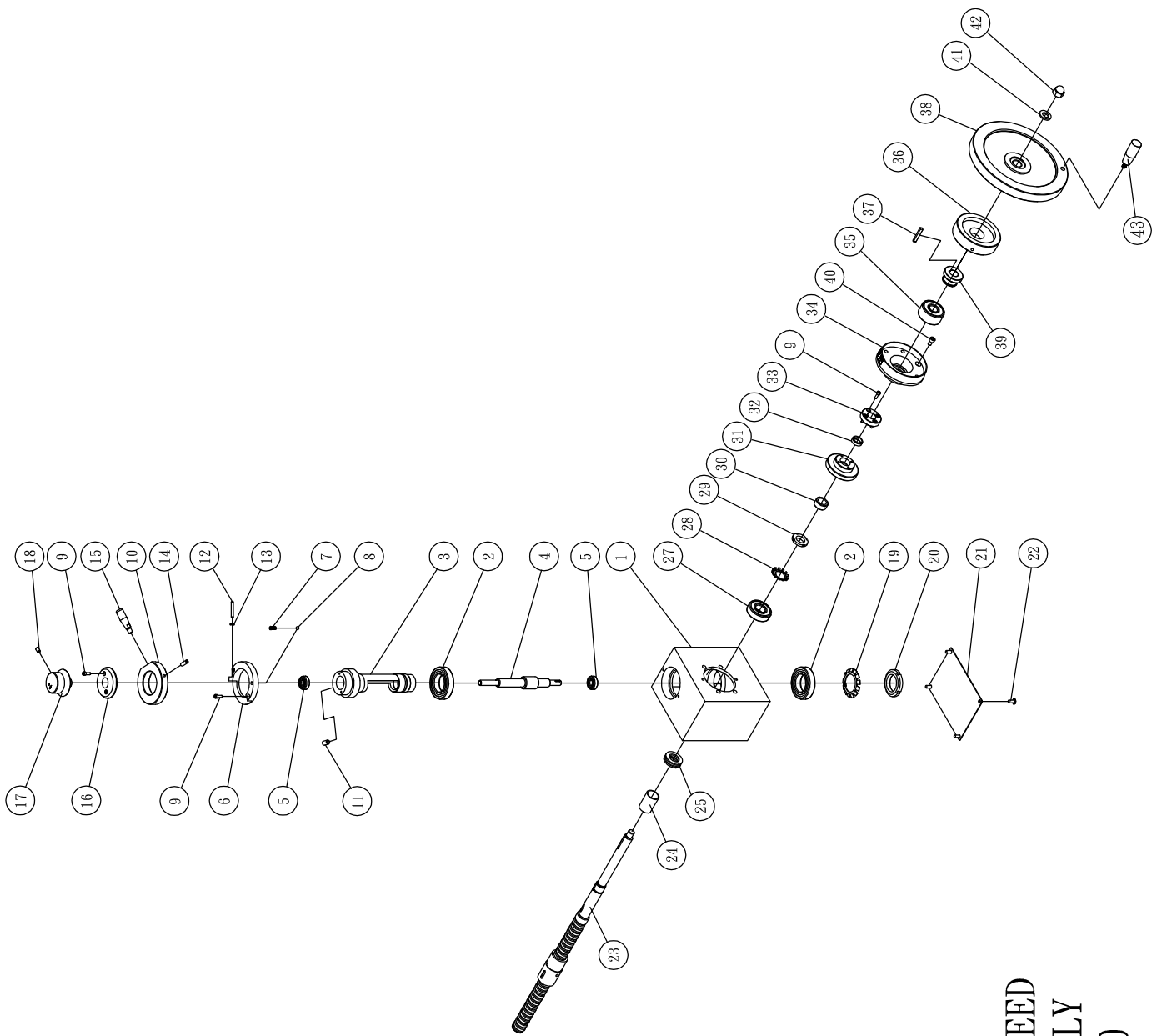


CROSSFEED SCREW FIXING  
 SOCKET ASSEMBLY  
 ( AHI~AHDII )  
 (08185A0700)

CROSSFEED SCREW FIXING SOCKET ASSEMBLY ( AHII~AHDII )

NO.	DRAWING NO. /SPEC.	DESCRIPTION	QTY	NOTE
1	06185011A0	Crossfeed screw fixing socket	1	
2	08185002N0	Crossfeed screw	1	
3	0618500900	Crossfeed nut adjusting ring	1	
4	KEYD050520	Pin	1	5x5x20
5	618-05-015	Brush fixing pin	1	
6	3060402300	F/R Blet wheel	1	
7	B000051104	Bearing	1	51104(20x21x35x10)
8	0618C00700	Crossfeed indication ring	1	
9	B00005204Z	Bearing	1	5204Z(20x47x20.6)
10	0618405400	Crossfeed indication ring sleeve	1	
11	06184004N0	Crossfeed graduation ring	1	mm : 06184004C0
12	AW04000M20	Serrate washer	1	AW04
13	AN04M20P15	Nut	1	AN04(M20x1.0P)
14	PIN0005030	Pin	1	5x30L
15	SS0000M620	Hand knob	1	M6x20L
16	WH00KSP200	Handwheel	1	
17	WP00122003	Washer	1	12x20x3
18	NE00000M12	Nut	1	M12
19	HE00G90M10	Handle	1	FG90-M10
20	3060415700	Washer	1	
21	KEYD050525	Pin	1	5x5x25L
22	BHU0061008	Inner hexagonal headless screw	2	M6-8L
23	MC01402200	Motor	1	CP-516L-40W-6P
24	30604023C0	F/R Blet wheel	1	
25	BS0020525	Time blet	1	525-RPP-5
26	BHU0050805	Inner hexagonal headless screw	2	M5-5L
27	KEYD040415	Pin	1	4x4x15L





MICRO CROSSFEED  
CASE ASSEMBLY  
08184A1000

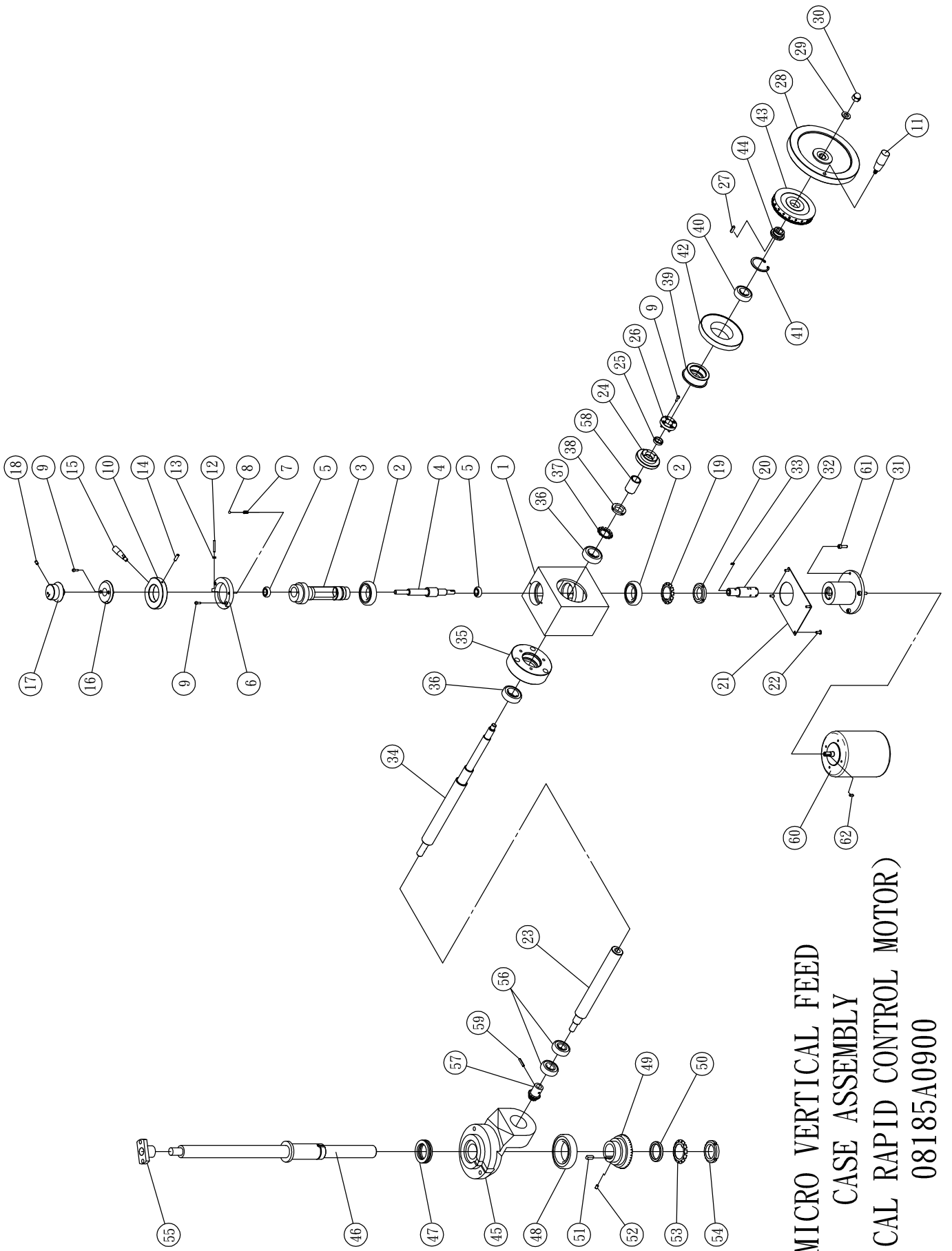
## MICRO CROSSFEED CASE ASSEMBLY

NO.	DRAWING NO. /SPEC.	DESCRIPTION	QTY	NOTE
1	06184040M0	Micro crossfeed case	1	
2	B0006007ZZ	Bearing	2	6007ZZ(35x62x14)
3	06184C0400	Shaft	1	
4	06184C02N2	Micro crossfeed gear	1	mm : 06184C02M2
5	B0006000ZZ	Bearing	2	6000ZZ(10x26x8)
6	06184C0600	Ring	1	
7	SC00503006	Spring	1	∅ 6 OD x P3 x ∅0.6 x 18L
8	SB01000006	Steel ball	1	∅ 6
9	BH00040712	Inner hexagonal screw	8	M4x0.7Px12L
10	06184C0500	Ring	1	
11	BHU0081208	Inner hexagonal headless screw	1	M8-10L
12	BHU0040730	Screw	1	M4x0.7Px30L
13	NH000000M4	Nut	1	M4
14	BHU0061020	Inner hexagonal headless screw	1	M6-20L
15	06184C1300	Micro crossfeed handle	1	
16	06184C0300	Micro crossfeed indication ring	1	
17	06184C01N0	Micro crossfeed graduation ring	1	mm : 06184C01C0
18	BHU0061010	Inner hexagonal headless screw	1	M6-10L
19	AW07000M35	Serrate washer	1	AW07
20	AN07M35P15	Nut	1	AN07(M35x1.5P)
21	06185C0800	Micro crossfeed case cover board	1	
22	BRC0050810	Cross round head screw	4	M5x0.8Px10L
23	08185004N0	Micro crossfeed ballscrew	1	mm : 08185004C0
24	0618402500	Ring	1	
25	B000051104	Bearing	1	51104(20x21x35x10)
26				
27	B00006204Z	Bearing	1	6204Z(20x47x14)

## MICRO CROSSFEED CASE ASSEMBLY

NO.	DRAWING NO. /SPEC.	DESCRIPTION	Q/TY	NOTE
28	AW04000M20	Serrate washer	1	AW04
29	AN04M20P15	Nut	1	AN04(M20x1.0P)
30	06184C1100	Spacer ring	1	
31	06184C02N1	Micro crossfeed gear	1	mm : 06184C02M1
32	RG0300SC17	Ring	1	SC-17
33	06184C1000	Crossfeed fixing ring	1	
34	06184007NM	Crossfeed indication ring	1	
35	B000005303	Bearing	1	5303ZZ(17x47x22.2)
36	06184004NM	Crossfeed graduation ring	1	
37	KEYS050535	Pin	1	5x5x35
38	WH00KRA200	Handwheel	1	KRA200
39	0618405400	Indication ring sleeve	1	
40	BH00061012	Inner hexagonal screw	2	M6x1.0Px12L
41	WP00122003	Washer	1	13x24x2.5
42	NE00000M12	Nut	1	M12
43	HA00R90M10	Handle	1	FR90-M10





MICRO VERTICAL FEED  
CASE ASSEMBLY  
(VERTICAL RAPID CONTROL MOTOR)  
08185A0900

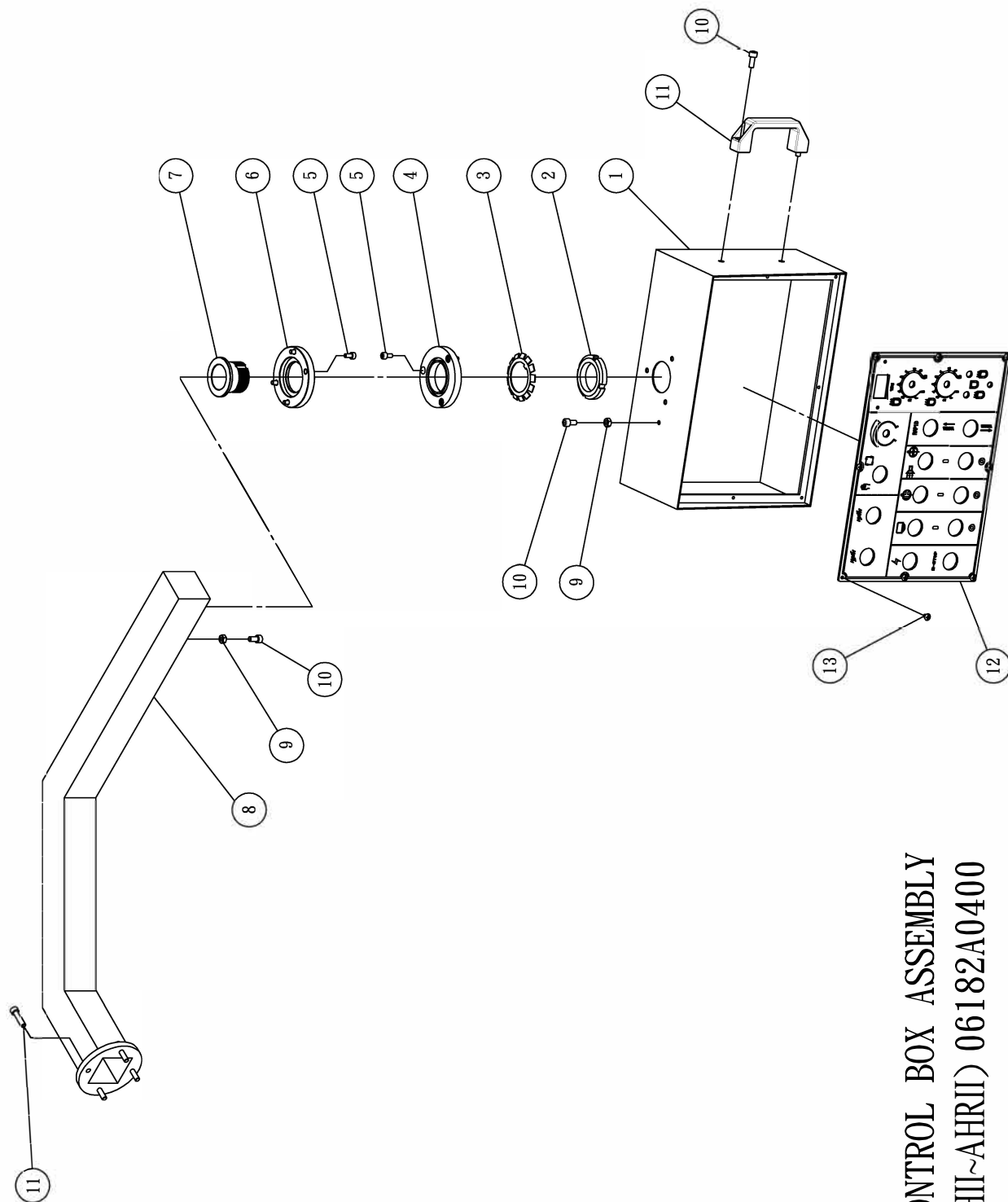
## MICRO VERTICAL FEED CASE ASSEMBLY (VERTICAL RAPID CONTROL MOTOR)

NO.	DRAWING NO. /SPEC.	DESCRIPTION	QTY	NOTE
1	06185D0700	Micro vertical feed case	1	
2	B0006007ZZ	Bearing	2	6007ZZ(35x62x14)
3	06184C0400	Micro vertical feed shaft	1	
4	06185D0202	Micro vertical feed gear	1	
5	B0006000ZZ	Bearing	2	6000ZZ(10x26x8)
6	06184C0600	Ring	1	
7	SC00503006	Spring	1	∅ 6 OD x P3 x ∅0.6 x 18L
8	SB01000006	Steel ball	2	∅ 6
9	BH00040712	Inner hexagonal screw	8	M4x0.7Px12L
10	06184C0500	Ring	1	
11	HA00R90M10	Handle	1	FR90-M10
12	BHU0040730	Screw	1	M4x0.7Px30L
13	NH000000M4	Nut	1	M4
14	BHU0061020	Inner hexagonal headless screw	1	M6-20L
15	06184C1300	Micro crossfeed handle	1	
16	06184C0300	Micro vertical feed indication ring	1	
17	06184C01N0	Micro vertical feed graduation ring	1	mm : 06184C01C0
18	BHU0061010	Inner hexagonal headless screw	1	M6-10L
19	AW07000M35	Serrate washer	1	AW07
20	AN07M35P15	Nut	1	AN07(M35x1.5P)
21	06185D0800	Micro vertical feed case cover board	1	
22	BRC0050810	Cross round head screw	4	M5x0.8Px10L
23	06185D1400	Vertical feed gear shaft	1	
24	06185D0201	Micro vertical feed gear	1	
25	RING00SC20	Spacer ring	1	SC-20
26	06185D1000	Micro vertical feed fixing ring	1	
27	KEYD050520	Pin	1	5x5x20

MICRO VERTICAL FEED CASE ASSEMBLY (VERTICAL RAPID CONTROL MOTOR)

NO.	DRAWING NO. /SPEC.	DESCRIPTION	QTY	NOTE
28	WH00KRA200	Handwheel	1	KRA200
29	WP00122003	Washer	1	13x24x2.5
30	NE00000M12	Nut	1	M12
31	06185D19AS	Vertical feed motor socket	1	AHR: 06185D193A
32	06185D18C2	Vertical feed motor shaft	1	AHR: 06185D1800
33	KEYD030310	Pin	1	3x3x10
34	08185D1200	Vertical feed handwheel shaft	1	
35	06185D1600	Micro vertical feed case fixing seat	1	
36	B0006205ZZ	Bearing	2	6205ZZ(25x52x15)
37	AW05000M25	Serrate washer	1	AW05
38	AN05M25P15	Nut	1	AN05(M25x1.5P)
39	06185D1700	Micro vertical feed case fixing ring	1	
40	B0006204ZZ	Bearing	1	6204ZZ(20x47x14)
41	CL01000047	Fixing ring	1	R47
42	0618500500	Vertical feed indication ring	1	ACER(in) : 06185005A0
43	06185004N0	Vertical feed graduation ring	1	ACER(in) : 06185004A0
44	0618501800	Indication ring sleeve	1	
45	0618201000	Vertical screw fixing seat	1	
46	06185650NL	Vertical leadscrew	1	06185011C0 (mm)
47	B000051108	Bearing	1	51108(40x42x60x13)
48	B0006011ZZ	Bearing	1	6011ZZ(55x90x18)
49	06182014N1	Gear	1	mm : 06182014C1
50	0618502300	Spacer	1	
51	KETD070722	Pin	1	7x7x22
52	BHU0061010	Inner hexagonal headless screw	1	M6-10L
53	AW08000M40	Serrate washer	1	AW08
54	AN08M40P15	Nut	1	AN08(M40x1.5P)



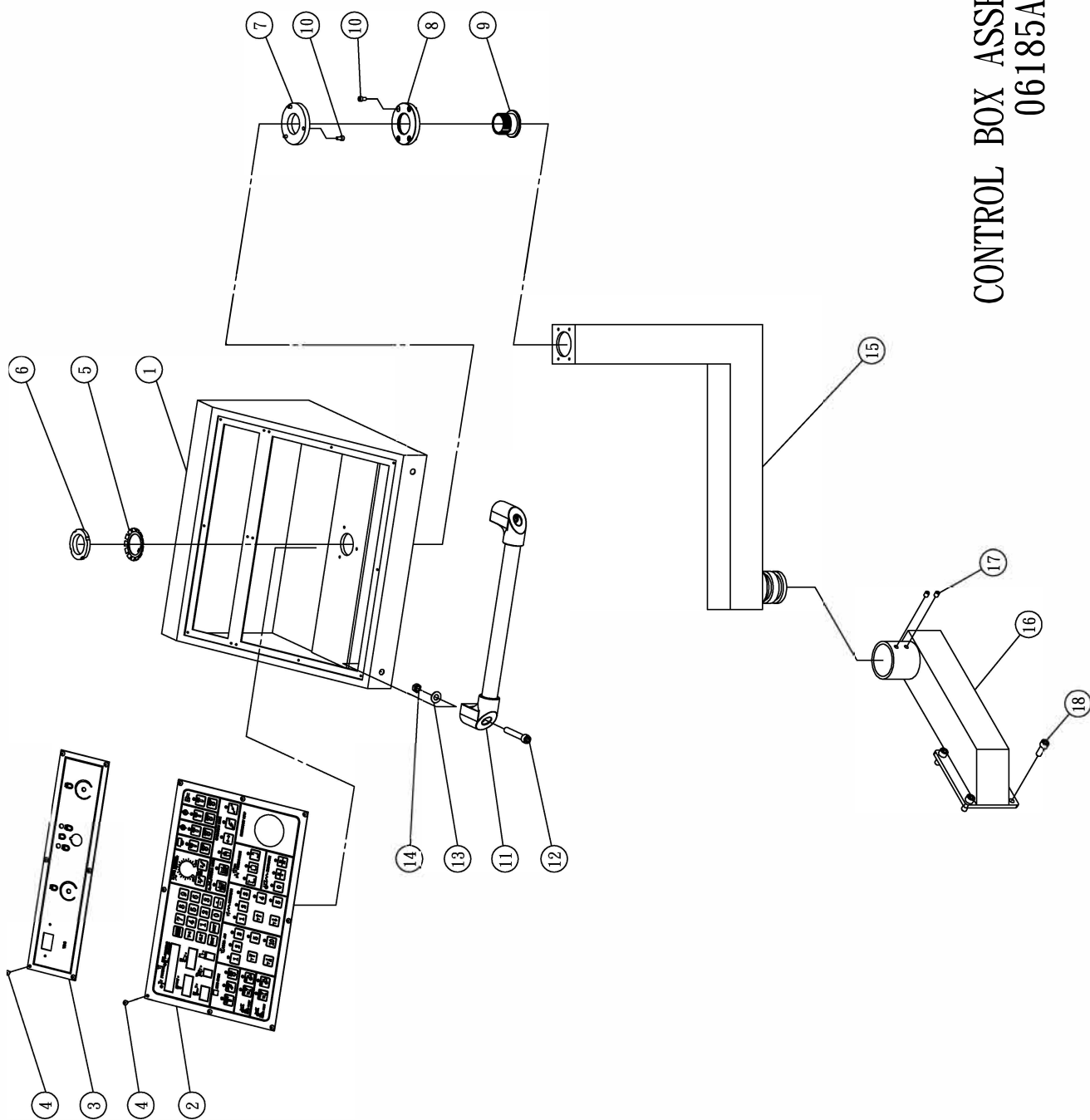


CONTROL BOX ASSEMBLY  
 (HII~AHRII) 06182A0400

## CONTROL BOX PARTS LIST (H11 ~ AHR1D)

NO.	DRAWING NO. /SPEC.	DESCRIPTION	QTY	NOTE
1	0618202200	Control box	1	
2	AN07M35P15	Nut	1	AN07(M35x1.5P)
3	AW07000M35	Washer	1	AW07
4	0618202100	Fixing seat	1	
5	BH00050810	Inner hexagonal screw	7	M5x0.8Px10L
6	0618202600	Fixing ring	1	
7	0618202000	Control box turning shaft	1	
8	0618201700	Supporting arm	1	
9	NH000000M6	Nut	2	M6
10	BH00061012	Inner hexagonal screw	4	M6x1.0Px12L
11	HA01121194	Handle	1	1211-94
12	0618504800	Control panel	1	
13	BRC0040706	Cross head screw	8	M4x0.7Px6L

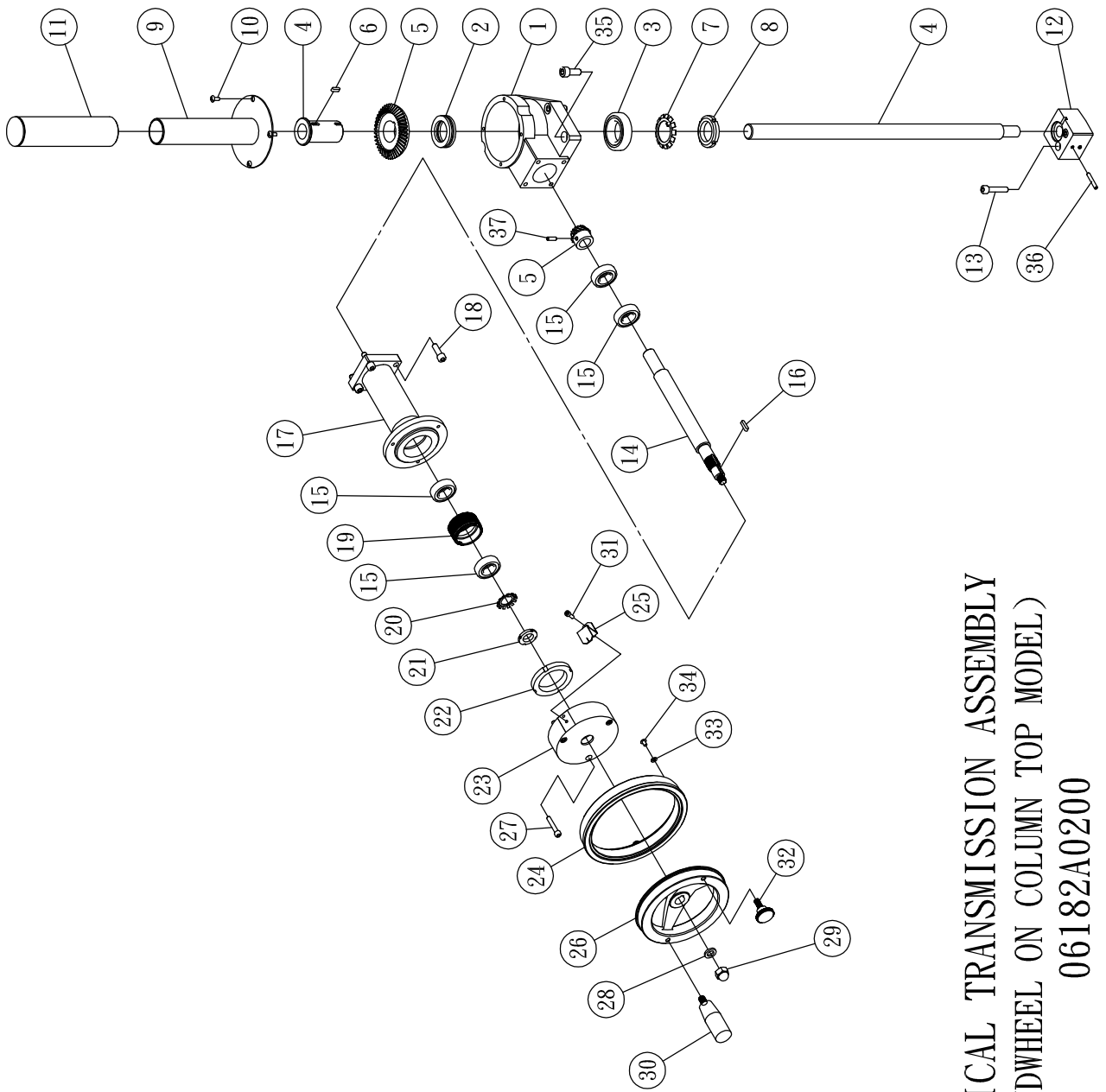
CONTROL BOX ASSEMBLY (AHDII)  
06185A0800



## CONTROL BOX PARTS LIST (AHDII)

NO.	DRAWING NO. /SPEC.	DESCRIPTION	QTY	NOTE
1	3060510100	Control box	1	618 / 818
2	3060515300	Control panel	1	
3	3060515400	Chuck control	1	
4	BHB0040708	Flat head screw	14	M4x0.7Px8L AW08
5	AW08000M40	Washer	1	AN08 (M40x1.5P)
6	AN08M40P15	Nut	1	
7	0618202100	Fixing seat	1	
8	0618202600	Fixing ring	1	
9	0618502000	Control box turning shaft	1	M5x0.8Px10L
10	BH00050810	Screw	7	1330-400
11	HA01330400	Handle	1	M10x1.5Px60L
12	BH00101560	Round head screw	2	10x23x2
13	WP01102302	Washer	2	M10
14	NH00000M10	Nut	2	
15	0618505600	Supporting arm B	1	
16	0618505500	Supporting arm A	1	M8-12L
17	BHU0101512	Headless screw	2	M10x1.5Px25L
18	BH00101525	Inner hexagonal screw	4	





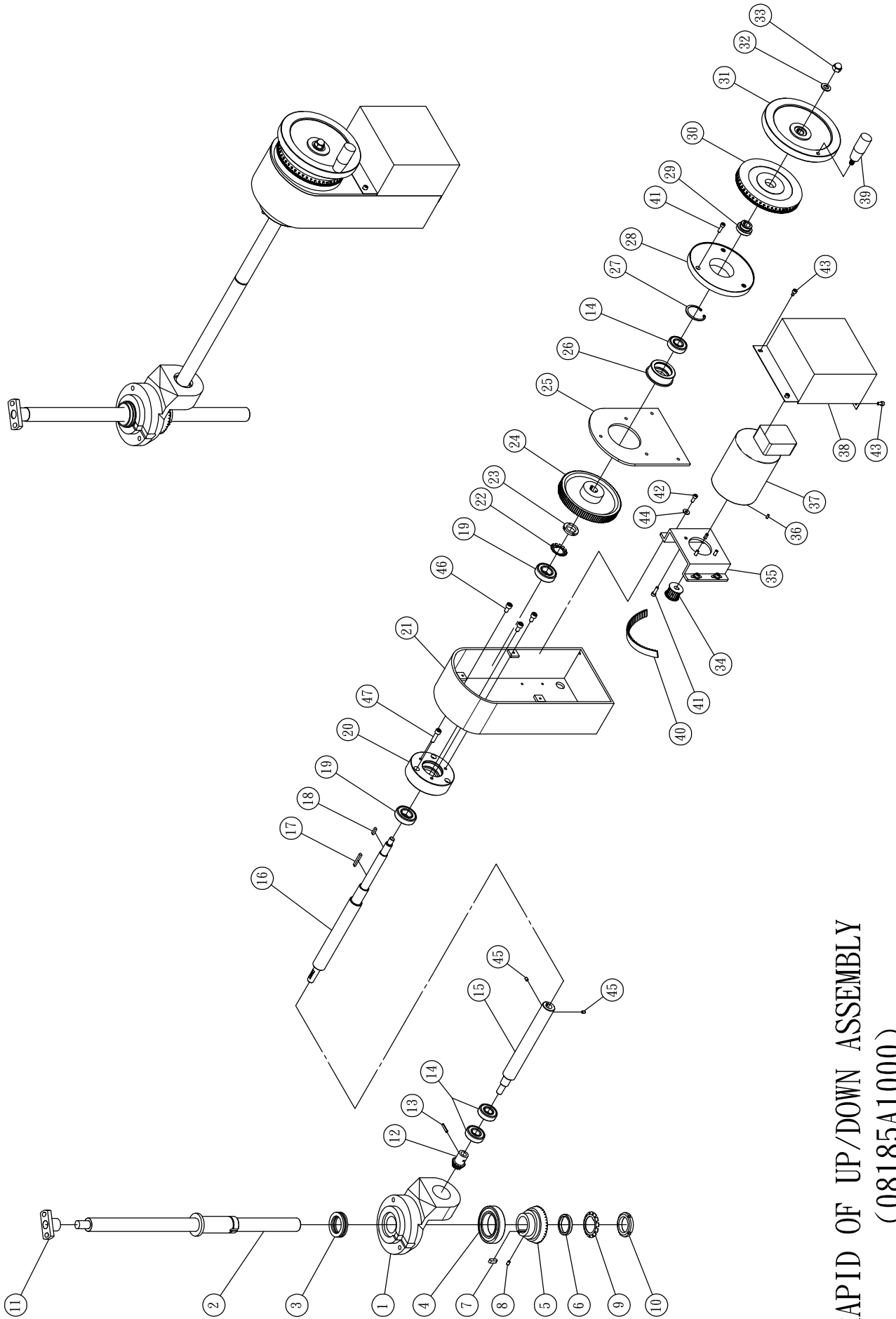
VERTICAL TRANSMISSION ASSEMBLY  
 (HANDWHEEL ON COLUMN TOP MODEL)  
 06182A0200

## VERTICAL TRANSMISSION ASSEMBLY

NO.	DRAWING NO. /SPEC.	DESCRIPTION	QTY	NOTE
1	06182V0100	Gear set	1	
2	B000051107	Bearing	1	51107(35x37x52x12)
3	B0006007ZZ	Bearing	1	6007ZZ(35x62x14)
4	06182V0800	Vertical screw	1	
5	06182V0700	Bevel gear	1	
6	KEYD050515	Pin	1	5x5x15
7	AW07000M35	Serrate washer	1	AW07
8	AN07M35P15	Nut	1	AN07 (M35x1. 5P)
9	06182V0900	Top cover set	1	
10	BRC0050812	Cross round head screw	4	M5x0. 8Px12L
11	06182V1000	Top cover	1	
12	06182V0300	Connect bracket	1	
13	BH00081230	Inner hexagonal screw	2	M8x1. 25Px30L
14	06182V0600	Transmission shaft	1	
15	B0006004ZZ	Bearing	4	6004ZZ(20x42x12)
16	KEYD050520	Pin	1	5x5x20
17	06182V0200	Bracket	1	
18	BH00081225	Inner hexagonal screw	4	M8x1. 25Px25L
19	06182V0500	Bearing set	1	
20	AW04000M20	Serrate washer	1	AW04
21	AN04M20P15	Nut	1	AN04 (M20x1. 5P)
22	AN10000M50	Nut	1	AN10
23	06182V0400	Indication needle seat	1	
24	06182V1400	Vertical feed graduation ring	1	
25	06182V1100	Indication needle	1	
26	06182V1500	Handwheel	1	
27	BH00061035	Inner hexagonal screw	3	M6x1. 0Px35L

## VERTICAL TRANSMISSION ASSEMBLY

NO.	DRAWING NO. /SPEC.	DESCRIPTION	QTY	NOTE
28	WP00122003	Washer	1	12x20x3
29	NE00000M12	Nut	1	M12
30	HE00G90M10	Handle	1	FG90-M10
31	BH00050815	Inner hexagonal screw	2	M5x0.8Px15L
32	3060405400	Screw	1	
33	WP00051201	Washer	3	5x12x1
34	BHB0050808	Round head screw	3	M5x0.8Px8L
35	BH00101525	Inner hexagonal screw	4	M10x1.5Px25L
36	PINS006060	Spring pin	1	∅ 6 x 60L
37	PINS006030	Spring pin	1	∅ 6 x 30L



RAPID OF UP/DOWN ASSEMBLY  
(08185A1000)

## RAPID OF UP/DOWN ASSEMBLY (08185A1000)

NO.	DRAWING NO. /SPEC.	DESCRIPTION	QTY	NOTE
1	0618201000	Vertical screw fixing seat	1	
2	06185650NL	Vertical leadscrew	1	
3	B000051108	Bearing	1	51108(40x42x60x13)
4	B0006011ZZ	Bearing	1	6011ZZ(55x90x18)
5	06182014N1	Gear	1	
6	0618502300	Spacer	1	
7	KETD070722	Pin	1	7x7x22
8	BHU0061010	Inner hexagonal headless screw	2	M6-8L
9	AW08000M40	Serrate washer	1	AW08
10	AN08M40P15	Nut	1	AN08(M40x1.5P)
11	0618501300	Vertical leadscrew nut	1	
12	06182009N2	Gear	1	mm : 06182009C2
13	PINS005025	Spring pin	1	∅ 5x25L
14	B0006204ZZ	Bearing	2	6204ZZ(20x47x14)
15	08185D0100	Vertical feed gear shaft	1	
16	08185D1200	Vertical feed handwheel shaft	1	
17	KEYD050540	Pin	1	5x5x40
18	KEYD050520	Pin	1	5x5x20
19	B0006205ZZ	Bearing	2	6205ZZ(25x52x15)
20	06185D1600	Micro vertical feed case fixing seat	1	
21	0818501100	Feed case	1	
22	AW05000M25	Serrate washer	1	AW05
23	AN05M25P15	Nut	1	AN05(M25x1.5P)
24	0818501500	F/R Belt wheel	1	
25	0818501200	Rapid UP/DOWN of cover	1	
26	06185D1700	Micro vertical feed case fixing ring	1	
27	CL0100047	Fixing ring	1	R47

## RAPID OF UP/DOWN ASSEMBLY (08185A1000)

NO.	DRAWING NO. /SPEC.	DESCRIPTION	QTY	NOTE
28	06185005A0	Crossfeed indication ring	1	
29	0618501800	Indication ring sleeve	1	
30	06185004A0	Vertical feed graduation ring	1	
31	WH00KRA200	Handwheel	1	KRA200
32	WP00122003	Washer	1	12x20x3
33	NE00000M12	Nut	1	M12
34	30604023C0	F/R Belt wheel	1	
35	0818501300	Motor adustment block	1	
36	KEYD040412	Pin	1	4x4x12
37	MU01802200	Motor	1	TC-516AL 80W
38	0818501400	Motor cover	1	
39	HA00R90M10	Handle	1	
40	BS00200755	Time blet	1	HTD-755-5M-20mm
41	BH00061020	Inner hexagonal screw	7	M6x1. 0Px20L
42	BH00061015	Inner hexagonal screw	4	M6x1. 0Px15L
43	BH00061010	Inner hexagonal screw	4	M6x1. 0Px10L
44	WP00061602	Washer	4	6x16x2
45	BHU0061008	Inner hexagonal headless screw	2	M6x1. 0Px8L
46	BH00081216	Inner hexagonal screw	3	M8x1. 25Px16L
47	BH00081230	Inner hexagonal screw	3	M8x1. 25Px30L

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## Acer Group

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**Company / customer**  
**Project description**  
**drawing number**  
**Commission**

**Surface Grinding Machine**  
**20140421**

**Manufacturer (company)**

Acer Group

**Path**

**Project name**  
**make**

Supra-618II or 818II 230V-480VAC with GW Cover Limit

**Type**

Supra-618II or 818II 230V-480VAC

**Place of installation**

**Responsible for project**

**Part feature**

**Created on**

2013/5/17

**Edit date**

2022/6/2

**Number of pages**    11

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# Device tag list

F03\_001

device tag part number Type number	function text Article designation	X-Ref	symbol
=CAB-FR1 TECO.RHU-10K1-10.0A RHU-10K1-10.0A	Grinding wheel motor overload Motor overload switch	=CAB/1.3	
=CAB-FR2 TECO.RHU-10K1-2.5A RHU-10K1-2.5A	Cool./Vac. motor overload Motor overload switch	=CAB/1.4	
=CAB-FU1 DF.420016x3+480332 420016x3+480332	Main fuses gG Cylindrical fuses 10x38, 16A x3+PMF 3P-modular fuse holder	=CAB/1.0	
=CAB-FU2 GSENN.5A1030 5A1030	Fuse	=CAB/1.6	
=CAB-FU3 GSENN.3A1030 3A1030	Fuse	=CAB/1.7	
=CAB-FU4 GSENN.5A1030 5A1030	Fuse	=CAB/1.7	
=CAB-HL1 TEND.EFUN-12 24V EFUN-12 24V	Power On Complete device, round, indicator light	=CAB/2.2	
=CAB-KM1 TECO.CU-11B5 CU-11B5	G. W. Starter Contactor	=CAB/2.3	
=CAB-KM2 TECO.CU-11B5 CU-11B5	Coolant Starter Contactor	=CAB/2.6	

device tag part number Type number	function text Article designation	X-Ref	symbol
=CAB-M1 CB.MS01362346-2.3KW MS01362346-2.3KW	Grinding wheel motor 3-phase induction motor	=CAB/1.3	
=CAB-M6 CB.CB Slide guideway lubrication unit CB Slide guideway lubrication unit	Lubrication motor Slide guideway lubrication unit	=CAB/1.7	
=CAB-QS1 ABB.OT16 OT16	Main switch Main switch	=CAB/1.0	
=CAB-SB1 RENY.R2PNR4D-1C-R R2PNR4D-1C-R	Emergency Stop Emergency stop push button	=CAB/2.2	
=CAB-SB2 RENY.R2PIF-7A-11G R2PIF-7A-11G	G. W. On Illuminated green flush push button	=CAB/2.3	
=CAB-SB3 RENY.R2PIFD-1B-7IR R2PIFD-1B-7IR	Coolant Off Complete device, round, pushbutton	=CAB/2.6	
=CAB-SB4 RENY.R2PIF-7A-11G R2PIF-7A-11G	G. W. On Illuminated green flush push button	=CAB/2.6	
=CAB-TC1 LGE.1-PH.170VA.110V.12V 1-PH.170VA.110V.12V	Control transformer Control transformer	=CAB/1.6	
=CAB-XS1 LKEW.LK-3021F	Power receptacle	=CAB/1.8	






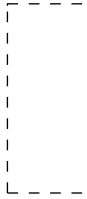
# Device tag list

F03\_001

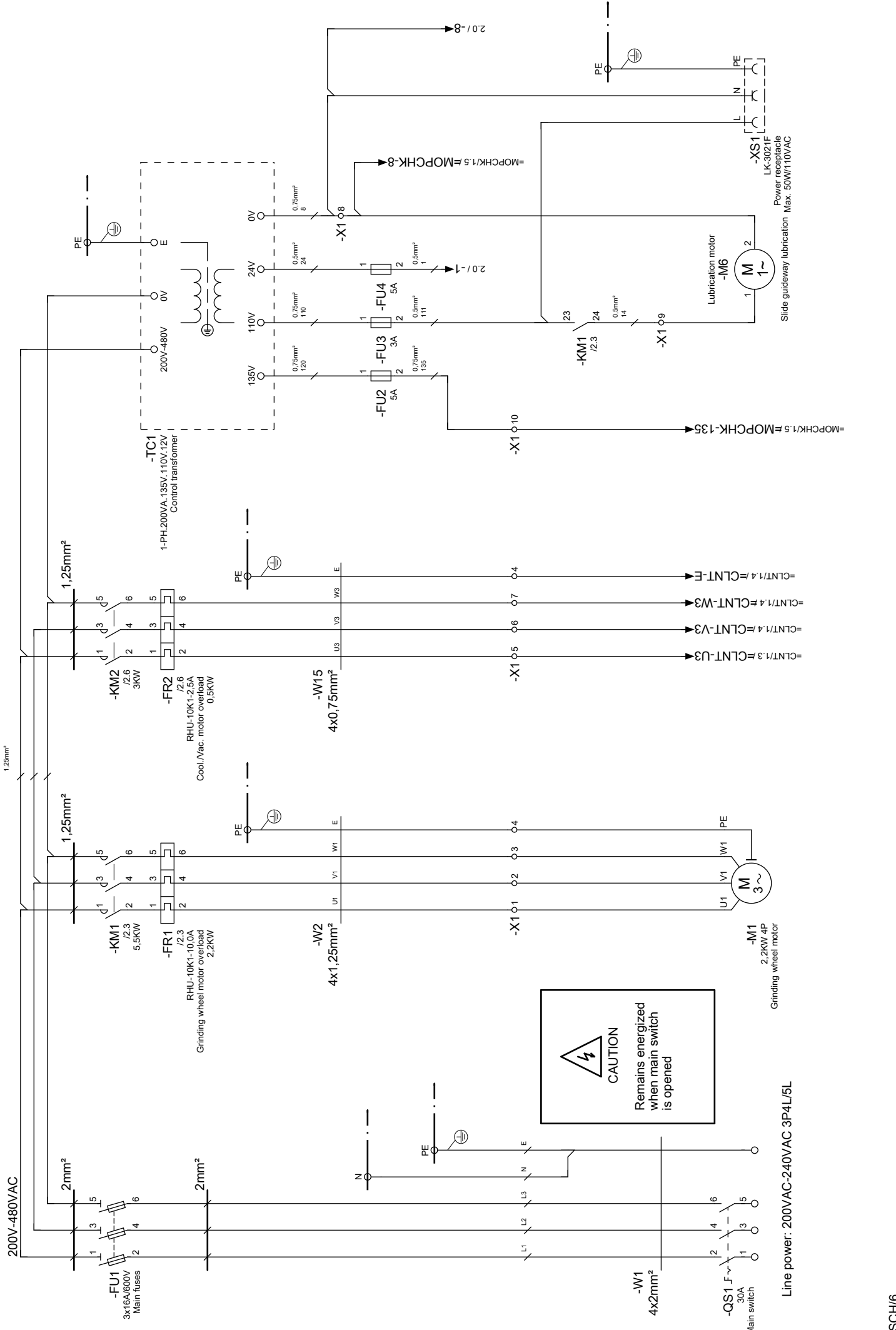
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=CLNT-A701 CB.Coolant/Vacuum Cleaner Unit		=CLNT/1.2		=MOPCHK-A51-AP2-AP4-TB3		=MOPCHK/1.5	
=CLNT-A701-M51 CB.MOW3182041-0.1KW	Coolant pump motor	=CLNT/1.3		=MOPCHK-A51-AP2-TB1		=MOPCHK/1.4	
=CLNT-A701-M52 CB.MOS3122041-0.4KW MOS3122041-0.4KW	Vacuum motor 3-phase induction motor	=CLNT/1.5		=MOPCHK-A51-AP2-TB2		=MOPCHK/1.2	
=MOPCHK-A51 GSENN.CMR-5C-110VAC-90VDC CMR-5C-110VAC-90VDC	Chuck Controller	=MOPCHK/1.1		=MOPCHK-A51-AP2-TB3		=MOPCHK/1.6	
=MOPCHK-A51-AP2 GSENN.CHUCK_PS_V6 CHUCK_PS_V6	Power Control Card Chuck control power card	=MOPCHK/1.2		=MOPCHK-A52 CB.ELC001224A ELC001224A	Electrical Magnetic Chuck 300mmx600mm Electrical chuck	=MOPCHK/1.3	
=MOPCHK-A51-AP2-AP1 GSENN.CHUCK_MCU_V3 CHUCK_MCU_V3	Chuck control card	=MOPCHK/1.3		=MOPCHK-LD1 GSENN.LED.GRN.D8 LED.GRN.D8	MAG LED Green light	=MOPCHK/1.4	
=MOPCHK-A51-AP2-AP3 GSENN.CHUCK_DSP_KEY_V2 CHUCK_DSP_KEY_V2	Chuck controller display & setting card	=MOPCHK/1.5		=MOPCHK-LD2 GSENN.LED.RED.D8 LED.RED.D8	DEMAG LED Red light	=MOPCHK/1.5	
=MOPCHK-A51-AP2-AP4 GSENN.CHUCK_TB5_V1 CHUCK_TB5_V1	Terminal blocks Chuck controller terminal blocks card	=MOPCHK/1.3		=MOPCHK-RP2 GSENN.24V/R503 24V/R503	= Potentiometer	=MOPCHK/1.6	
=MOPCHK-A51-AP2-AP4-TB1D2		=MOPCHK/1.5		=MOPCHK-RP3 GSENN.24V/R503 24V/R503	MAG Potentiometer	=MOPCHK/1.6	

# Device tag list

F03\_001

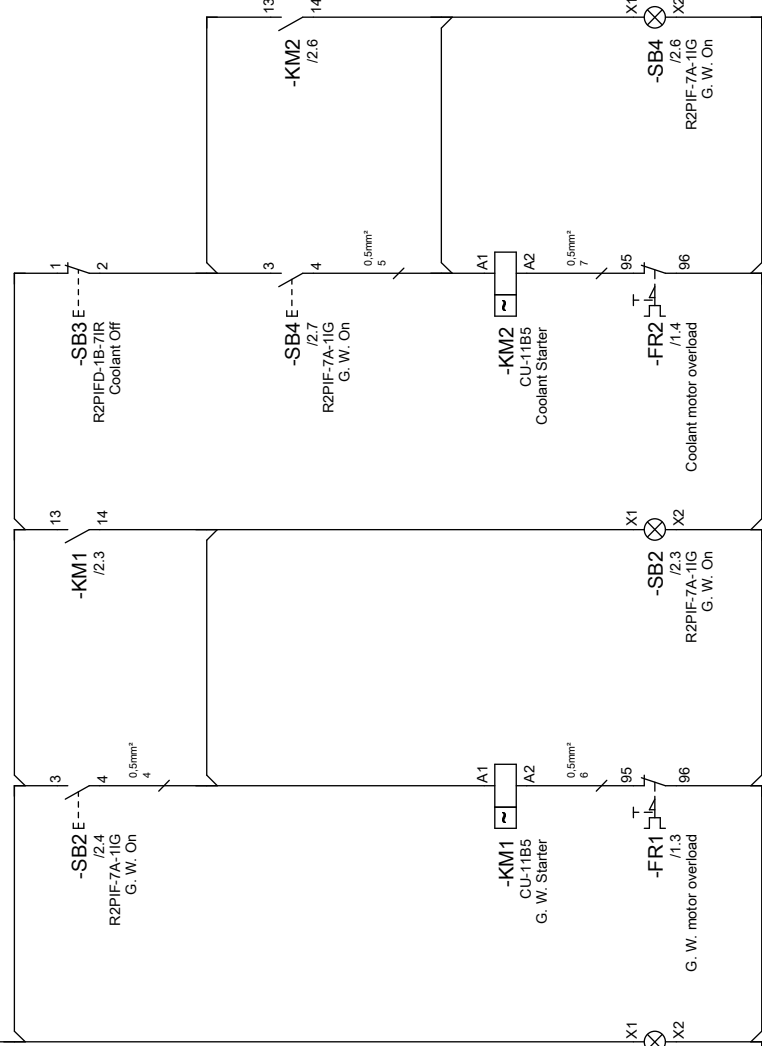
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=WLIT-A131 CB.WL0011V55W WL0011V55W	110V working light (Option) Working lamp	=WLIT/1.4					
=WLIT-A131-FU1		=WLIT/1.5					
=WLIT-A131-SA1301		=WLIT/1.5					
=WLIT-A131-U1		=WLIT/1.5					
=WLIT-XP1	Working light plug	=WLIT/1.5					





1.7/-1 24VAC

-SB1  
R2PNR4D-1C-R  
Emergency Stop



A1 A2  
 1 2 /1.4  
 3 4 /1.5  
 5 6 /1.5  
 13 14 /2.7

A1 A2  
 1 2 /1.3  
 3 4 /1.3  
 5 6 /1.3  
 13 14 /2.4  
 23 24 /1.7

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Modification	Date	Name	Original

Date	2014/4/25
Ed.	
Appr	

Surface Grinding Machine  
 Replaced by

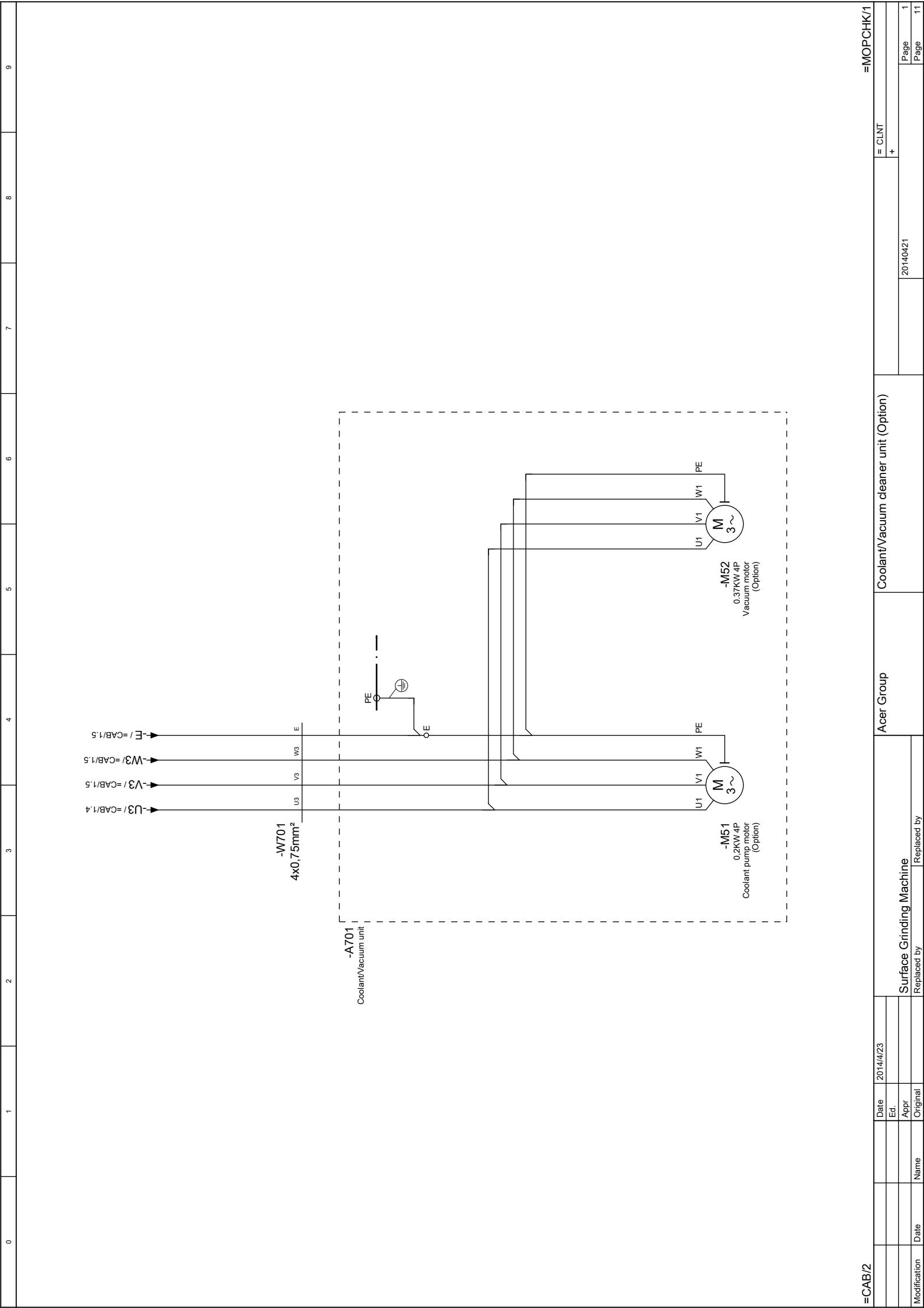
Acer Group

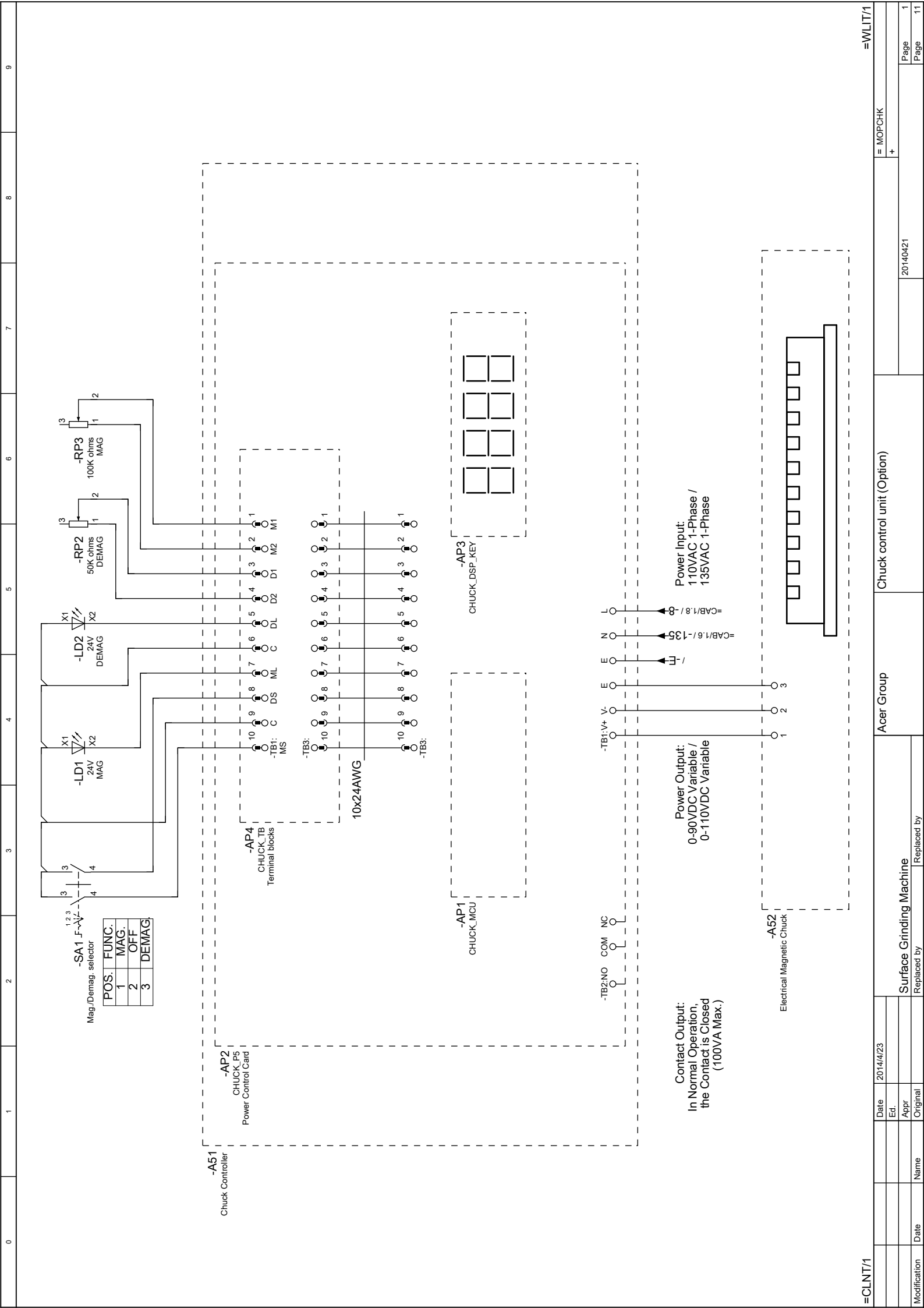
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20140421

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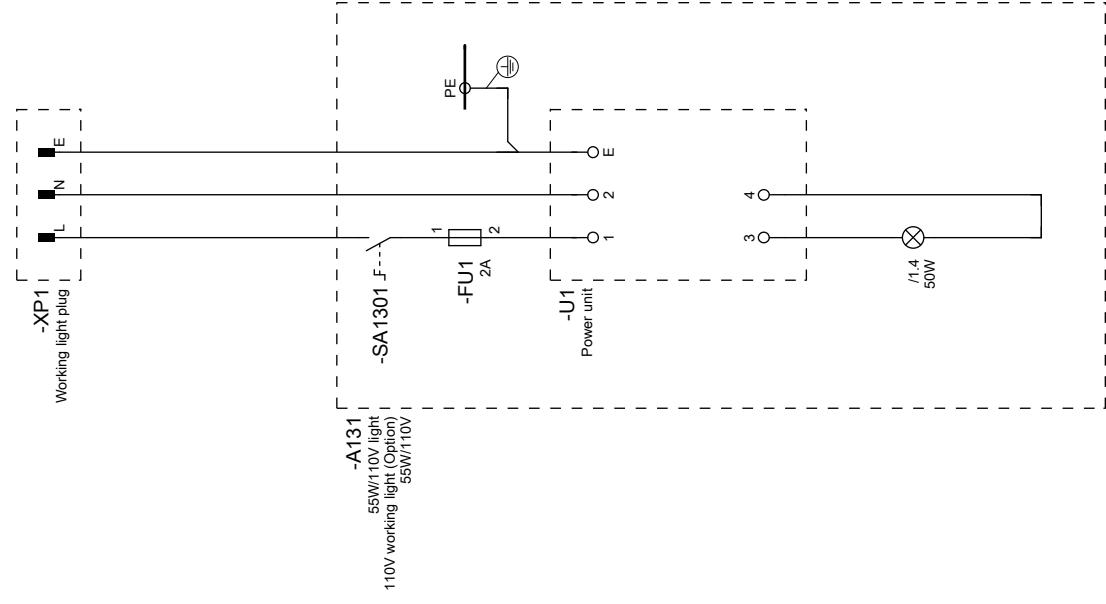
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=MOPCHK/1

Date 2014/4/23

Ed.

Appr

Original

Surface Grinding Machine

Replaced by

Replaced by

Acer Group

Working lamp

20140421

= WLIT

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Page 1

Page 11

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## ACER GROUP

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**Company / customer**  
**Project description**  
**drawing number**  
**Commission**

SUPRA-818AHII Surface Grinding Machine  
 201402010

**Manufacturer (company)**

ACER GROUP

**Path**  
**Project name**  
**make**  
**Type**  
**Place of installation**  
**Responsible for project**  
**Part feature**

SUPRA 618AHII or 818AHII  
 SUPRA-618/818AHII

**Created on**  
**Edit date**

2013/5/17  
 2014/2/10

**Number of pages** 25

# Table of contents

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=ASCH+/1	Title page		2013/5/17		X
=ASCH+/2	Table of contents : =ASCH+/1 - =WLIT+/1		2013/6/7		
=ASCH+/3	Operating panel layout		2013/6/7		
=ASCH+/4	Control panel layout		2013/6/6		
=ASCH+/5	Device tag list : =CAB+-FRI - =CAB+-M4		2013/6/7		
=ASCH+/6	Device tag list : =CAB+-QS1 - =LSIO+-SQ4		2013/6/7		
=ASCH+/7	Device tag list : =LSIO+-SQ5 - =MOPCHK+-A51		2013/6/7		
=ASCH+/8	Device tag list : =MOPCHK+-A51-AP1 - =WLIT+-A131-FU1		2013/6/7		
=ASCH+/9	Device tag list : =WLIT+-A131-SAI301 - =WLIT+-XP1		2013/6/7		
=ASCH+/10	Parts list : TECO.RHU-10K1-10,0A - GSENN.24VRS03		2013/6/7		
=ASCH+/11	Parts list : ALPS.SRRN134300 - CB.WL0011V55W		2013/6/7		
=CAB+/1	Main power		2013/6/7		
=CAB+/2	Cross feed motor drive		2013/6/6		
=CAB+/3	Left/rightward & in/outward motion drive		2013/6/7		
=CAB+/4	Control power		2013/6/7		
=CAB+/5	Control power		2013/6/7		
=CLNT+/1	Coolant/Vacuum cleaner unit (Option)		2013/6/6		
=HYDTNK+/1	Hydraulic unit		2013/6/6		
=LSIO+/1	In/Out limit switches		2013/6/7		
=LSLR+/1	Left/rightward switching switches		2013/6/6		
=LSTHR+/1	Throttle limit switches		2013/6/7		
=LUB+/1	Slide guide lubrication unit		2013/6/7		
=MOP+/1	Operating panel		2013/6/7		
=MOPCHK+/1	Chuck control unit (Option)		2013/6/7		
=WLIT+/1	Working lamp		2013/6/7		



Modification	Date	Name
		Original

Date	2013/5/11
Ed.	
Appr	

SUPRA-818AHII Surface Grinding Machine	
Replaced by	Replaced by

ACER GROUP	
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Operating panel layout	
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201402010	
Page	3
Page	25



Date	2014/2/10	ACER GROUP	Control panel layout	= ASCH
Ed.				+
Appr				
Modification	Date	Name	Replaced by	Page
			Replaced by	25
			201-402010	4

SUPRA-818AHII Surface Grinding Machine

# Device tag list

F03\_001

device tag part number Type number	function text Article designation	X-Ref	symbol
=CAB-FR1 TECO.RHU-10K1-10,0A RHU-10K1-10,0A	Grinding wheel motor overload Motor overload switch	=CAB/1.2	
=CAB-FR2 TECO.RHU-10K1-4,8A RHU-10K1-4,8A	Hydraulic motor overload Motor overload switch	=CAB/1.4	
=CAB-FR3 TECO.RHU-10K1-2,5A RHU-10K1-2,5A	Cool./Vac. motor overload Motor overload switch	=CAB/1.7	
=CAB-FR4 TECO.RHU-10K1-1,0A RHU-10K1-1,0A	Cross feed motor overload Motor overload switch	=CAB/2.2	
=CAB-FU1 DF 420016x3+480332 420016x3+480332	Main fuses gG Cylindrical fuses 10x38, 16A x3+PMF 3P-modular fuse holder	=CAB/1.0	
=CAB-FU2 ROKO.AFE 2A+FS-101 AFE 2A+FS-101	Glass tube fuse 2A+Fuse holder with cover	=CAB/4.4	
=CAB-FU3 ROKO.AFE 2A+FS-101 AFE 2A+FS-101	Glass tube fuse 2A+Fuse holder with cover	=CAB/4.1	
=CAB-FU7 ROKO.AFE 1A+FS-101	Glass tube fuse 1A+Fuse holder with cover	=CAB/3.3	
=CAB-FU8 ROKO.AFE 1A+FS-101	Glass tube fuse 1A+Fuse holder with cover	=CAB/3.4	

device tag part number Type number	function text Article designation	X-Ref	symbol
=CAB-KA1 OMRON.LY2-24VAC+PTF08A-E LY2-24VAC+PTF08A-E	Power on	=CAB/4.6	
=CAB-KA2 OMRON.MY2-24VAC+PYF08A-E MY2-24VAC+PYF08A-E	In/Out limit	=CAB/4.7	
=CAB-KM1 TECO.CU-11B10 CU-11B10	Grinding wheel starter Magnetic contactor	=CAB/5.0	
=CAB-KM2 TECO.CU-11B10 CU-11B10	Hyd. pump starter Magnetic contactor	=CAB/5.2	
=CAB-KM3 TECO.CU-11B10 CU-11B10	Cool./Vac. starter Magnetic contactor	=CAB/5.3	
=CAB-KM4 TECO.CU-11B01 CU-11B01	Move in starter Magnetic contactor	=CAB/5.4	
=CAB-KM5 TECO.CU-11B01 CU-11B01	Move out starter Magnetic contactor	=CAB/5.5	
=CAB-M1 CB.MS01362346-2,3KW	Grinding wheel motor	=CAB/1.2	
=CAB-M4 CB.MC01402200-40W MC01402200-40W	Cross feed motor 3-phase induction motor	=CAB/2.2	

# Device tag list

F03\_001

device tag part number Type number	function text Article designation	X-Ref	symbol
=CAB-QS1 ABB.OTI16F3+OX85+OHBS2AJ	Main switch	=CAB/1.0	
=CAB-TC1 LGE.3-PH.800VA.220V.110V.24V.12V 3-PH.800VA.220V.110V.24V.12V	Control transformer Control transformer	=CAB/4.0	[ ]
=CAB-UI GSENN.2A.001	Motion controller	=CAB/3.2	[ ]
=CAB-UI-TB1		=CAB/3.5	
=CAB-UI-TB2		=CAB/3.2	
=CAB-UI-TB3		=CAB/3.6	
=CAB-UI-TB4		=CAB/3.4	
=CAB-XS1 LL.LLPM-509-30-7	Hydraulic unit socket	=CAB/1.4	[ ]
=CAB-XS2 LL.LLPM-508-25-4	Cool./Vac. unit socket	=CAB/1.6	[ ]

device tag part number Type number	function text Article designation	X-Ref	symbol
=CAB-XS3 LKEW.LK-3021F	Power receptacle	=CAB/4.2	
=CLINT-A701 CB.Coolant/Vacuum Cleaner Unit		=CLINT/1.2	[ ]
=CLINT-A701-M51 CB.MOW3182041-0,1KW	Coolant pump motor	=CLINT/1.3	
=CLINT-A701-M52 CB.MOS3122041-0,4KW	Vacuum motor	=CLINT/1.5	
=HYDTNK-A11	Hydraulic tank unit	=HYDTNK/1.2	[ ]
=HYDTNK-A11-M2 CB.MO01162346-0,75KW	Hydraulic pump drive	=HYDTNK/1.3	
=HYDTNK-A11-YV1 CB.EV3V221101	Switching left/right drive	=HYDTNK/1.5	
=LSIO-SQ3 HLE.Z-15G1308 Z-15G1308	In & out limit switch Limit switch	=LSIO/1.6	
=LSIO-SQ4 HLE.AH-8104 AH-8104	Inward moving stroke Limit switch	=LSIO/1.4	

# Device tag list

F03\_001

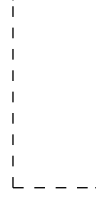








device tag part number Type number	function text Article designation	X-Ref	symbol
=LSIO-SQ5 HLE.AH-8104 AH-8104	Outward move stroke Limit switch	=LSIO/1.5	
=LSLR-SQ1 KFPS.TL-B5NE1	Leftward switching detect	=LSLR/1.5	
=LSLR-SQ2 KFPS.TL-B5NE1	Rightward switching detect	=LSLR/1.4	
=LSTHR-SQ3 OMRON.V-152-1A5	Throttle in safe detect	=LSTHR/1.4	
=LUB-M6 CB.CHCY.EL-1-110VAC	Lubrication motor	=LUB/1.4	
=MOP-RP1 TOCOS.RV24VZ05S02 RV24VZ05S02	Jog Inc. adj. Potentiometer	=MOP/1.8	
=MOP-SA1 RENY.R2SNS-2FD-1A-B R2SNS-2FD-1A-B	Mode selection Non-illuminated, 2-position maintained selector switch	=MOP/1.7	
=MOP-SB1 RENY.R2PNR4-1B-R R2PNR4-1B-R	Emergency stop Emergency Stop Push button	=MOP/1.1	
=MOP-SB2 RENY.R2PIF-1A-71W R2PIF-1A-71W	Power on Illuminated white flush push button	=MOP/1.1	







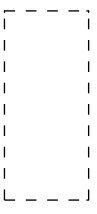


device tag part number Type number	function text Article designation	X-Ref	symbol
=MOP-SB3 RENY.R2PIF-1A-71G R2PIF-1A-71G	G. W. on Illuminated green flush push button	=MOP/1.2	
=MOP-SB4 RENY.R2PNF-1B-R R2PNF-1B-R	G. W. off Non-illuminated red flush push button	=MOP/1.2	
=MOP-SB5 RENY.R2PIF-1A-71G R2PIF-1A-71G	Hydraulic on Illuminated green flush push button	=MOP/1.3	
=MOP-SB6 RENY.R2PNF-1B-R R2PNF-1B-R	Hydraulic off Non-illuminated red flush push button	=MOP/1.3	
=MOP-SB7 RENY.R2PIF-1A-71G R2PIF-1A-71G	Cool./Vac. on Illuminated green flush push button	=MOP/1.4	
=MOP-SB8 RENY.R2PNF-1B-R R2PNF-1B-R	Cool./Vac. off Non-illuminated red flush push button	=MOP/1.4	
=MOP-SB11 RENY.R2PIF-1A-71G R2PIF-1A-71G	Move in Illuminated green flush push button	=MOP/1.5	
=MOP-SB12 RENY.R2PIF-1A-71G R2PIF-1A-71G	Move out Illuminated green flush push button	=MOP/1.6	
=MOPCHK-A51 GSENN.CMR-5C-110VAC-90VDC CMR-5C-110VAC-90VDC	Chuck controller (Option) CMR-5C-110VAC-90VDC	=MOPCHK/1.0	



# Device tag list




F03\_001

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=MOPCHK-A51-AP1 GSENN.CHUCK60 CHUCK60	Chuck control device Magnetic chuck control card	=MOPCHK/1.1	
=MOPCHK-A51-AP2 GSENN.PWR50-10A PWR50-10A	Chuck power device Magnetic chuck power card	=MOPCHK/1.1	
=MOPCHK-A51-AP2-CN3		=MOPCHK/1.5	
=MOPCHK-A51-AP2-CN6		=MOPCHK/1.4	
=MOPCHK-A51-AP2-CN7		=MOPCHK/1.6	
=MOPCHK-A51-AP2-TB1		=MOPCHK/1.4	
=MOPCHK-A51-AP2-TB2		=MOPCHK/1.2	
=MOPCHK-A51-AP3 GSENN.DVM1 DVM1	Display device Display device of magnetic chuck controller	=MOPCHK/1.4	
=MOPCHK-A51-AP3-CN8		=MOPCHK/1.5	

device tag part number Type number	function text Article designation	X-Ref	symbol
=MOPCHK-A51-AP3-INPUT		=MOPCHK/1.4	
=MOPCHK-A51-LD1 GSENN.LED.GRN.D8 LED.GRN.D8	MAG LED Green light	=MOPCHK/1.3	
=MOPCHK-A51-LD2 GSENN.LED.RED.D8 LED.RED.D8	DEMAG LED Red light	=MOPCHK/1.4	
=MOPCHK-A51-RP101 GSENN.24VR503 24VR503	MAG Potentiometer	=MOPCHK/1.8	
=MOPCHK-A51-RP102 GSENN.24VR503 24VR503	DEMAG Potentiometer	=MOPCHK/1.6	
=MOPCHK-A51-SA101 ALPS.SRRN134300 SRRN134300	Mag./Demag. Non-illuminated, 3-position maintained selector switch	=MOPCHK/1.2	
=MOPCHK-A52 CB.ELC000618A ELC000618A	Electrical magnetic chuck (Option) 150x450 Electrical chuck plate	=MOPCHK/1.2	
=WLIT-A131 CB.WL0011V55W WL0011V55W	110V working light (Option) Working lamp	=WLIT/1.4	
=WLIT-A131-FU1		=WLIT/1.4	

# Device tag list

F03\_001

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=WLIT-A131-SA1301		=WLIT/1.4	
=WLIT-A131-U1		=WLIT/1.4	
=WLIT-XP1	Working light plug	=WLIT/1.4	

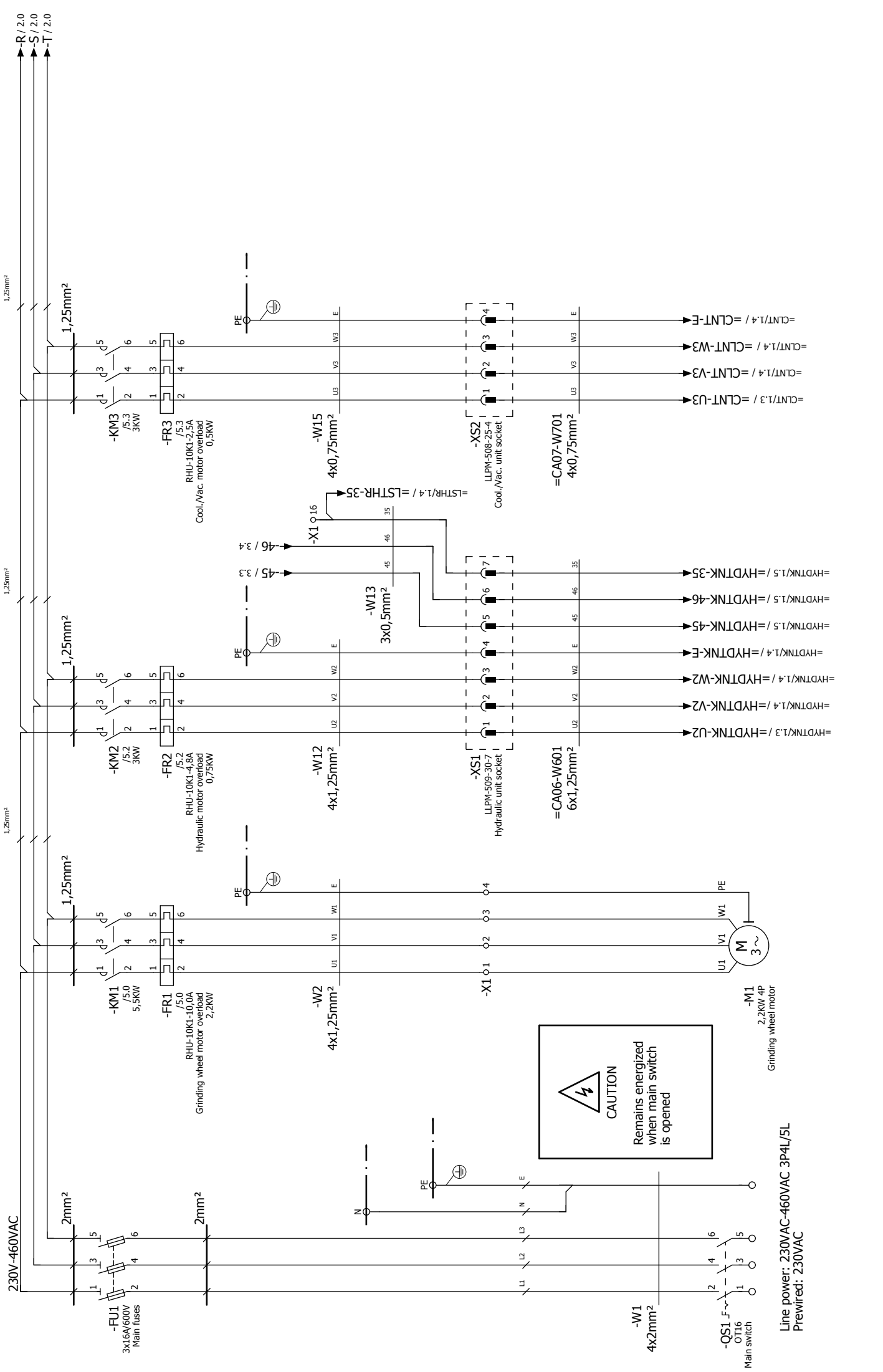
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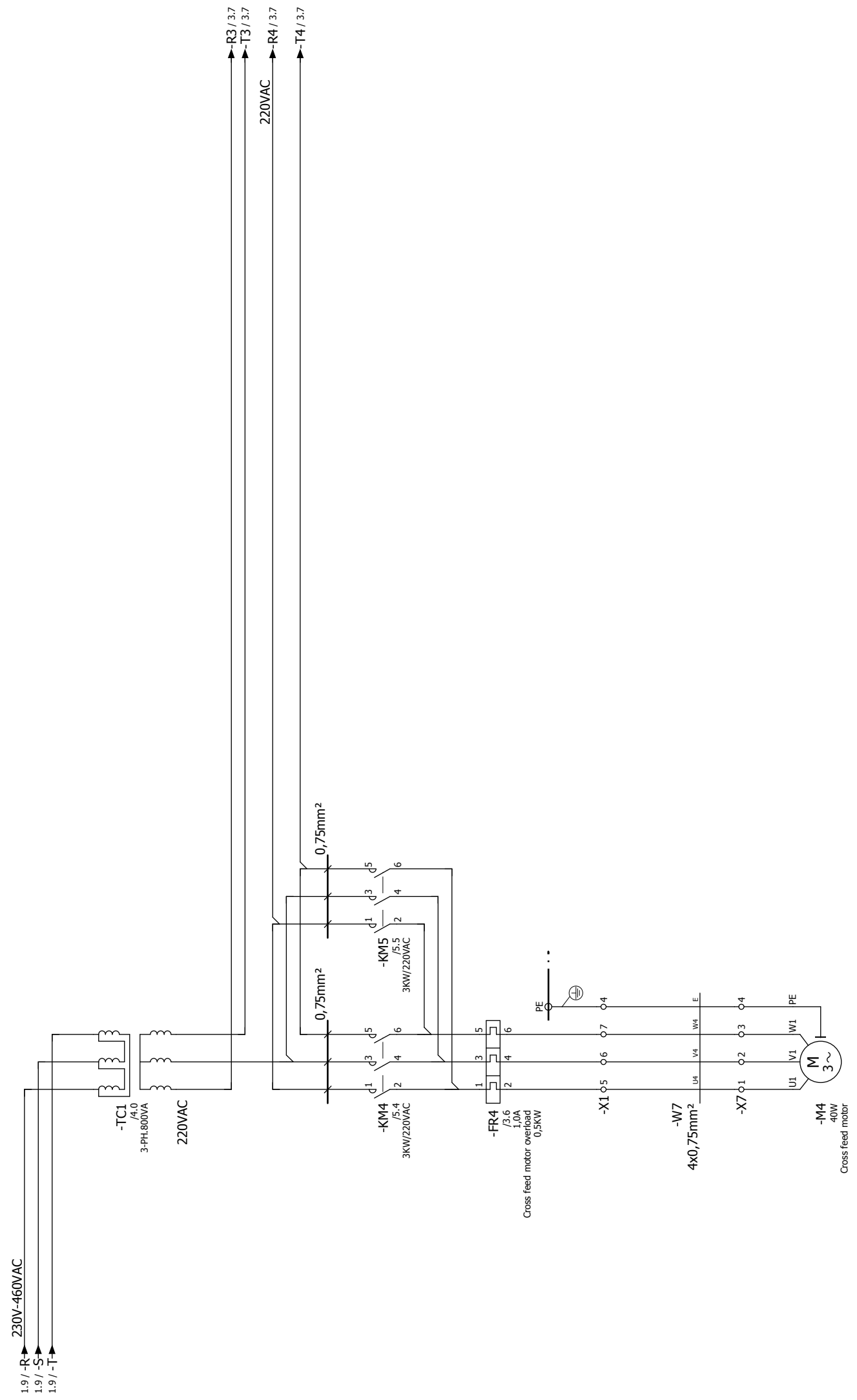
# Parts list

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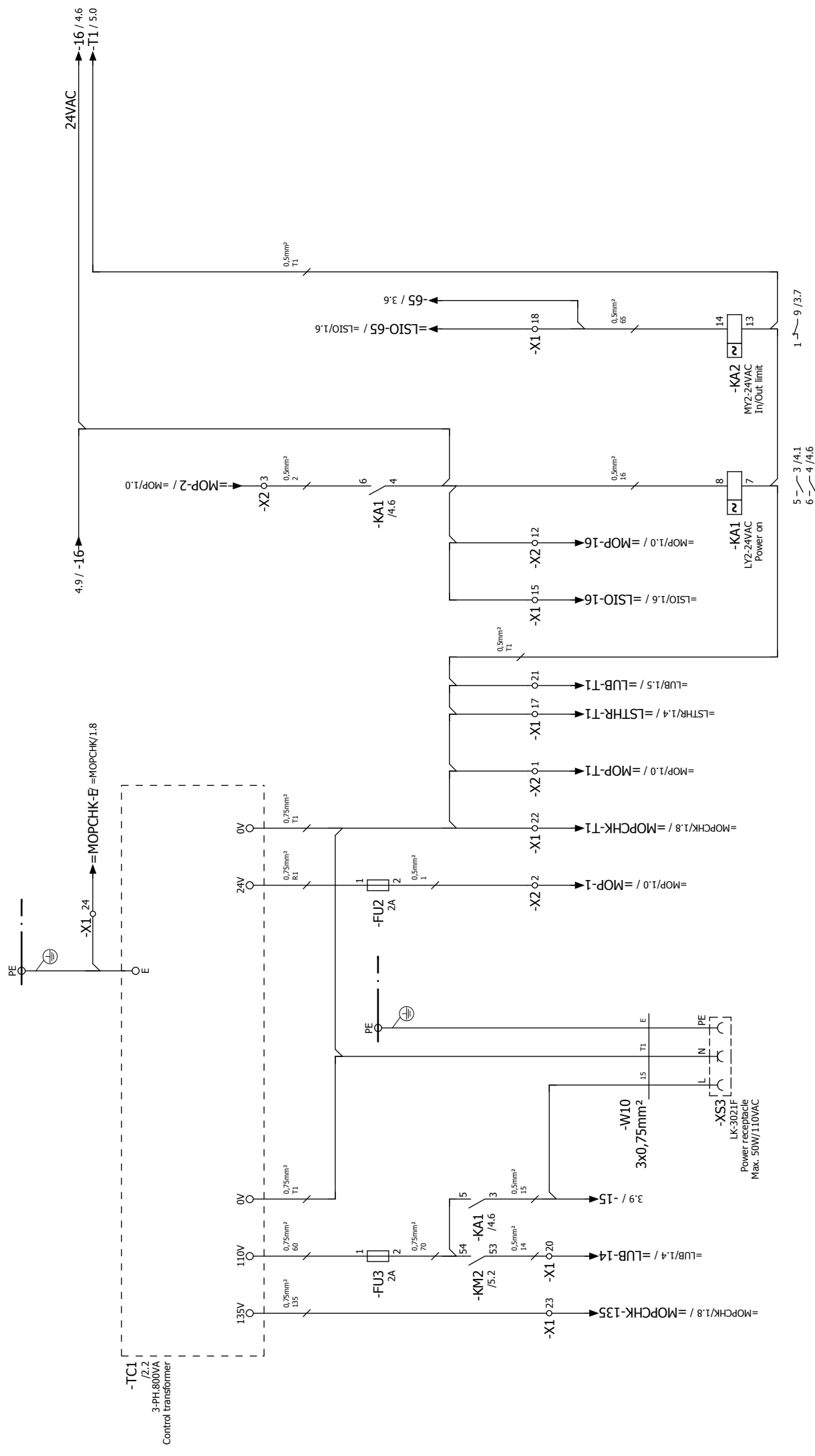
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=CAB-FR1	1	Motor overload switch	RHU-10K1-10,0A	TECO	TECO.RHU-10K1-10,0A
=CAB-FR2	1	Motor overload switch	RHU-10K1-4,8A	TECO	TECO.RHU-10K1-4,8A
=CAB-FR3	1	Motor overload switch	RHU-10K1-2,5A	TECO	TECO.RHU-10K1-2,5A
=CAB-FR4	1	Motor overload switch	RHU-10K1-1,0A	TECO	TECO.RHU-10K1-1,0A
=CAB-FU1	1	gG Cylindrical fuses 10x38, 16A X3+PME 3P-modular fuse holder	420016x3+480332	DF	DF.420016x3+480332
=CAB-FU2	1	Glass tube fuse 2A+Fuse holder with cover	AFE 2A+FS-101	ROKO	ROKO.AFE 2A+FS-101
=CAB-FU3	1	Glass tube fuse 2A+Fuse holder with cover	AFE 2A+FS-101	ROKO	ROKO.AFE 2A+FS-101
=CAB-FU7	1	Glass tube fuse 2A+Fuse holder with cover	AFE 2A+FS-101	ROKO	ROKO.AFE 1A+FS-101
=CAB-FU8	1	Glass tube fuse 2A+Fuse holder with cover	AFE 2A+FS-101	ROKO	ROKO.AFE 1A+FS-101
=CAB-KA1	1	Control relay with socket	LY2-24VAC+PTF08A-E	OMRON	OMRON.LY2-24VAC+PTF08A-E
=CAB-KA2	1	Control relay with socket	MY2-24VAC+PYF08A-E	OMRON	OMRON.MY2-24VAC+PYF08A-E
=CAB-KM1	1	Magnetic contactor	CJ-11B10	TECO	TECO.CU-11B10
=CAB-KM2	1	Magnetic contactor	CJ-11B10	TECO	TECO.CU-11B10
=CAB-KM3	1	Magnetic contactor	CJ-11B10	TECO	TECO.CU-11B10
=CAB-KM4	1	Magnetic contactor	CJ-11B01	TECO	TECO.CU-11B01
=CAB-KM5	1	Magnetic contactor	CJ-11B01	TECO	TECO.CU-11B01
=CAB-M1	1	3-phase induction motor	MS01362346-2,3KW	CB	CB.MS01362346-2,3KW
=CAB-M4	1	3-phase induction motor	MC01402200-40W	CB	CB.MC01402200-40W
=CAB-OS1	1	Power disconnect	OT16F3+OX85+OHBSZAJ	ABB	ABB.OT16F3+OX85+OHBSZAJ
=CAB-TC1	1	Control transformer	3-PH.800VA.220V.110V.24V.12V	LGE	LGE.3-PH.800VA.220V.110V.24V.12V
=CAB-U1	1	2-Axis motion controller	2A.001	GSENN	GSENN.2A.001
=CAB-XS1	1	Power socket	LLPM-509-30-7	LL	LL.LLPM-509-30-7
=CAB-XS2	1	Power socket	LLPM-508-25-4	LL	LL.LLPM-508-25-4
=CAB-XS3	1	Femal receptacle	LK-3021F	LKEW	LKEW.LK-3021F
=CLINT-A701	1	Coolant/Vacuum Cleaner Unit	Coolant/Vacuum Cleaner Unit	CB	CB.Coolant/Vacuum Cleaner Unit
=CLINT-A701-M51	1	3-phase induction motor	MOW3182041-0,1KW	CB	CB.MOW3182041-0,1KW
=CLINT-A701-M52	1	3-phase induction motor	MOS3122041-0,4KW	CB	CB.MOS3122041-0,4KW
=HYDTNK-A11-M2	1	3-phase induction motor	M001162346-0,75KW	CB	CB.M001162346-0,75KW
=HYDTNK-A11-YV1	1	3-Position, Spring returned valve	EV3V221101	CB	CB.EV3V221101
=LSIO-SQ3	1	Limit switch	Z-15G1308	HLE	HLE.Z-15G1308
=LSIO-SQ4	1	Limit switch	AH-8104	HLE	HLE.AH-8104
=LSIO-SQ5	1	Limit switch	AH-8104	HLE	HLE.AH-8104
=LSLR-SQ1	1	Proximity switch	TL-B5NE1	KFPS	KFPS.TL-B5NE1
=LSLR-SQ2	1	Proximity switch	TL-B5NE1	KFPS	KFPS.TL-B5NE1
=LSTHR-SQ3	1	Limit switch	V-152-1A5	OMRON	OMRON.V-152-1A5
=LUB-M6	1	1-phase induction motor	CHCY-EL-1-110VAC	CB	CB.CHCY-EL-1-110VAC
=MOP-PP1	1	Potentiometer	R/24YN205502	TOCOS	TOCOS.R/24YN205502
=MOP-SA1	1	Non-illuminated, 2-position maintained selector switch	R2SNS-2FD-1A-B	RENY	RENY.R2SNS-2FD-1A-B
=MOP-SB1	1	Emergency Stop Push button	R2PNR4-1B-R	RENY	RENY.R2PNR4-1B-R
=MOP-SB2	1	Illuminated white flush push button	R2PJF-1A-71W	RENY	RENY.R2PJF-1A-71W
=MOP-SB3	1	Illuminated green flush push button	R2PJF-1A-71G	RENY	RENY.R2PJF-1A-71G
=MOP-SB4	1	Non-illuminated red flush push button	R2PNF-1B-R	RENY	RENY.R2PNF-1B-R
=MOP-SB5	1	Illuminated green flush push button	R2PJF-1A-71G	RENY	RENY.R2PJF-1A-71G
=MOP-SB6	1	Non-illuminated red flush push button	R2PNF-1B-R	RENY	RENY.R2PNF-1B-R
=MOP-SB7	1	Illuminated green flush push button	R2PJF-1A-71G	RENY	RENY.R2PJF-1A-71G
=MOP-SB8	1	Non-illuminated red flush push button	R2PNF-1B-R	RENY	RENY.R2PNF-1B-R
=MOP-SB11	1	Illuminated green flush push button	R2PJF-1A-71G	RENY	RENY.R2PJF-1A-71G
=MOP-SB12	1	Illuminated green flush push button	R2PJF-1A-71G	RENY	RENY.R2PJF-1A-71G
=MOPCHK-A51	1	CMR-5C-110VAC-90VDC	CMR-5C-110VAC-90VDC	GSENN	GSENN.CMR-5C-110VAC-90VDC
=MOPCHK-A51-AP1	1	Magnetic chuck control card	CHUCK60	GSENN	GSENN.CHUCK60
=MOPCHK-A51-AP2	1	Magnetic chuck power card	PWR50-10A	GSENN	GSENN.PWR50-10A
=MOPCHK-A51-AP3	1	Display device of magnetic chuck controller	DVM1	GSENN	GSENN.DVM1
=MOPCHK-A51-LD1	1	LED Green light	LED.GRN.D8	GSENN	GSENN.LED.GRN.D8
=MOPCHK-A51-LD2	1	LED Red light	LED.RED.D8	GSENN	GSENN.LED.RED.D8
=MOPCHK-A51-RP101	1	Potentiometer	24VRS03	GSENN	GSENN.24VRS03
=MOPCHK-A51-RP102	1	Potentiometer	24VRS03	GSENN	GSENN.24VRS03











-TC1  
/2,2  
3-PH, 800VA  
Control transformer

-W10  
3x0,75mm<sup>2</sup>  
Power receptacle  
LK-302IF  
Max. 50W/110VAC

Modification	Date	Name	Original

Date	2013/5/10
Ed.	
Appr	
SUPRA-818AHIII Surface Grinding Machine	
Replaced by	

ACER GROUP

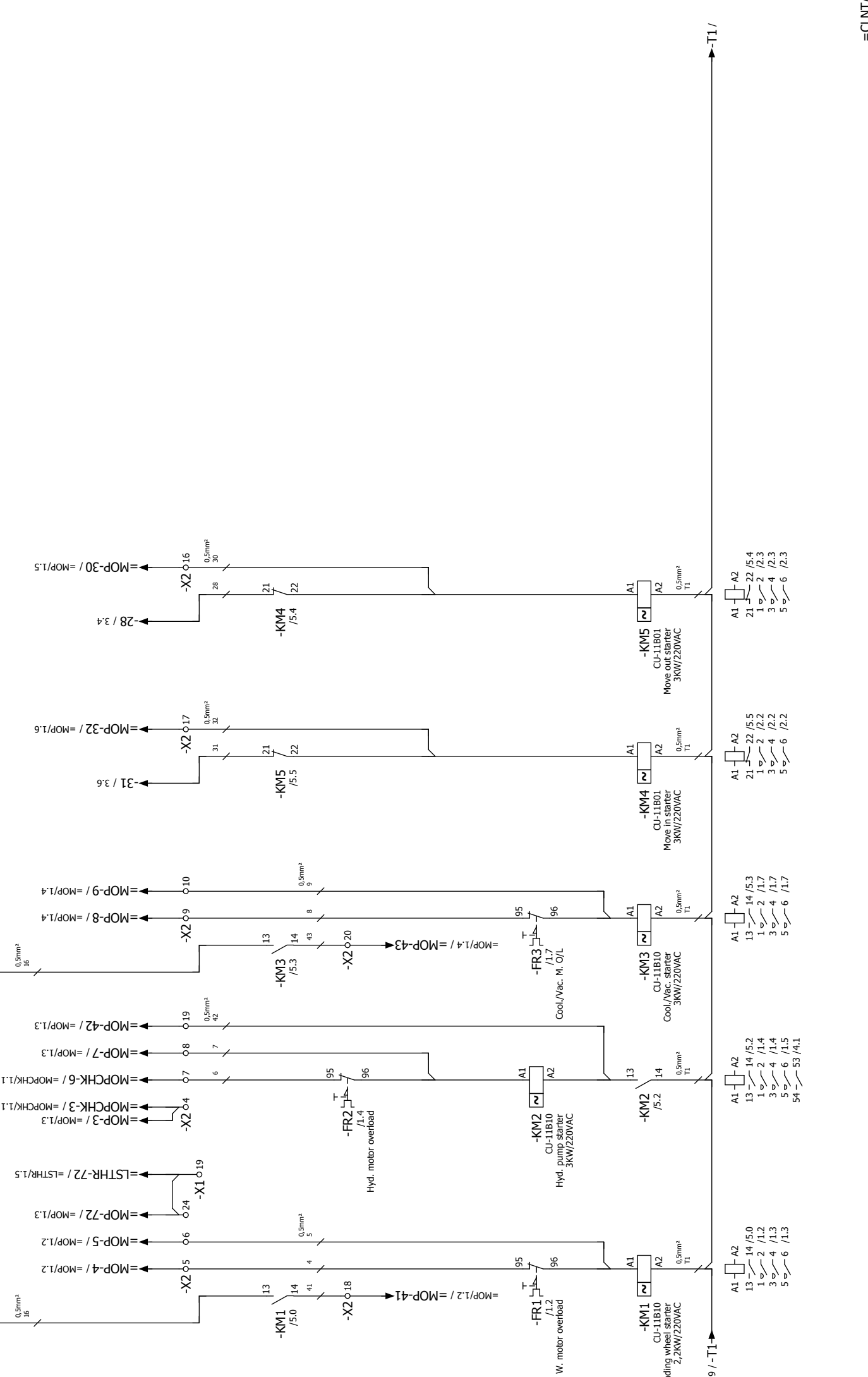
Control power

201402010	
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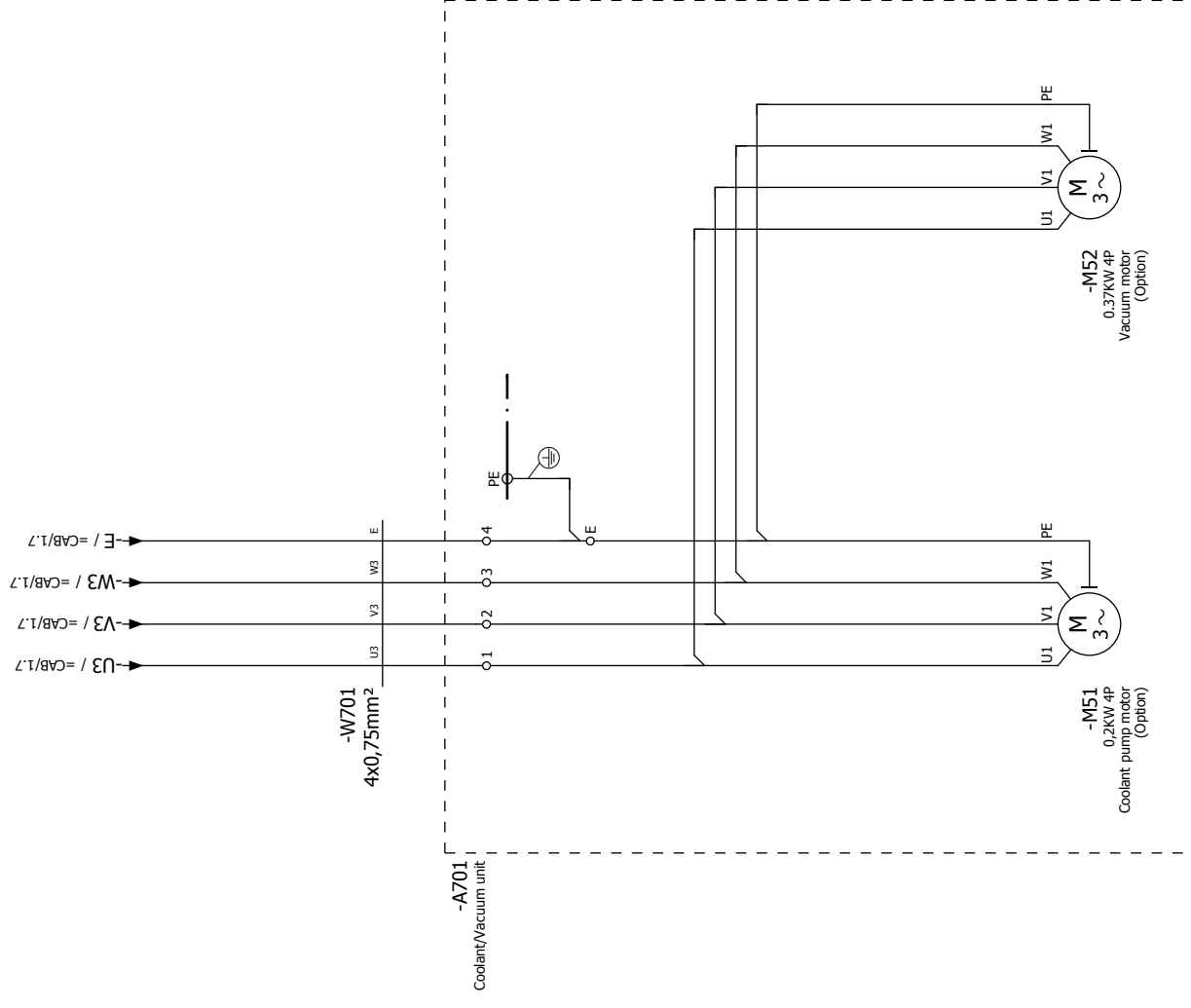
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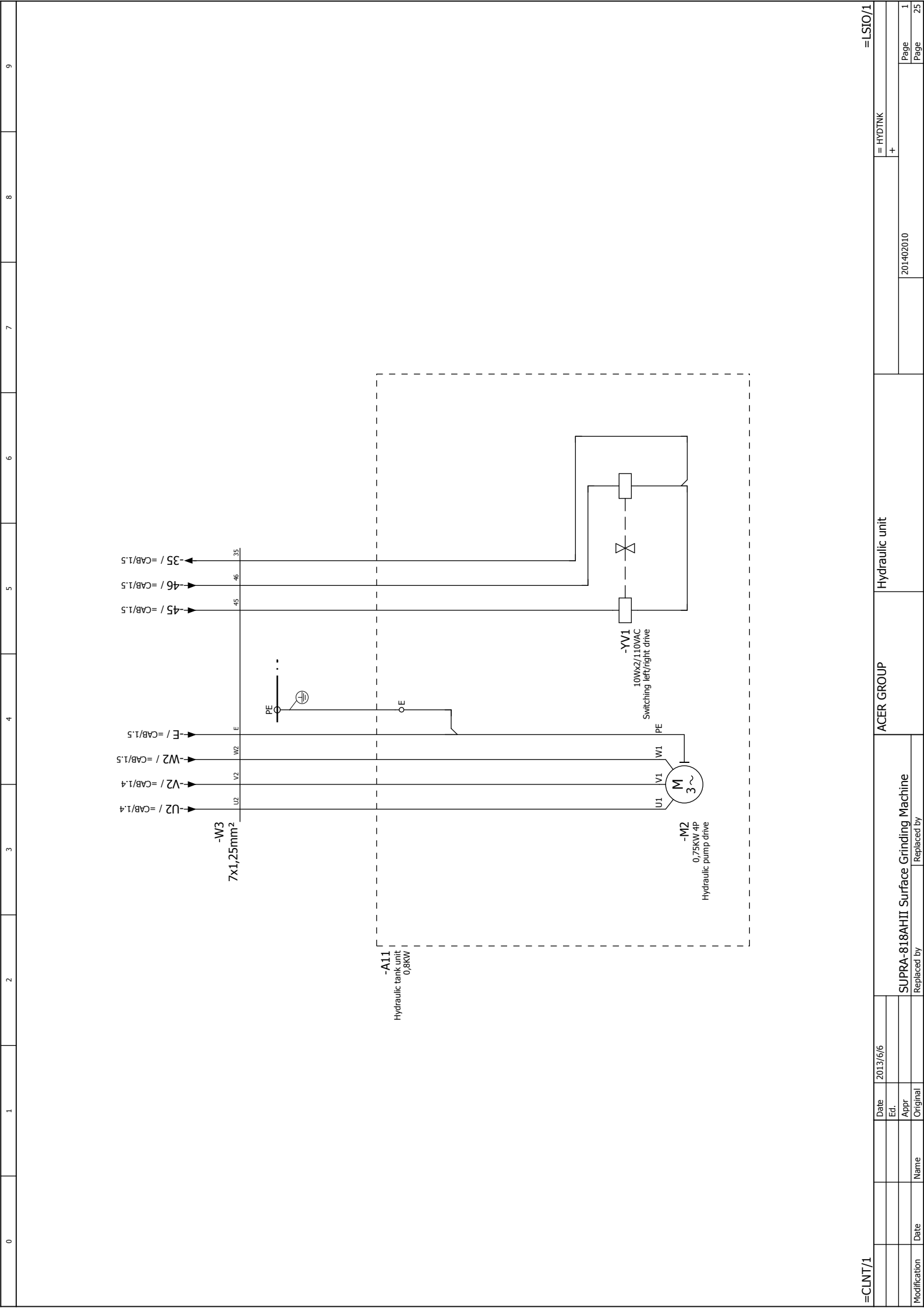


5.9 / -16 → 24VAC → 16 / 0.5mm<sup>2</sup> → 16 → 1 → 2 → 3 → 4 → 5 → 6 → 7 → 8 → 9 → -16 / 5.0



Modification	Date	Name	Original	Replaced by
			Appr	Replaced by
			Date	Replaced by
			Ed.	Replaced by
			Date	Replaced by
			Page	Replaced by
			Page	Replaced by





=CLNT/1

Date 2013/6/6

Ed.

Appr

Name

Date

Original

Replaced by

Replaced by

SUPRA-818AHII Surface Grinding Machine

ACER GROUP

Hydraulic unit

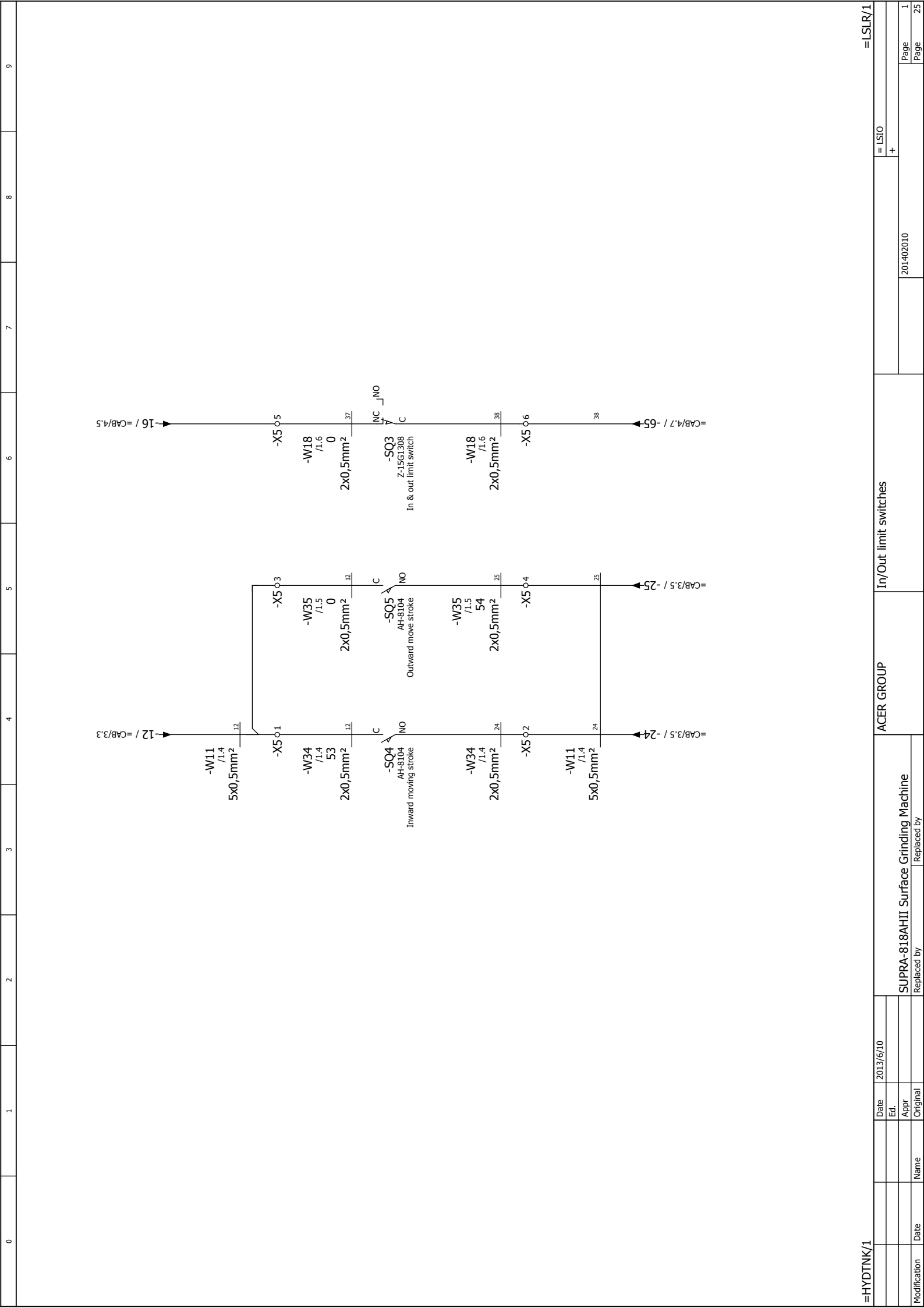
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201402010

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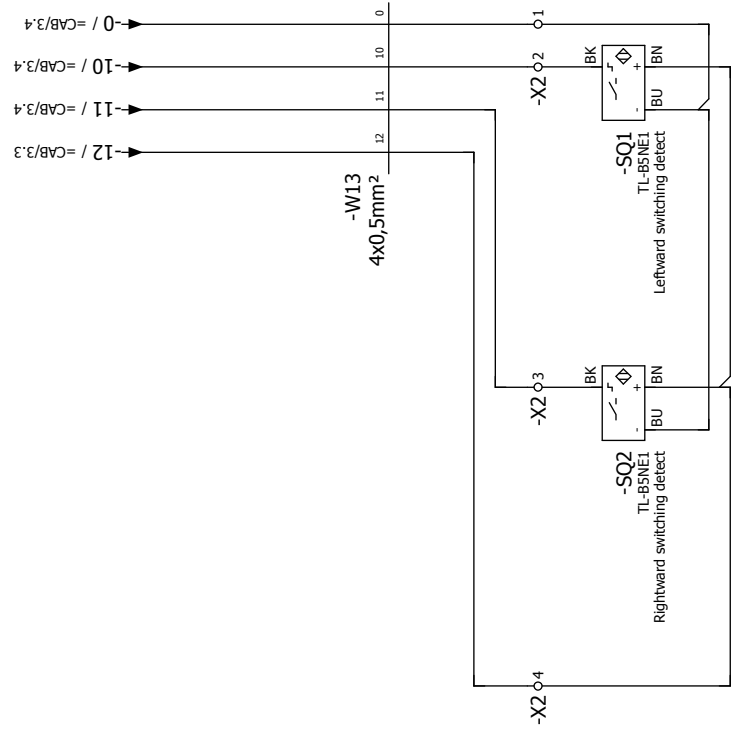
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=HYDTNK/1

=LSLR/1

Date	2013/6/10	ACER GROUP	In/Out limit switches	= LSI0	+
Ed.					
Appr					
Modification	Date	Name	Replaced by	201402010	Page 1
			Replaced by		Page 25



=LS10/1

Date 2013/6/10

Ed.   
 Appr   
 Original

Modification Date Name Original Replaced by

SUPRA-818AHII Surface Grinding Machine

Replaced by

ACER GROUP

Left/rightward switching switches

= LSIR

+

201402010

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=LSTHR/1

0	1	2	3	4	5	6	7	8	9
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-W20  
/1,4  
3x0,5mm<sup>2</sup>

-W20  
/1,4  
2x0,5mm<sup>2</sup>

-SQ3  
V-152-1A5  
Throttle in safe detect

-W20  
/1,4  
3x0,5mm<sup>2</sup>

-W20  
/1,4  
2x0,5mm<sup>2</sup>

72

35

72

35

TI

NC

NO

C

TI

-72 / =CAB/5,1

-35 / =CAB/1,6

=CAB/4,5 / -TI

=LSLR/1

ACER GROUP

Throttle limit switches

=LUB/1

Date	2013/6/10
Ed.	
Appr	
Name	Replaced by
Date	
Original	

SUPRA-818AHII Surface Grinding Machine	
Replaced by	Replaced by

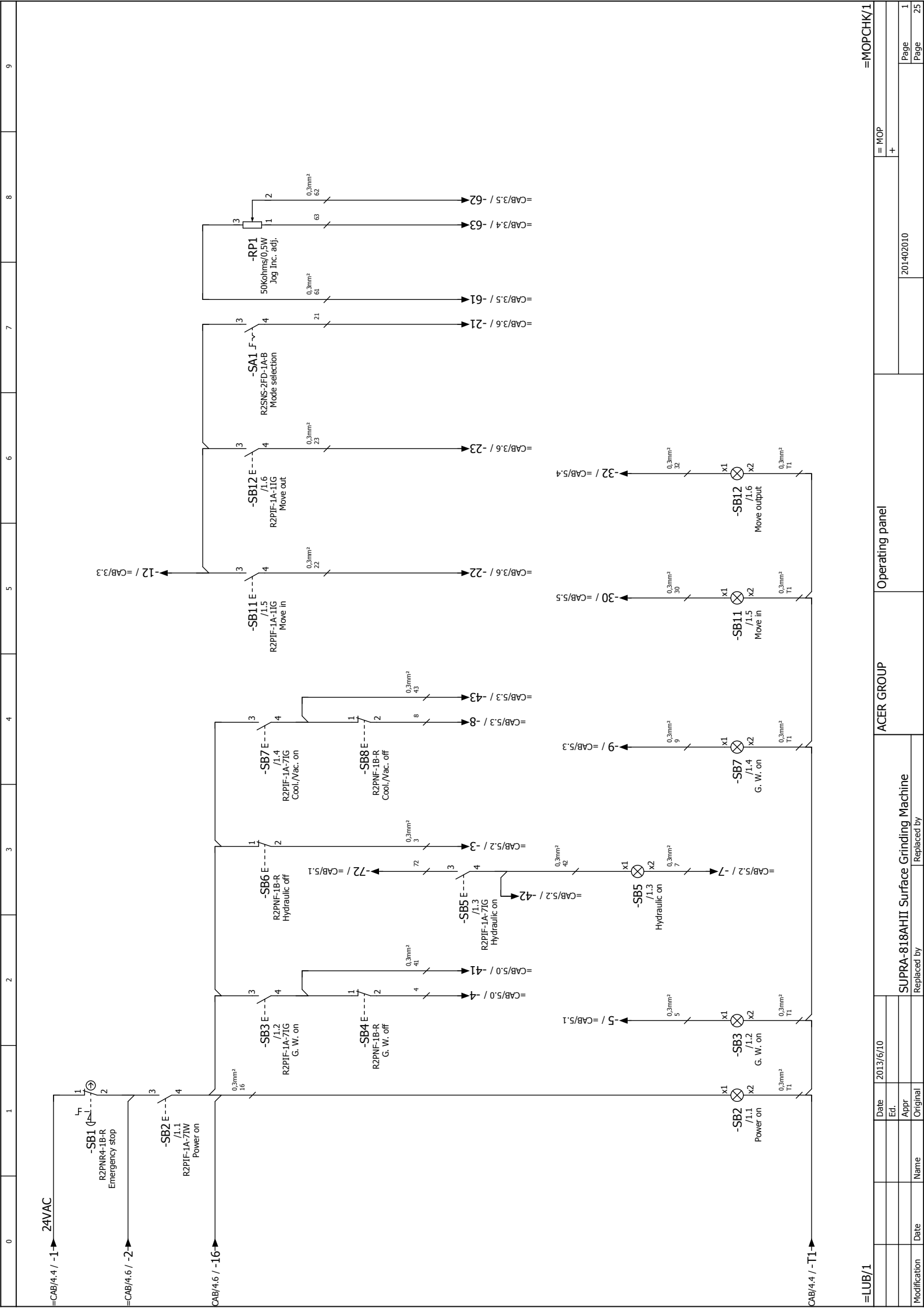
  

	= LSTHR
	+
201402010	
Page 1	Page 25

0	1	2	3	4	5	6	7	8	9
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=LSTHR/1		2013/6/10		ACER GROUP		Side guide lubrication unit		= MOP/1	
Date	Ed.							= LUB +	
Appr	Original							201402010	
Modification	Date	Name	Replaced by	SUPRA-818AHII Surface Grinding Machine				Page 1	
			Replaced by					Page 25	



=LUB/1

Date: 2013/6/10

SUPRA-818AHIII Surface Grinding Machine

ACER GROUP

Operating panel

=MOPCHK/1

Modification

Date

Name

Original

Replaced by

Replaced by

201402010

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Page 1

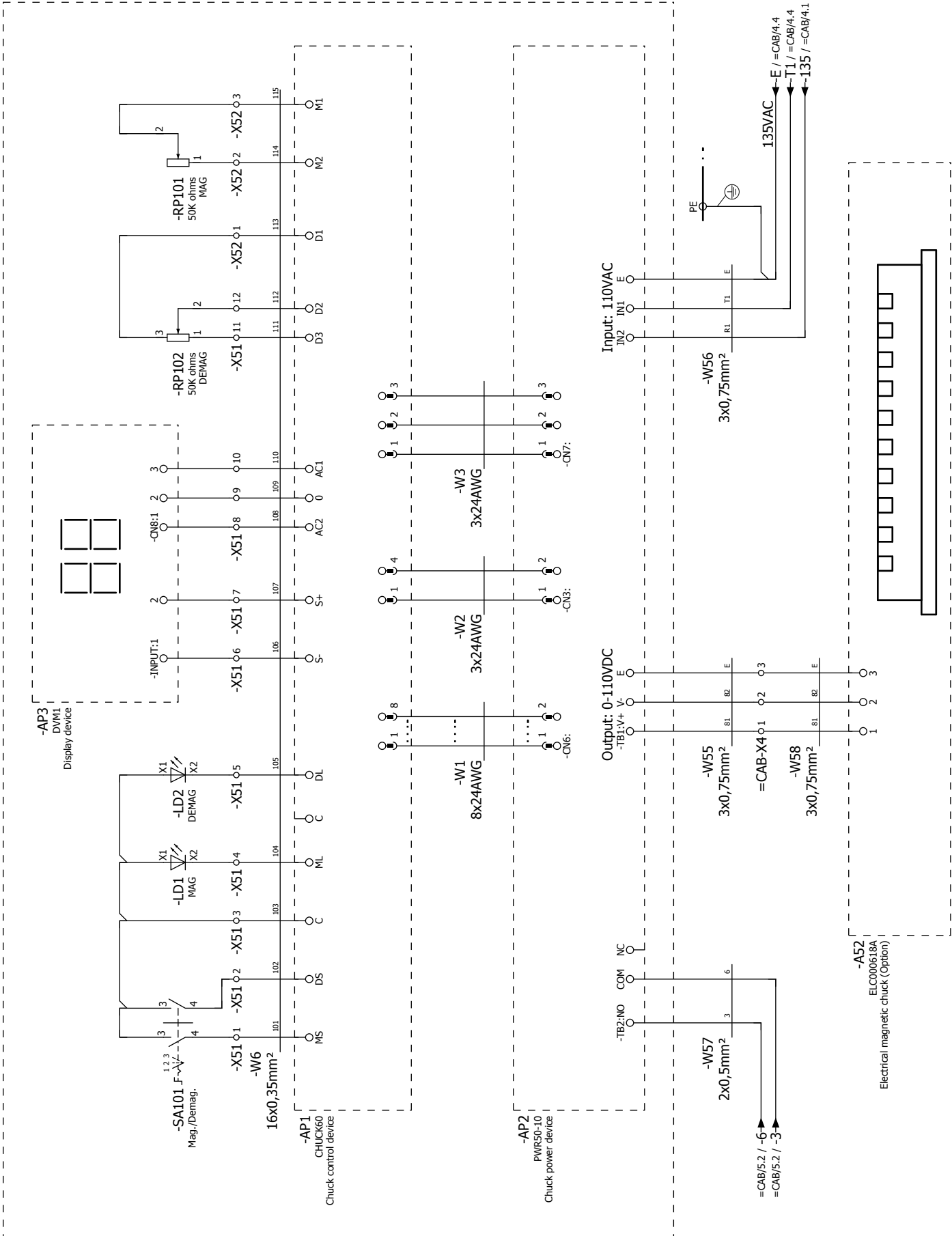
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-A51  
CMR-5C  
Chuck controller (Option)



=MOP/1

Date 2013/5/10

Ed. 1

Appr. [Signature]

Name [Name]

Date 201-402010

Modification

Date

Appr. [Signature]

Name [Name]

Date 201-402010

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Supra-818AHIII Surface Grinding Machine

Replaced by

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Replaced by

Replaced by

Page 1

Chuck control unit (Option)

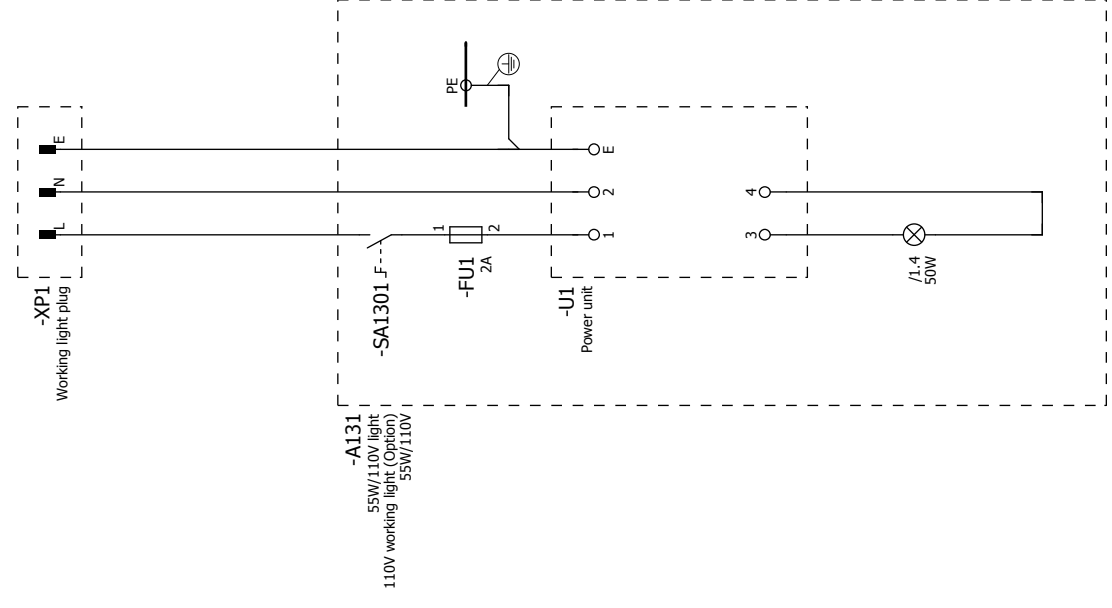
ACER GROUP

MOPCHK

+

WLIIT/1

Page 1



=MOPCHK/1

Date	2013/6/7
Ed.	
Appr	
Original	

SUPRA-818AHII Surface Grinding Machine	
Replaced by	Replaced by

ACER GROUP

Working lamp

201402010	
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= WLIT  
+

**ACER Group**

**Company / customer**  
**Project description**  
**drawing number**  
**Commission**

SUPRA-618/818AHDII surface grinder

**Manufacturer (company)** ACER Group

**Path** Supra 618-818-AHDII-200V-260V-INV-Z-DELTA

**Project name** Supra 618 or 818AHDII

**make** +CA

**Type**

**Place of installation**

**Responsible for project**

**Part feature**

**Created on** 2011/4/23  
**Edit date** 2022/6/2 by (short name) alex  
**Number of pages** 35

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=CA+3	Table of contents : =CA10+1 - =CA20+1		2011/11/3		
=CA+4	Operating panel		2011/11/3		
=CA+5	Electrical cabinet panel		2011/11/3		
=CA+6	Device tag list : =CA01+-A1 - =CA01+-FU2		2011/11/3		
=CA+7	Device tag list : =CA01+-FU3 - =CA01+-QS1		2011/11/3		
=CA+8	Device tag list : =CA01+-R2 - =CA01+-XS2		2011/11/3		
=CA+9	Device tag list : =CA01+-XS3 - =CA02+-A3-AP1-U3-CN26		2011/11/3		
=CA+10	Device tag list : =CA02+-A3-AP1-U3-TB1 - =CA04+-SQ1		2011/11/3		
=CA+11	Device tag list : =CA04+-SQ2 - =CA10+-A51-AP4-INPUT		2011/11/3		
=CA+12	Device tag list : =CA10+-A51-AP4-TB1 - =CA10+-A52		2011/11/3		
=CA+13	Parts list		2011/11/3		
=CA01+1	Main power		2011/11/3		
=CA01+2	Cross feed motor drive		2011/11/3		
=CA01+3	Left/rightward & in/outward motion drive		2011/11/3		
=CA01+4	Elevating motor drive		2011/11/3		
=CA01+5	Control power		2011/11/3		
=CA01+6	Magnetic contacts & relays		2011/11/3		
=CA01+7	Controller power		2011/11/3		
=CA01+8	Sensors & detectors (X0-X7)		2011/11/3		
=CA01+9	Sensors & detectors (X20-X27)		2011/11/3		
=CA01+10	Control signals (Y0, Y1, Y10, Y11)		2011/11/3		
=CA01+11	Control signals (Y20-Y27)		2011/11/3		
=CA02+1	Operating panel		2011/11/3		
=CA03+1	Working lamp		2011/10/25		
=CA03+2	Optical linear scale unit		2011/10/19		
=CA04+1	Left/rightward switching switches		2011/10/25		
=CA04.1+1	In, out & top limit switches		2011/10/25		
=CA04.2+1	Throttle limit switches		2011/10/31		
=CA06+1	Hydraulic unit		2011/10/31		
=CA07+1	Coolant unit		2011/10/29		
=CA09+1	Slide guide lubrication unit		2011/10/31		







# Device tag list

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





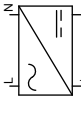


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=CA01-A1-X20	Extension port	=CA01/7.6	
=CA01-A1-X21	POWER	=CA01/7.3	
=CA01-A1-X22	RS-485	=CA01/7.4	
=CA01-A1-X23	DI C	=CA01/7.5	
=CA01-A1-X24	DO C0	=CA01/7.5	
=CA01-A2 DELTA.DVP16SP11R DVP16SP11R	Digital input/output unit S series 8DI/8DO extension unit	=CA01/7.6	
=CA01-A2-X25	DI C	=CA01/7.7	
=CA01-A2-X26	DO C0	=CA01/7.7	






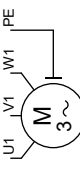
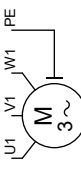

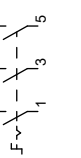
device tag part number Type number	function text Article designation	X-Ref	symbol
=CA01-A15	Resisters	=CA01/4.7	
=CA01-A15-R1	1/W	=CA01/4.7	
=CA01-A15-R2	=	=CA01/4.8	
=CA01-FR1 TECO.RHU-10K1.7.2-10A RHU-10K1.7.2-10A	Grinding wheel motor overload Motor overload switch	=CA01/1.3	
=CA01-FR2 TECO.RHU-10K1.3.5-4.8A RHU-10K1.3.5-4.8A	Hydraulic motor overload Motor overload switch	=CA01/1.5	
=CA01-FR3 TECO.RHU-10K1.1.8-2.5A RHU-10K1.1.8-2.5A	Coolant motor overload Motor overload switch	=CA01/1.7	
=CA01-FR5	Vacuum motor overload	=CA01/6.8	
=CA01-FU1	Main fuses	=CA01/1.0	
=CA01-FU2		=CA01/5.1	



# Device tag list


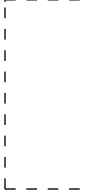





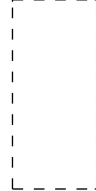

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
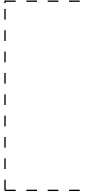





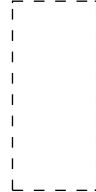
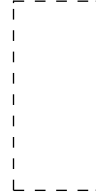
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=CA01-FU3		=CA01/5.2	
=CA01-FU4		=CA01/5.3	
=CA01-FU5		=CA01/5.1	
=CA01-FU6		=CA01/7.2	
=CA01-FU7		=CA01/3.3	
=CA01-FU8		=CA01/3.4	
=CA01-GS1 DELTA.DVP-2401 DVP-2401	Power supply Power supply unit, 1-phase	=CA01/7.2	
=CA01-KA1 OMRON.LY2N-J.110VAC LY2N-J.110VAC	Elevator power starter Control relay	=CA01/6.7	
=CA01-KA2 OMRON.MY2N-J.110VAC MY2N-J.110VAC	In/outward starter Control relay	=CA01/6.6	

device tag part number Type number	function text Article designation	X-Ref	symbol
=CA01-KM1 TECO.CU-11E10 CU-11E10	G. W. motor starter Motor contactor	=CA01/6.1	
=CA01-KM2 TECO.CU-11E10 CU-11E10	Hydraulic motor starter Motor contactor	=CA01/6.2	
=CA01-KM3 TECO.CU-11E10 CU-11E10	Coolant motor starter Motor contactor	=CA01/6.3	
=CA01-KM4 TECO.CU-11E10 CU-11E10	Cross feed power starter Motor contactor	=CA01/6.5	
=CA01-KM6 TECO.CU-11E10 CU-11E10	Vacuum starter Motor contactor	=CA01/6.8	
=CA01-M1 CB.MS01362346-2,3KW MS01362346	Grinding wheel motor 3-phase induction motor	=CA01/1.3	
=CA01-M4 CB.MC01402200-40W MC01402200-40W	Cross feed motor 3-phase induction motor	=CA01/2.3	
=CA01-M5 CB.MSUD29902A MSUD29902A	Stepping motor 2-phases stepping motor	=CA01/4.1	
=CA01-QS1	Main switch	=CA01/1.0	

# Device tag list

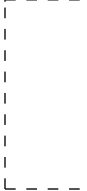
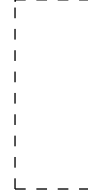






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
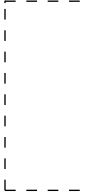







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=CA01-R2		=CA01/3.5	
=CA01-TC1 LGE.500VA.110V.12V 500VA.110V.12V	Control transformer Transformer	=CA01/5.0	
=CA01-U1 GSENN.2A-AD.INV.001 2A-AD.INV.001	Motion controller Motion controller for AD with inverter	=CA01/3.2	
=CA01-U1-TB1		=CA01/3.5	
=CA01-U1-TB2		=CA01/3.2	
=CA01-U1-TB3		=CA01/3.6	
=CA01-U1-TB4		=CA01/3.4	
=CA01-U2 ZS.ZS.2D4022 ZS.2D4022	2 phases stepping driver 2-phase stepping motor driver	=CA01/4.0	
=CA01-U2-X11		=CA01/4.1	

device tag part number Type number	function text Article designation	X-Ref	symbol
=CA01-U2-X12	OVH	=CA01/4.5	
=CA01-U3 DELTA.VFD004M23A VFD004M23A	Cross feed motor drive Inverter	=CA01/2.2	
=CA01-U3-DTB1		=CA01/2.3	
=CA01-U3-DTB2		=CA01/2.3	
=CA01-U3-J1	RS485	=CA01/2.6	
=CA01-U3-J4		=CA01/2.7	
=CA01-U3-J5		=CA01/2.4	
=CA01-XS1 LLE.LLPM509-30-7 LLPM509-30-7	Hydraulic unit socket 7P power socket	=CA01/1.5	
=CA01-XS2 LLE.LLPM508-25-4 LLPM508-25-4	Coolant unit socket 4P power socket	=CA01/1.7	

# Device tag list










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






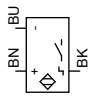
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=CA01-XS3 YYELK-3021F LK-3021F	Female receptacle		
=CA02-A3 GSENN.AD-MB-002 AD-MB-002	Operator's panel Membrane panel for AD series	=CA02/1.0	
=CA02-A3-AP1 GSENN.KEYSW1 KEYSW1	Operating element Elements of operating panel	=CA02/1.0	
=CA02-A3-AP1-CN1		=CA02/1.1	
=CA02-A3-AP1-CN2		=CA02/1.1	
=CA02-A3-AP1-CN3		=CA02/1.2	
=CA02-A3-AP1-CN12		=CA02/1.3	
=CA02-A3-AP1-CN21		=CA02/1.4	
=CA02-A3-AP1-CN22		=CA02/1.4	

device tag part number Type number	function text Article designation	X-Ref	symbol
=CA02-A3-AP1-CN26		=CA02/1.5	
=CA02-A3-AP1-U3 GSENN.PLC-PANELV2.2 PLC-PANELV2.2	Panel controller Panel controller	=CA02/1.0	
=CA02-A3-AP1-U3-CN1		=CA02/1.1	
=CA02-A3-AP1-U3-CN2		=CA02/1.1	
=CA02-A3-AP1-U3-CN3		=CA02/1.2	
=CA02-A3-AP1-U3-CN12		=CA02/1.3	
=CA02-A3-AP1-U3-CN21		=CA02/1.4	
=CA02-A3-AP1-U3-CN22		=CA02/1.4	
=CA02-A3-AP1-U3-CN26		=CA02/1.5	

# Device tag list

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device tag part number Type number	function text Article designation	X-Ref	symbol
=CA02-A3-AP1-U3-TB1	POWER	=CA02/1.4	
=CA02-A3-AP1-U3-TB2	RS-485	=CA02/1.3	
=CA02-A3-AP1-VRCN		=CA02/1.8	
=CA02-A3-RP1 TOKOS.RV24YN20S503 RV24YN20S503	Jog incremental adjustment Potentiometer	=CA02/1.8	
=CA02-A3-SB1 MOE.A22-ESTOP-K11 A22-ESTOP-K11	Emergency stop Emergency stop pushbutton	=CA02/1.7	
=CA03-A13	12V working light (Option)	=CA03/1.2	
=CA03-A131	110V working light (Option)	=CA03/1.5	
=CA03-A131-FU1		=CA03/1.6	
=CA03-A131-U1		=CA03/1.5	

device tag part number Type number	function text Article designation	X-Ref	symbol
=CA03-A301	Optical linear scale counter	=CA03/2.2	
=CA03-A301-PWR		=CA03/2.3	
=CA03-A301-X	Scale connector	=CA03/2.4	
=CA03-A302	Linear scale unit	=CA03/2.2	
=CA03-A302-A302		=CA03/2.4	
=CA03-X9	Working light cinnectors	=CA03/1.3	
=CA03-XP1	Working light plug	=CA03/1.5	
=CA03-XP2		=CA03/2.3	
=CA04-SQ1 KFPS.TL-B5NE1 TL-B5NE1	Leftward switching detect Proximity switch (NO contact)	=CA04/1.5	

# Device tag list






F03\_001

device tag part number Type number	function text Article designation	X-Ref	symbol
=CA04-SQ2 KFPS.TL-B5NE1 TL-B5NE1	Rightward switching detect Proximity switch (NO contact)	=CA04/1.3	
=CA04.1-SQ4 HLE.AH-8104 AH-8104	Inward moving stroke Limit switch	=CA04.1/1.3	
=CA04.1-SQ5 HLE.AH-8104 AH-8104	Outward move stroke Limit switch	=CA04.1/1.4	
=CA04.1-SQ6 HLE.Z15G1308 Z15G1308	Upward limit detect Limit switch	=CA04.1/1.5	
=CA04.1-SQ7 HLE.Z15G1308 Z15G1308	In/outward limit detect Limit switch	=CA04.1/1.6	
=CA04.2-SQ3 OMRON.V-152-1A5 V-152-1A5	Throttle in safe detect Limit switch	=CA04.2/1.4	
=CA06-A11 CB.EV3V221101 EV3V221101	Hydraulic tank unit Hydraulic solenoid drive	=CA06/1.2	
=CA07-A401	Coolant pump motor 3-phase induction motor	=CA07/1.3	
=CA07-A401-M51 CB.MWPU402346-0.1KW MWPU402346		=CA07/1.4	

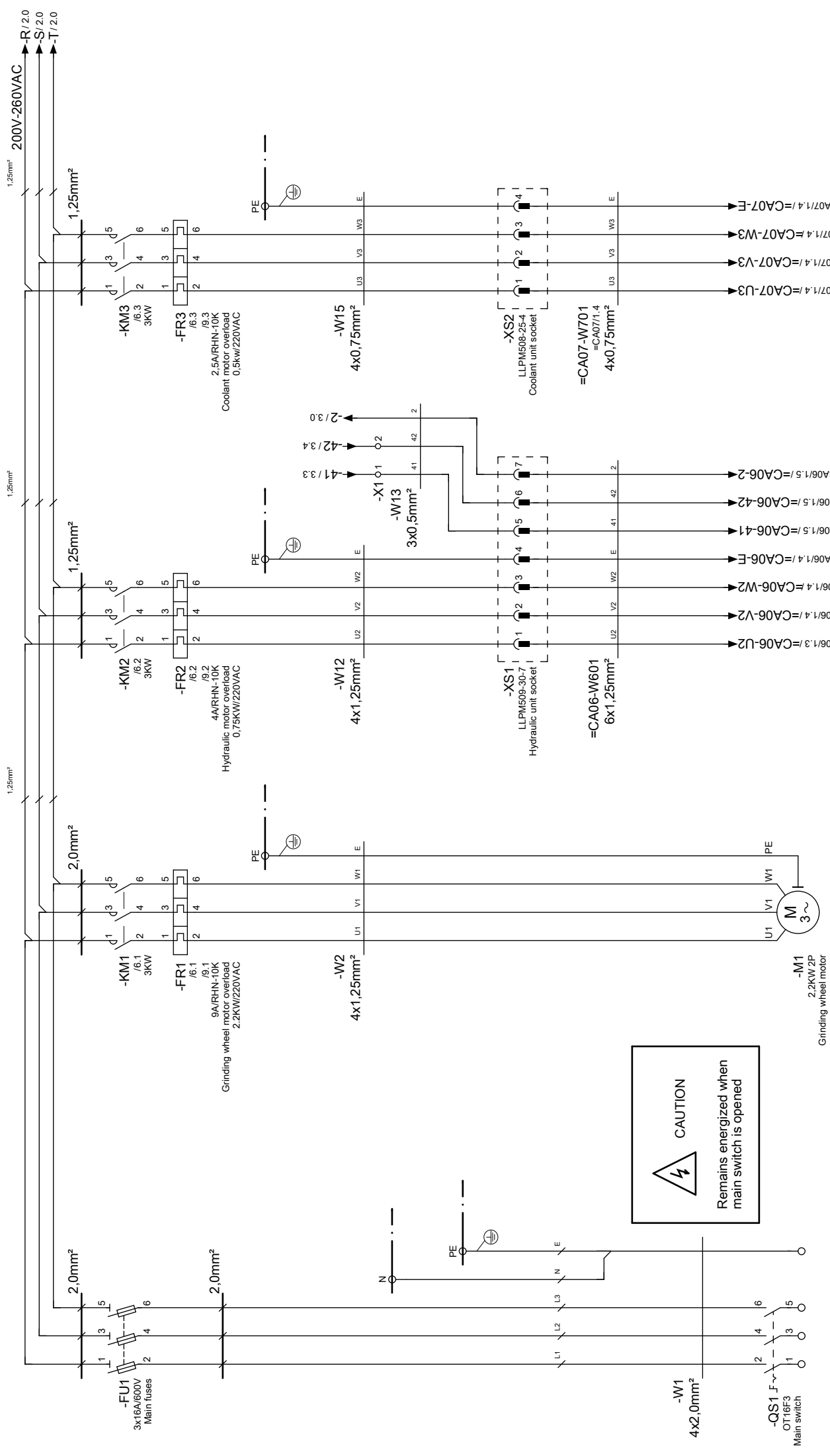
device tag part number Type number	function text Article designation	X-Ref	symbol
=CA07-A401-M52	Vacuum motor	=CA07/1.6	
=CA09-A14-M6 CB.CHCY.EL-1-110VAC CHCY.EL-1-110VAC	Electro magnetic pump	=CA09/1.4	
=CA10-A51-AP4 CB.DVM-1 DVM-1	Chuck controller (Option) Display device	=CA10/1.1	
=CA10-A51-AP4-CN3		=CA10/1.5	
=CA10-A51-AP4-CN6		=CA10/1.4	
=CA10-A51-AP4-CN7		=CA10/1.6	
=CA10-A51-AP4-CN8		=CA10/1.5	
=CA10-A51-AP4-CN9		=CA10/1.6	
=CA10-A51-AP4-INPUT		=CA10/1.4	

# Device tag list

F03\_001

device tag part number Type number	function text Article designation	X-Ref	symbol	device tag part number Type number	function text Article designation	X-Ref	symbol
=CA10-A51-AP4-TB1		=CA10/1.4					
=CA10-A51-AP4-TB2		=CA10/1.2					
=CA10-A51-AP4-TB4		=CA10/1.3					
=CA10-A51-AP4-TB5		=CA10/1.5					
=CA10-A52	Electrical magnetic chuck (Option)	=CA10/1.3					





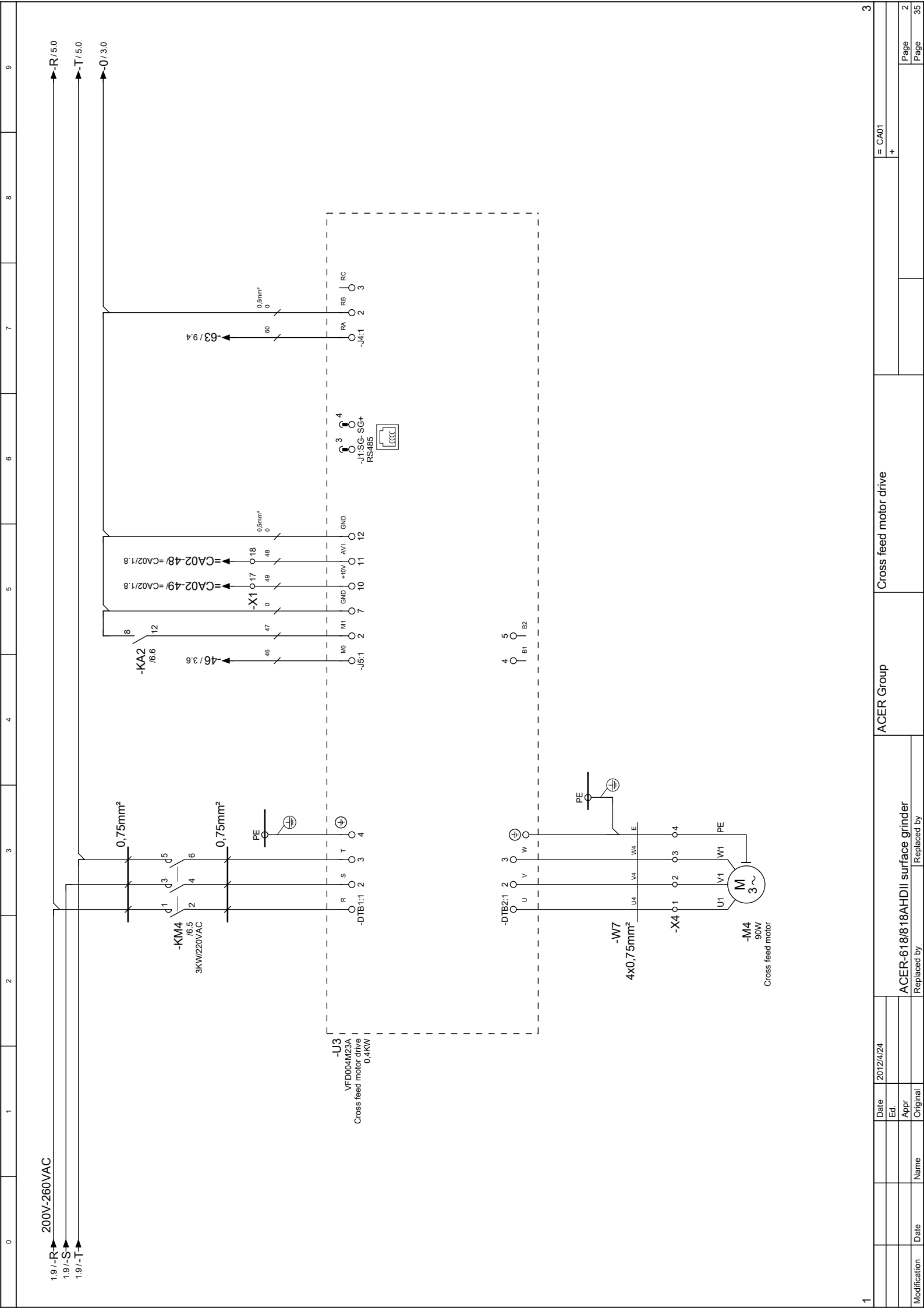
Line power: 200VAC-260VAC 3P4L/5L

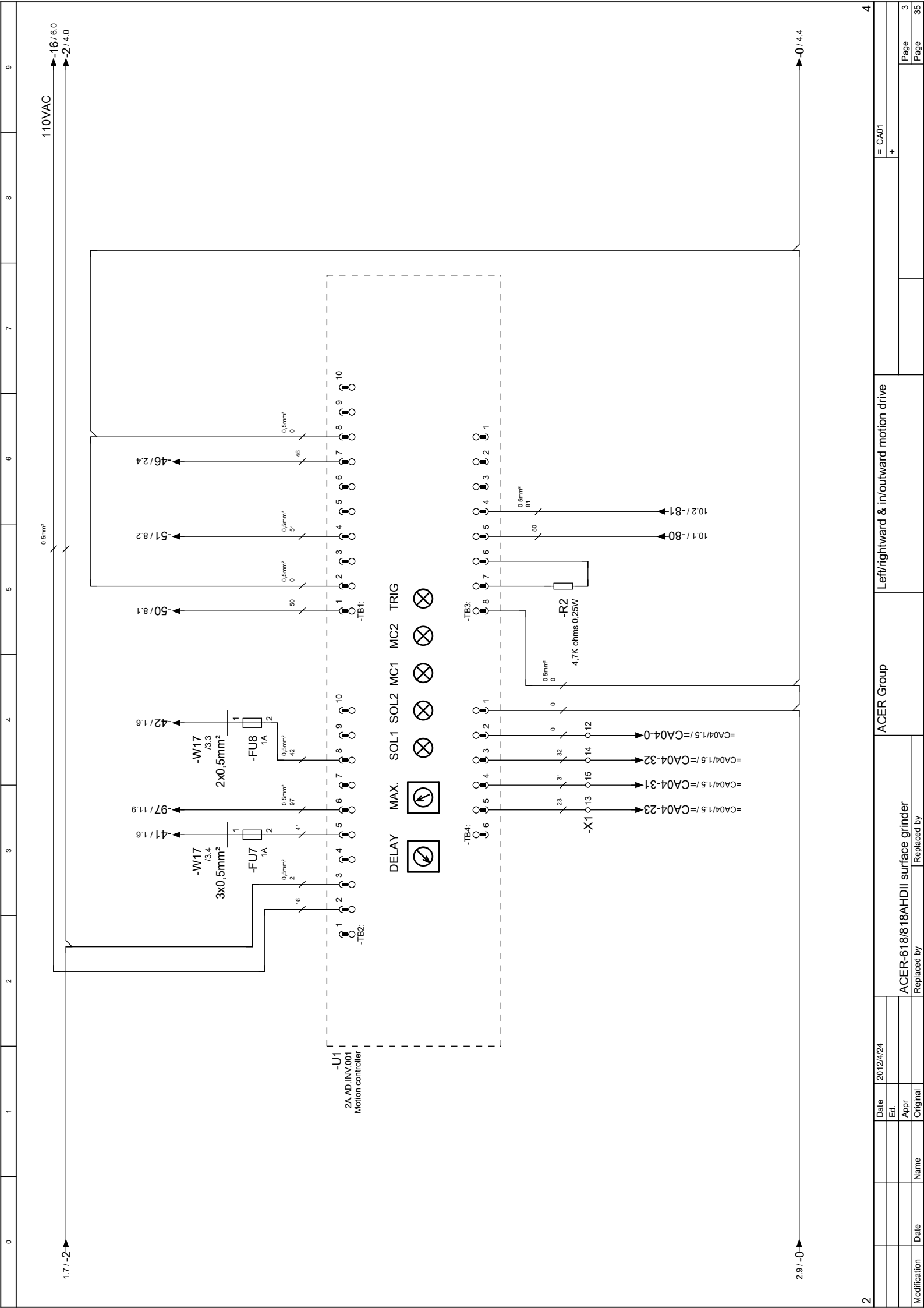
**CAUTION**  
Remains energized when main switch is opened

Refer to hydraulic unit (CA06)

Refer to coolant unit 1 (CA07) (Option)







110VAC

1.7/-2

16/6.0

-2/4.0

-U1  
2A AD.INV.001  
Motion controller

-TB2:

-TB1:

DELAY MAX. SOL1 SOL2 MC1 MC2 TRIG

-TB4:

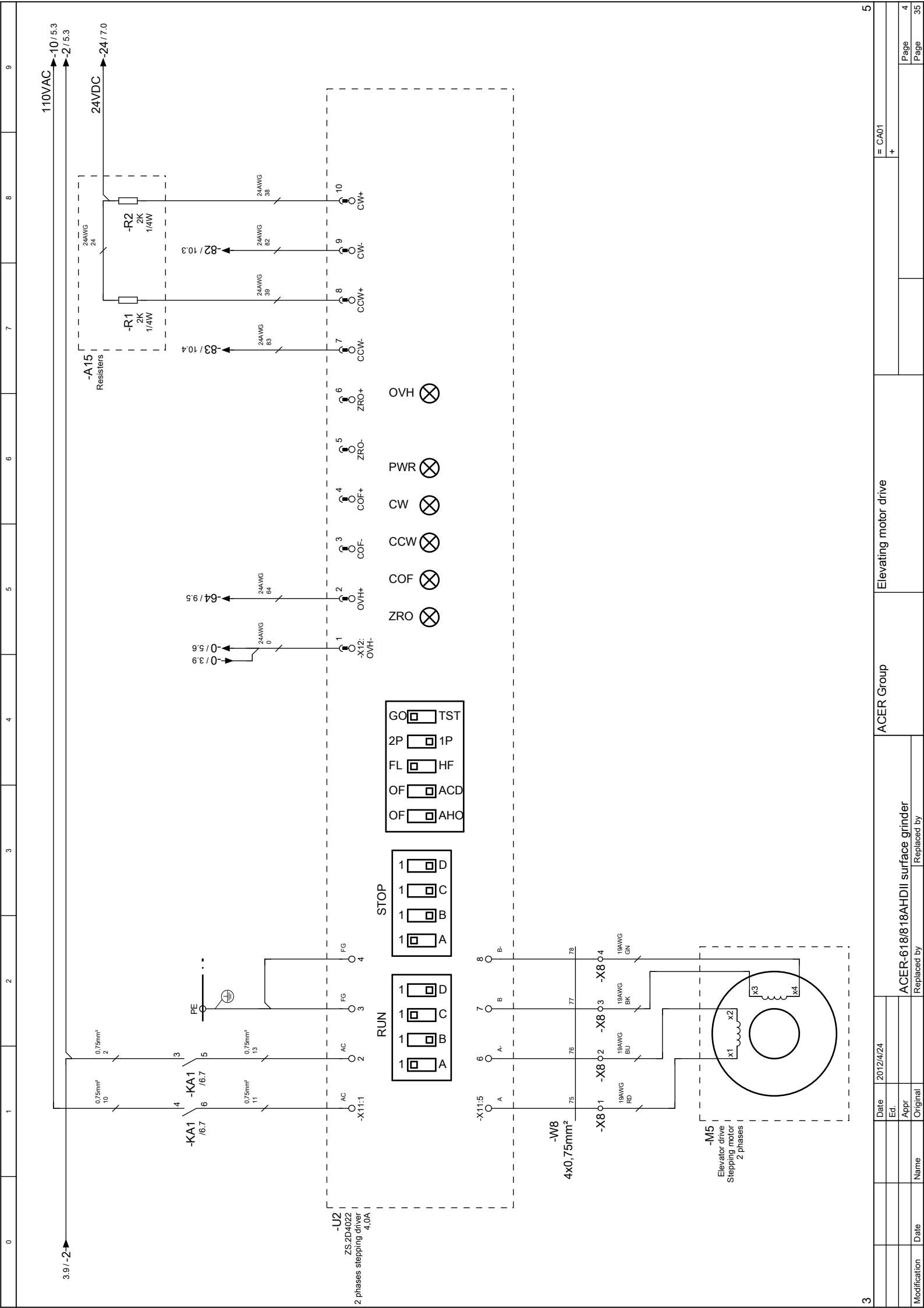
-TB3:

R2  
4.7K ohms 0.25W

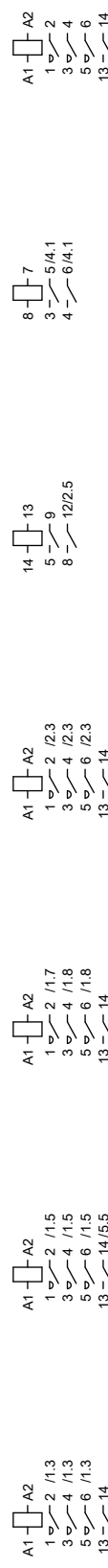
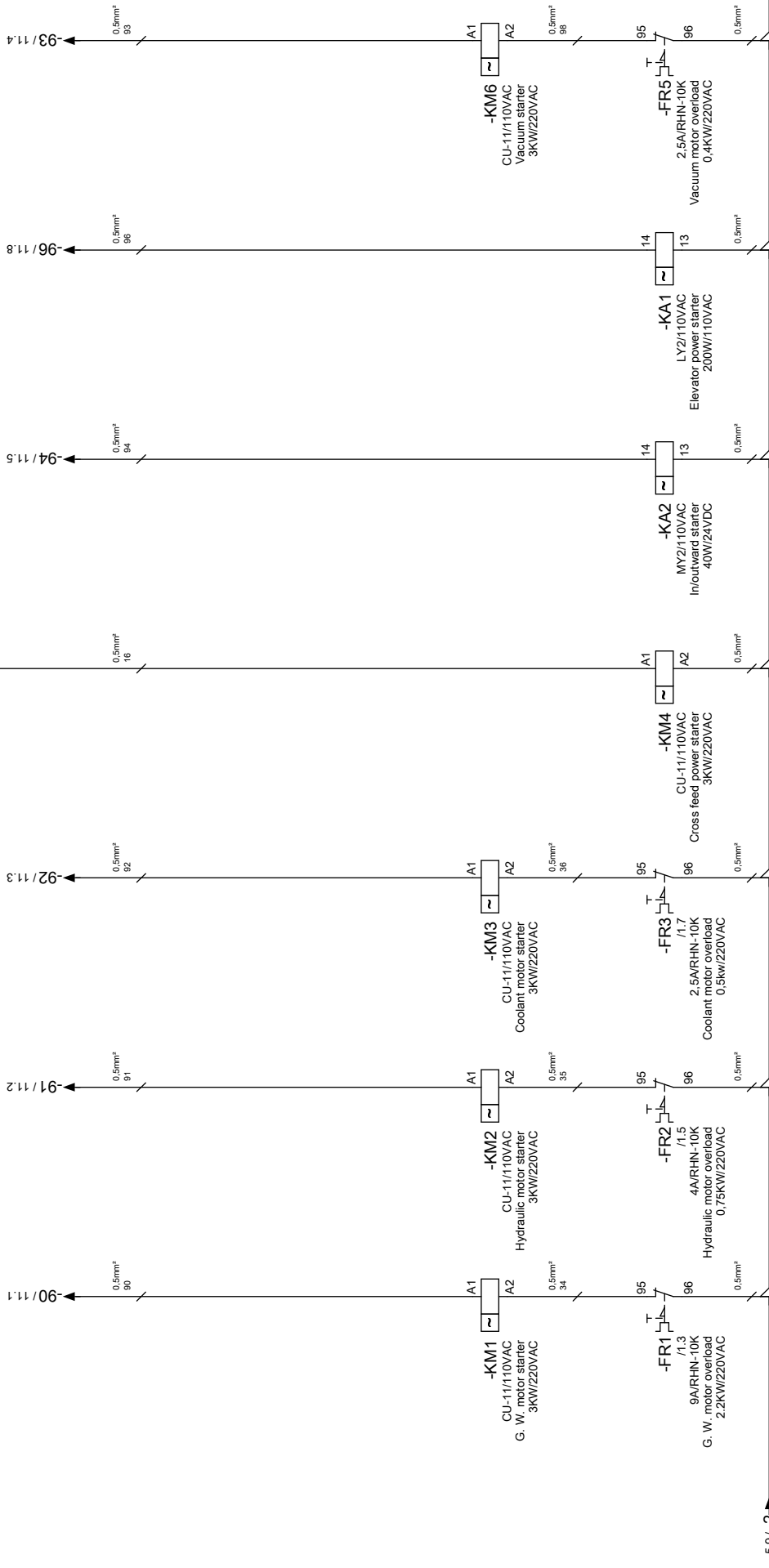
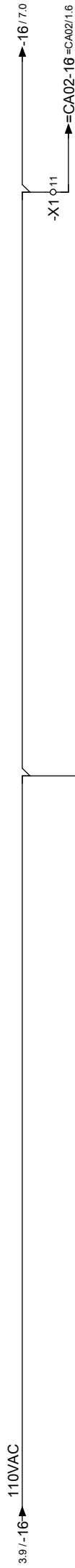
-X  
CA04/1.5/=CA04-23  
CA04/1.5/=CA04-31  
CA04/1.5/=CA04-32  
CA04/1.5/=CA04-0

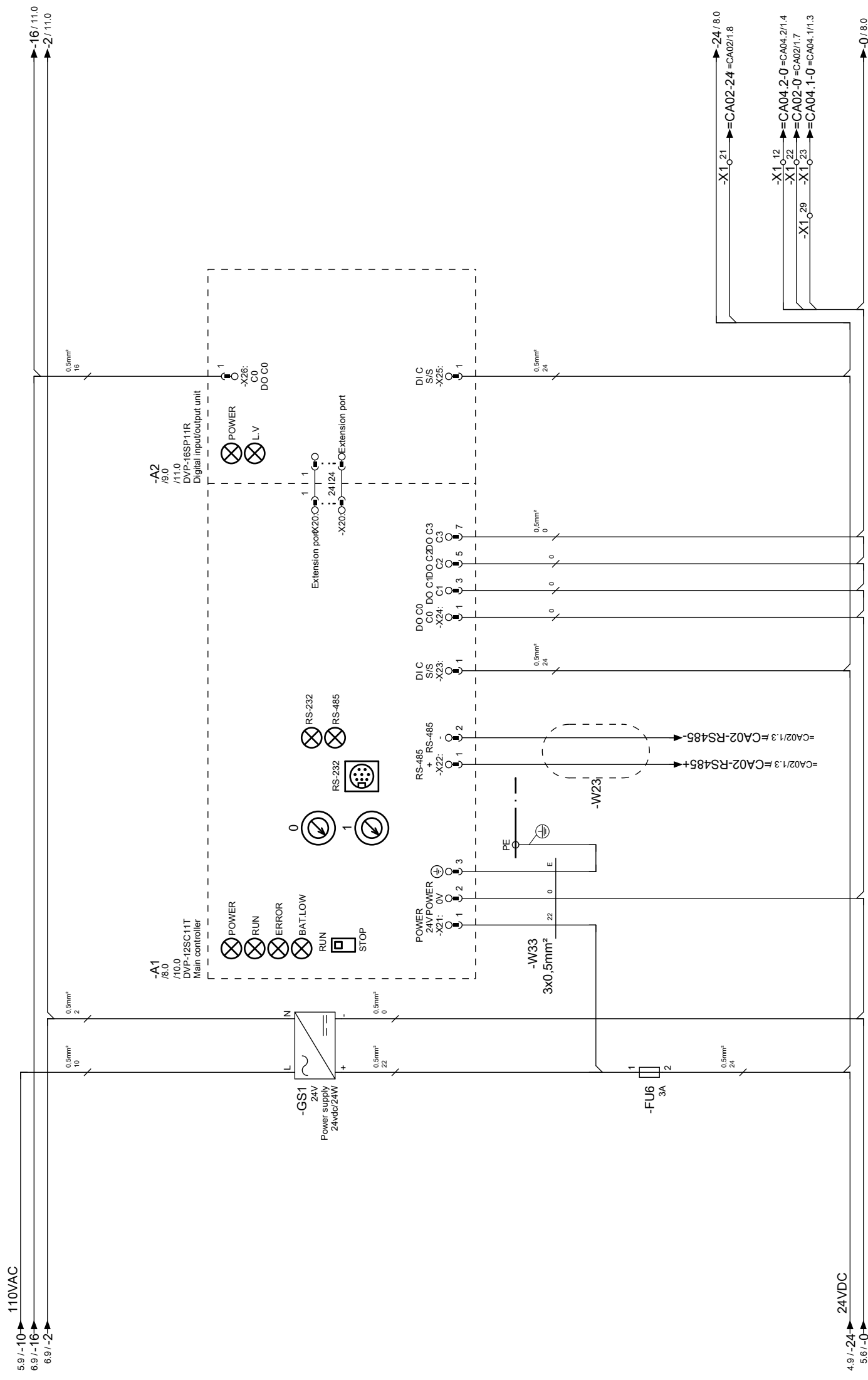
2.9/-0

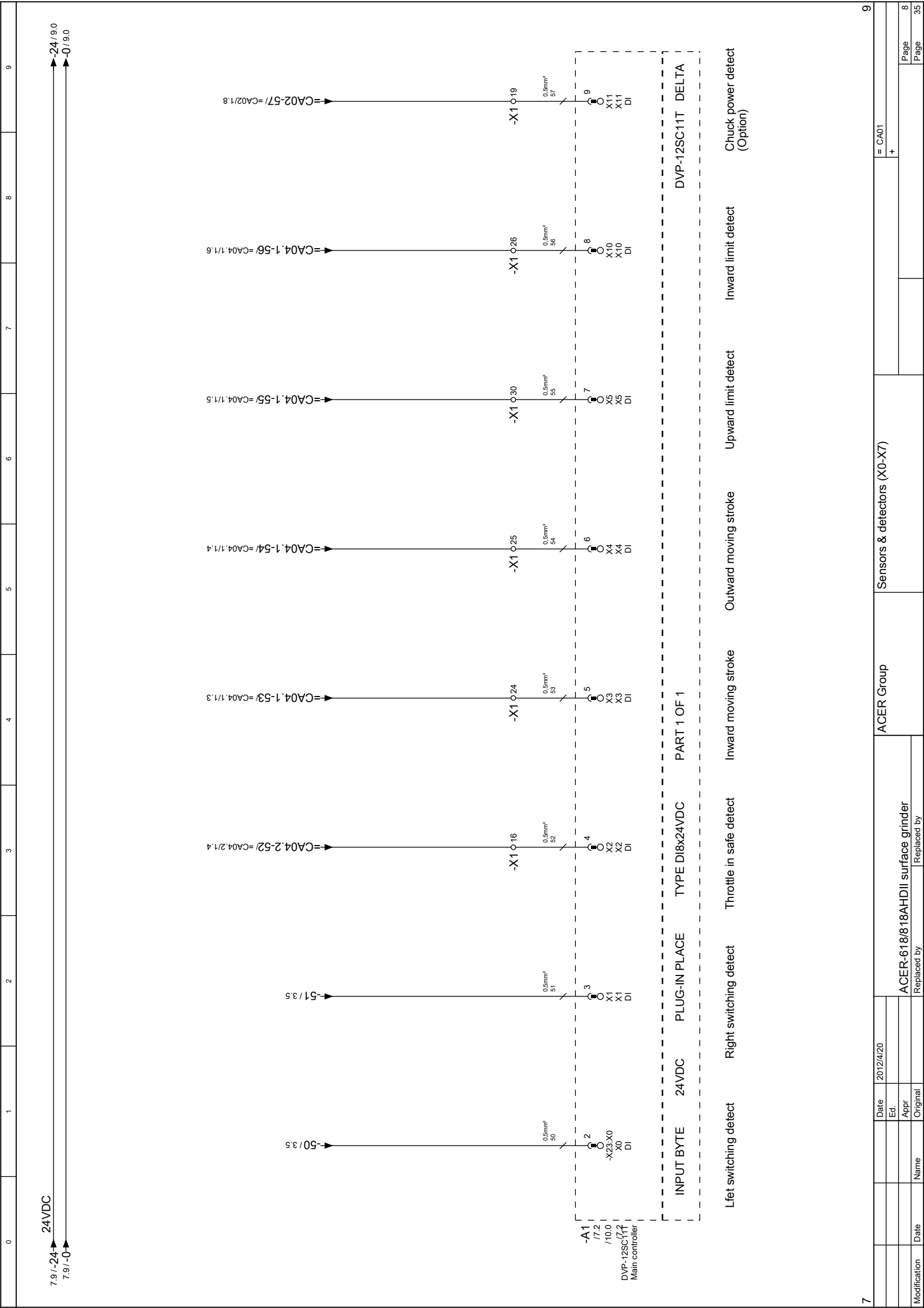
0/4.4





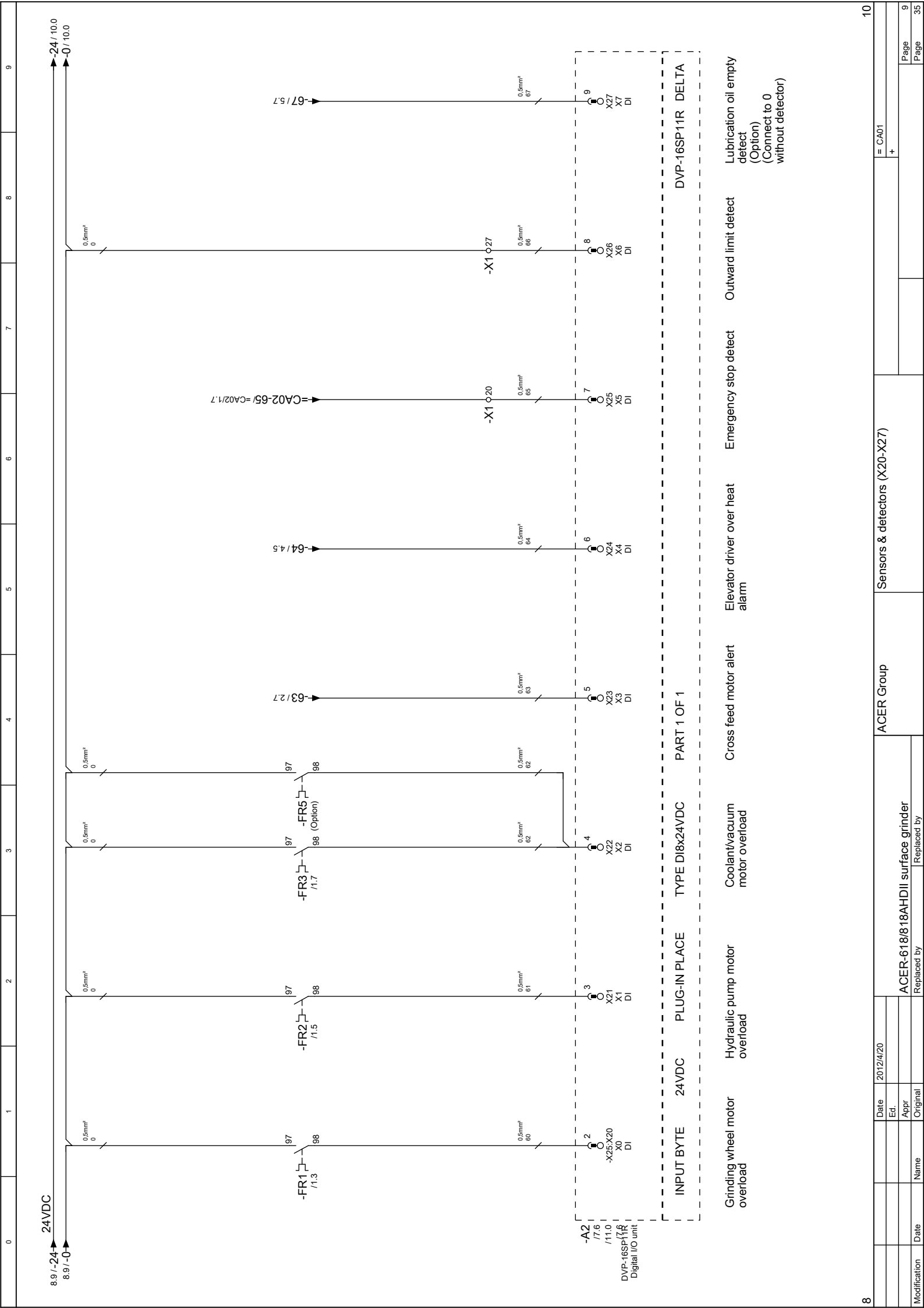






7.9/-24 → 24VDC  
7.9/-0 →

24 / 9.0  
-0 / 9.0



8.9 / -24 → 24VDC  
8.9 / -0 →

0.5mm²  
0

0.5mm²  
0

0.5mm²  
0

0.5mm²  
0

0.5mm²  
0

-FR1 /11.3

-FR2 /11.5

-FR3 /11.7

-FR5 (Option)

-63 /2.7

-64 /4.5

-X1 (20)

-X1 (27)

-67 /5.7

97

97

97

97

97

97

97

97

98

98

98

98

98

98

98

98

2

3

4

5

6

7

8

9

-A2 /7.6

/11.0

DVP-16SP11R

Digital I/O unit

X25-X20

X1

X2

X21

X1

X2

X22

X2

X1

X2

X23

X3

X4

X24

X4

X1

X2

X25

X5

X6

X5

X6

X26

X6

X7

X27

X7

X1

X2

X28

X6

X7

X1

X2

X29

X7

X30

X7

X1

X2

INPUT BYTE 24VDC PLUG-IN PLACE TYPE D18x24VDC PART 1 OF 1

DVP-16SP11R DELTA

Grinding wheel motor overload

Hydraulic pump motor overload

Coolant/vacuum motor overload

Grinding wheel motor overload

Hydraulic pump motor overload

Coolant/vacuum motor overload

Cross feed motor alert

Elevator driver over heat alarm

Emergency stop detect (Option) (Connect to 0 without detector)

Outward limit detect

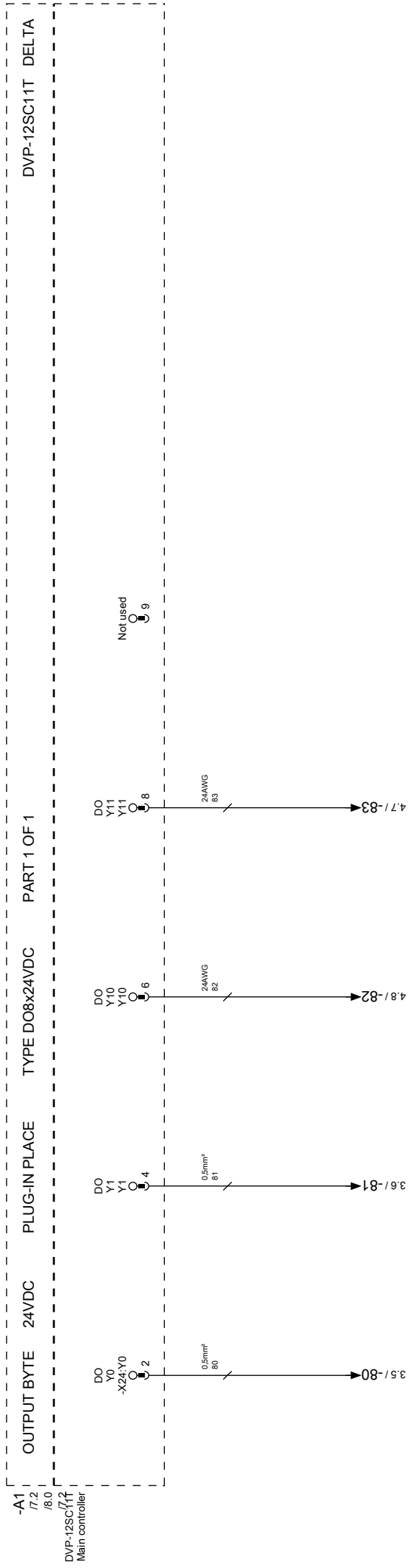
Lubrication oil empty detect

Emergency stop detect

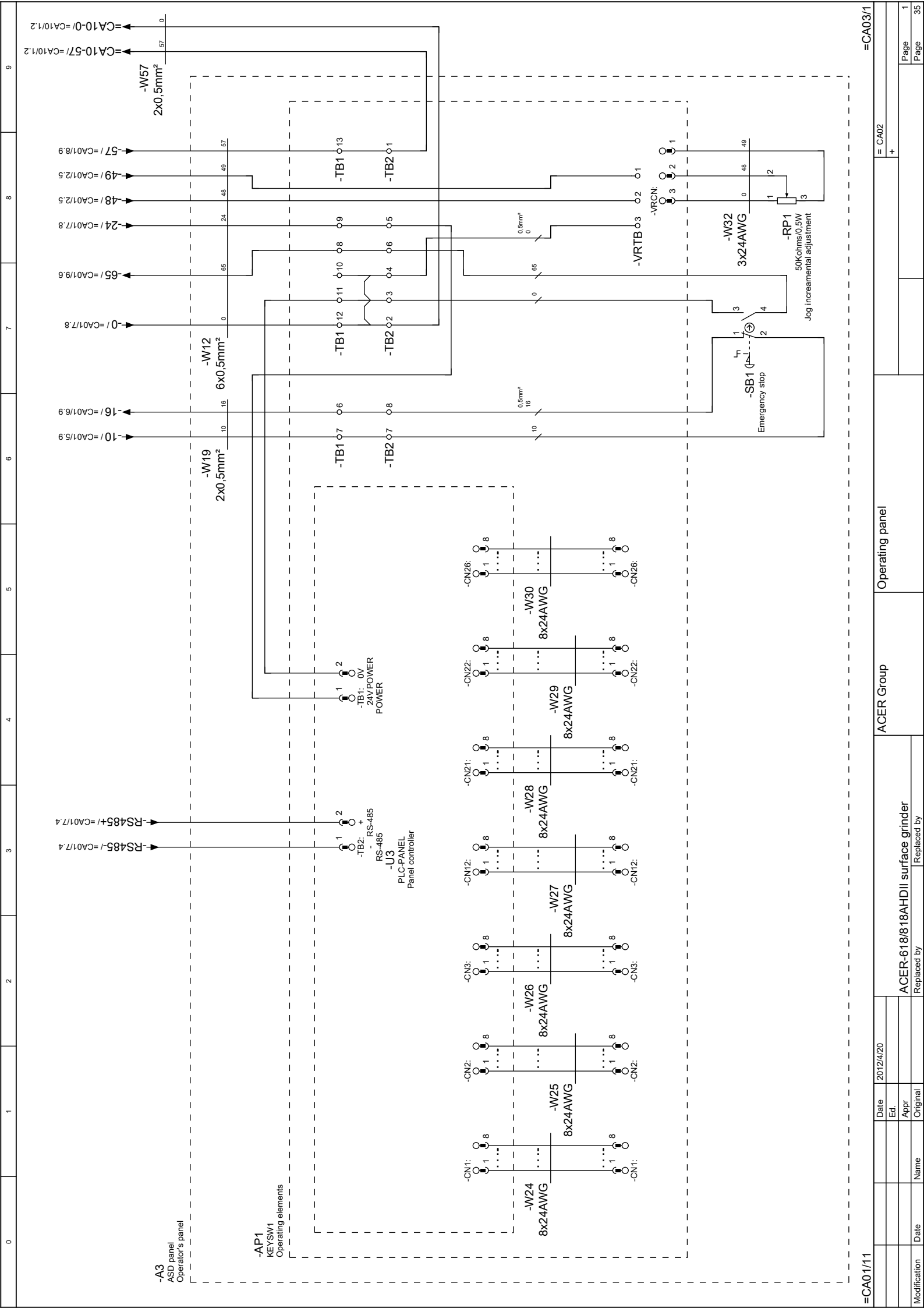
Lubrication oil empty detect (Option) (Connect to 0 without detector)



Jog cross feeding output Rapid cross feeding output Elevator series pulse output Elevator direction output





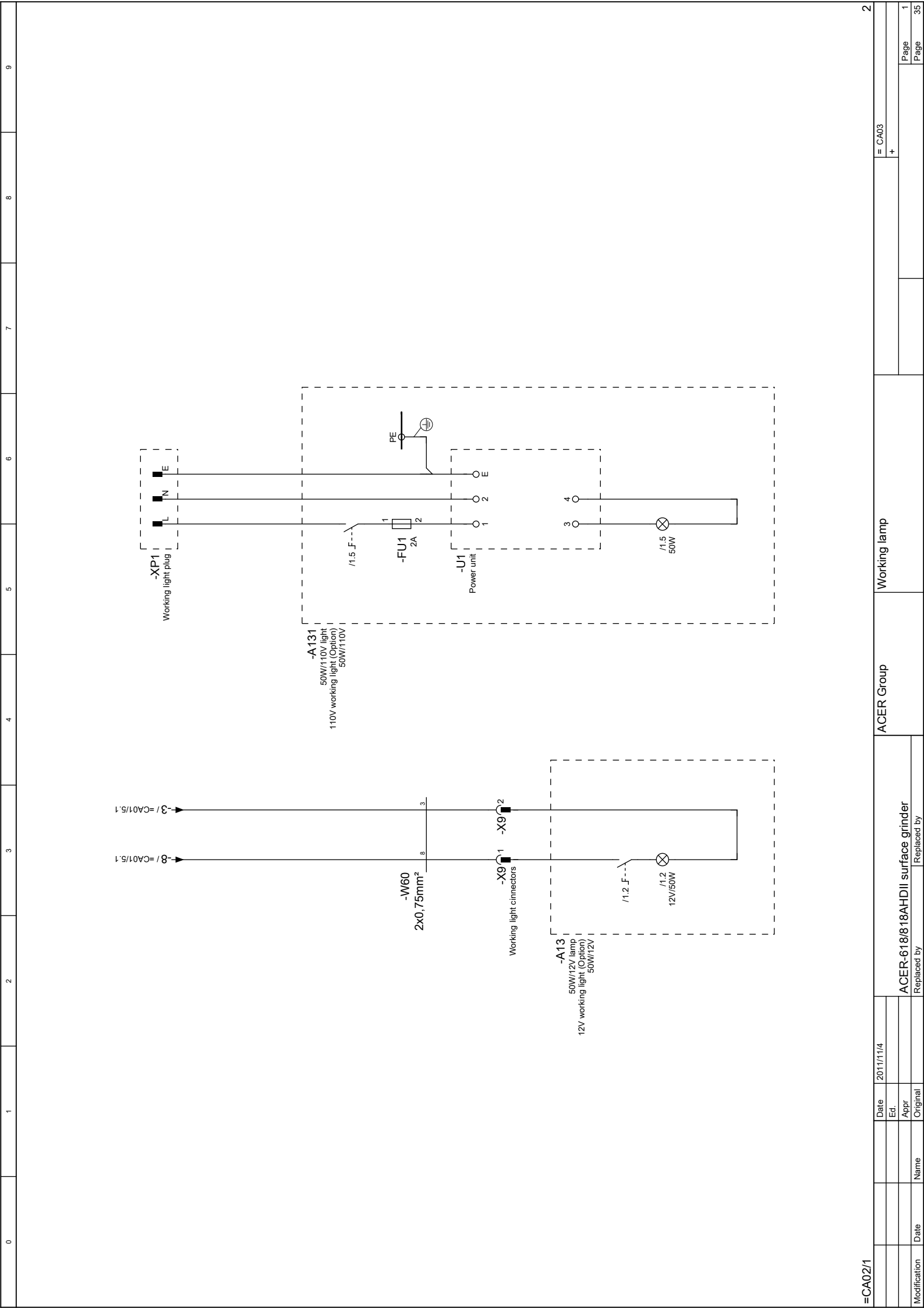


Modification	Date	Name	Original

Date	2012/4/20
Ed.	
Appr	

ACER-6181818AHDII surface grinder	
Replaced by	

Operating panel	
Replaced by	



0	1	2	3	4	5	6	7	8	9
---	---	---	---	---	---	---	---	---	---

The diagram illustrates the electrical connections between three main components:

- XP2:** A component with terminals 1, 2, and L.
- A301 Optical linear scale counter:** A component with terminals 1, 2, 3, and -PWR.
- A302 Linear scale unit:** A component with terminal -A302:1.
- Scale connector:** A connector with terminals X, Y, and Z.

Connections shown:

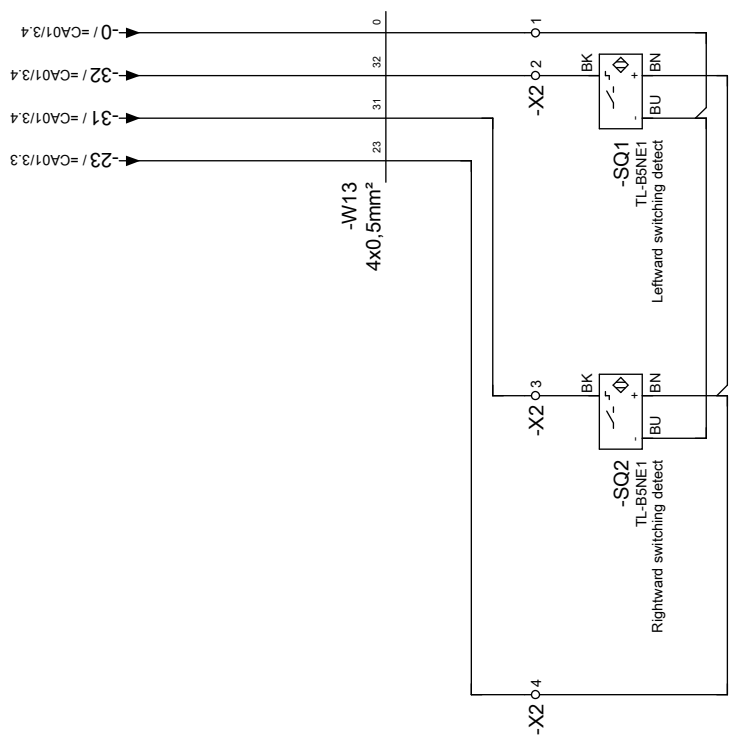
- Terminal 1 of -XP2 is connected to terminal 1 of -A301.
- Terminal 2 of -XP2 is connected to terminal 2 of -A301.
- Terminal L of -XP2 is connected to terminal 3 of -A301.
- Terminal -PWR of -A301 is connected to terminal -A302:1 of -A302.
- Terminal X of the Scale connector is connected to terminal -A302:1 of -A302.

(Option)

1		Date	2011/10/19	ACER Group	Optical linear scale unit	= CA03	=CA04/1
		Ed.				+	
		Appr		ACER-618/818AHDII surface grinder			
Modification	Date	Name	Original	Replaced by			
				Replaced by			
						Page	2
						Page	35

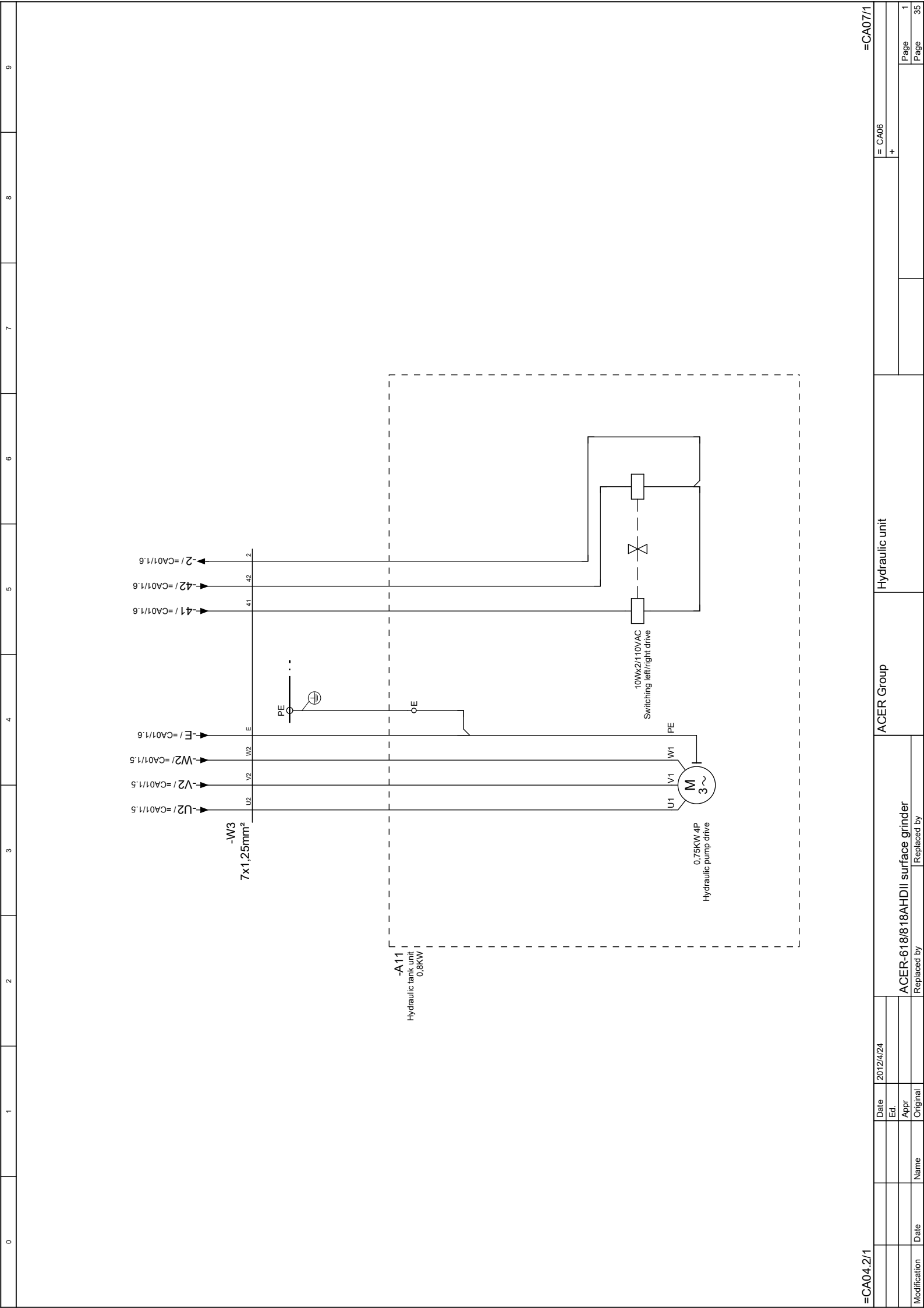
0	1	2	3	4	5	6	7	8	9
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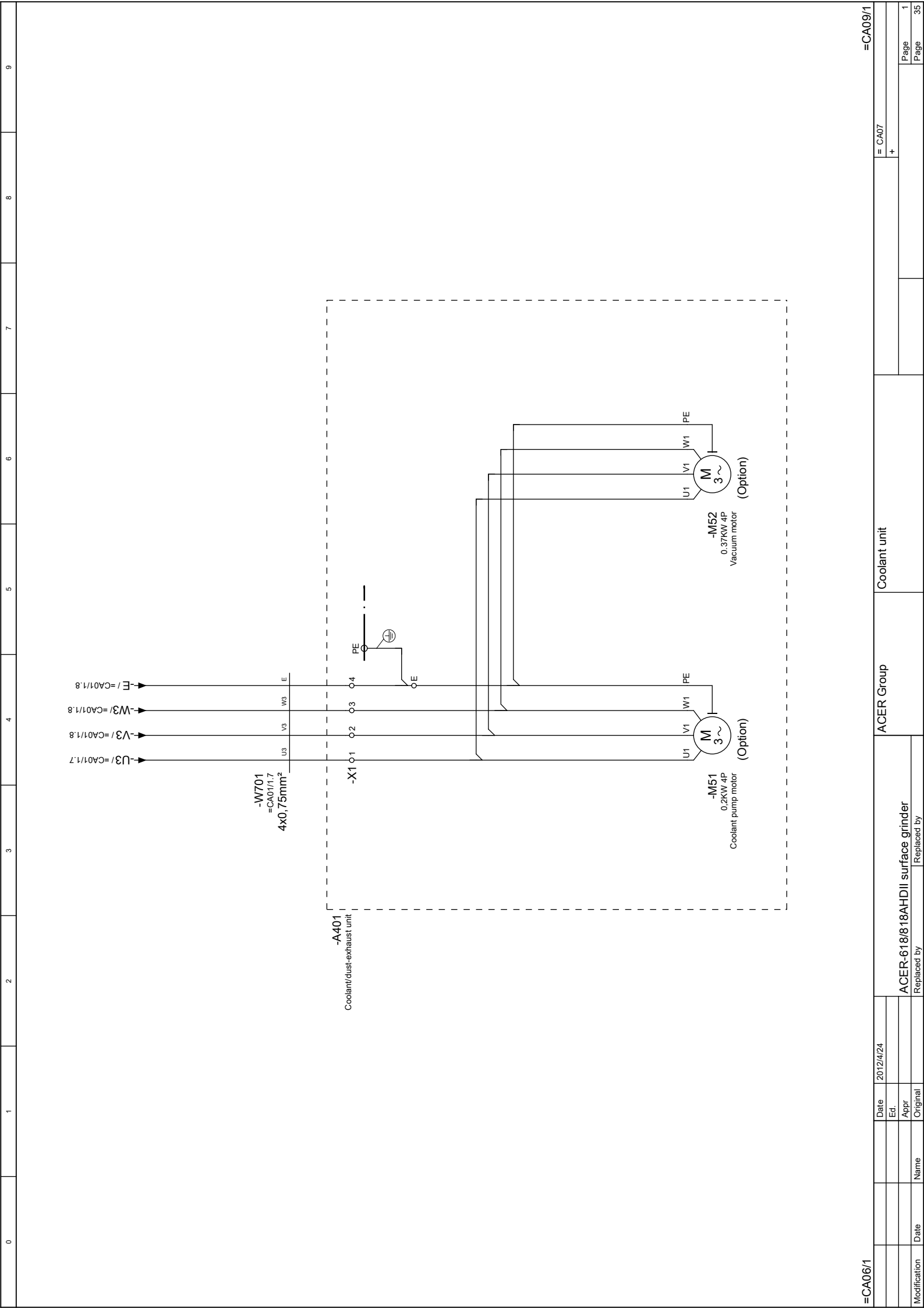


0	1	2	3	4	5	6	7	8	9
<p>The diagram shows a control circuit for the ACER-618/818AHDII surface grinder. It features a main power supply line at the top, labeled <math>-0 = CA01/7.8</math>. This line branches into three parallel paths, each leading to a different limit switch function:</p> <ul style="list-style-type: none"> <li><b>Inward moving stroke:</b> This path includes a normally open (NO) switch <math>-SQ4</math> (AH-8104) and a normally closed (NC) switch <math>-W11</math> (5x0,5mm<sup>2</sup>, /1.3). The circuit is protected by a fuse <math>-X5 \ 01</math>. The terminal is labeled <math>=CA01/8.4 / -53</math>.</li> <li><b>Outward moving stroke:</b> This path includes a normally open (NO) switch <math>-SQ5</math> (AH-8104) and a normally closed (NC) switch <math>-W35</math> (2x0,5mm<sup>2</sup>, /1.4, 54). The circuit is protected by a fuse <math>-X5 \ 03</math>. The terminal is labeled <math>=CA01/8.5 / -54</math>.</li> <li><b>In/outward limit detect:</b> This path includes a normally open (NO) switch <math>-SQ6</math> (Z15G1308) and a normally closed (NC) switch <math>-W18</math> (2x0,5mm<sup>2</sup>, /1.5, 0). The circuit is protected by a fuse <math>-X5 \ 05</math>. The terminal is labeled <math>=CA01/8.6 / -55</math>.</li> </ul> <p>Below these, there are two more parallel paths:</p> <ul style="list-style-type: none"> <li><b>In/outward limit detect:</b> This path includes a normally open (NO) switch <math>-SQ7</math> (Z15G1308) and a normally closed (NC) switch <math>-W21</math> (2x0,5mm<sup>2</sup>, /1.6, 0). The circuit is protected by a fuse <math>-X5 \ 07</math>. The terminal is labeled <math>=CA01/8.7 / -56</math>.</li> <li><b>In/outward limit detect:</b> This path includes a normally open (NO) switch <math>-SQ8</math> (Z15G1308) and a normally closed (NC) switch <math>-W21</math> (2x0,5mm<sup>2</sup>, /1.6, 56). The circuit is protected by a fuse <math>-X5 \ 08</math>. The terminal is labeled <math>=CA01/8.8 / -56</math>.</li> </ul>									
<p>Inward moving stroke      Outward moving stroke      Upward limit detect      In/outward limit detect</p>									
<p>ACER Group      In, out &amp; top limit switches</p>									
<p>ACER-618/818AHDII surface grinder</p>									
<p>Replaced by      Replaced by</p>									
<p>Date      2011/11/4</p>									
<p>Ed.      </p>									
<p>Appr      </p>									
<p>Name      Original</p>									
<p>Date      </p>									
<p>Modification      </p>									
<p>Page      1</p>									
<p>Page      35</p>									
<p>= CA04.1</p>									
<p>+      </p>									
<p>= 2/1</p>									









0	1	2	3	4	5	6	7	8	9
---	---	---	---	---	---	---	---	---	---

-A14-M6  
Lubrication unit

Lubrication motor  
10W  
/1.4

Oil level detect  
C NC  
(Option)

-14 / =CA01/5.5      -2 / =CA01/5.6      -0 / =CA01/5.6      -67 / =CA01/5.7

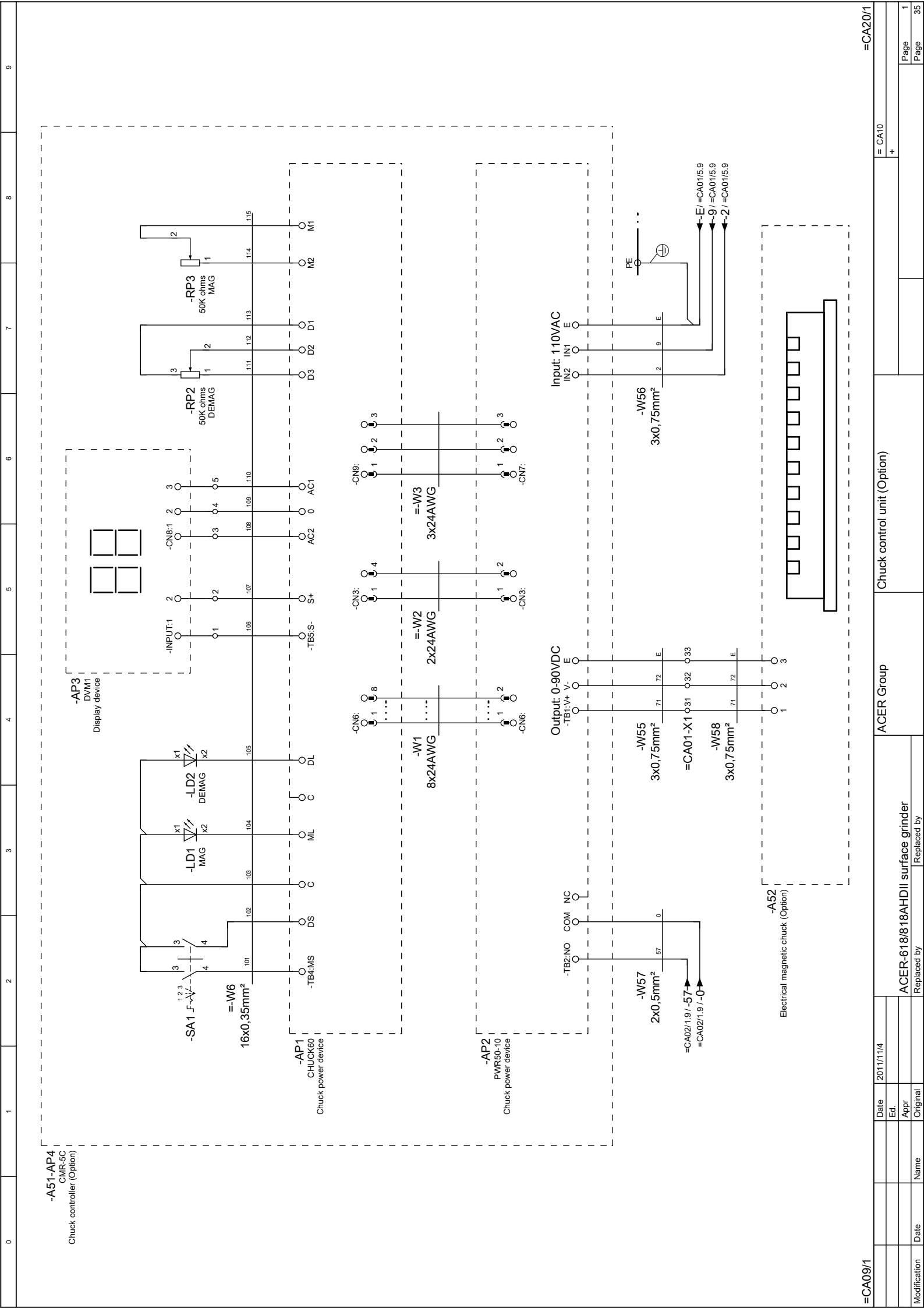
=CA07/1	=CA10/1	=CA09	+

ACER-618/818AHDII surface grinder	ACER Group	Slide guide lubrication unit	=CA07/1

Date	2011/1/4		
Ed.			
Appr			
Modification	Date	Name	Original
			Replaced by
			Replaced by



For models of Supra 618AHDII and 818AHDII only!

## Table of alert messages and troubleshooting

Alert message	Definition	Troubleshooting methods
E-StoP	Emergency stop	Release or check the emergency stop button.
oL-S	Overload of the grinding wheel motor	Contact the technical service personnel.
oL-H	Overload of the hydraulic pump motor	
oL-c	Overload of the coolant pump motor	
oL-d	Overload of the vacuum motor	
oL-F	Overload of the cross-feed motor	
oL-U	Alarm of the elevating driver	
LS-i	The saddle traveled over the inward or outward limit.	
LS-U	The grinding wheel ascended over the upper limit.	Contact the technical service personnel.
E-01	The starting position is lower than the 1 <sup>st</sup> reference point.	1. Raise high the starting position. 2. Clear the 1 <sup>st</sup> reference point.
E-02	The 1 <sup>st</sup> reference point is higher than the 2 <sup>nd</sup> reference point.	Reset the reference points.
E-04	The electrical chuck lost its power or fault as the table in automatic motion.	1. Check the connection box of magnetic chuck. 2. Contact the technical service personnel.
E-09	The throttle is off as the saddle in automatic motion.	1. Chose the cross feed direction again after the throttle on for continually. 2. Check the safety limit of the throttle.