

WA-4033HA

DOUBLE COLUMN FULLY AUTOMATIC BAND SAW

Study Carefully Before Operating



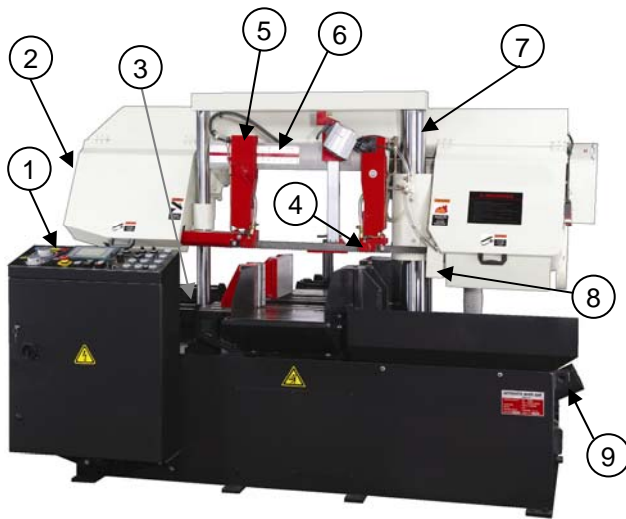
OPERATION MANUAL

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1 CHARACTERISTIC & SPECIFICATION

1.1 Characteristic



- ① NC Control Panel
- ② Hydraulic Tension Adjusting Device
- ③ Fully Stroke Hydraulic Cylinder
- ④ Hydraulic Carbide Guide
- ⑤ Movable Guide Arm
- ⑥ Scale
- ⑦ Double Column
- ⑧ Blade Cleaning Brush
- ⑨ Chip Conveyer

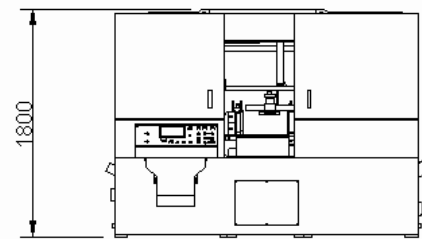
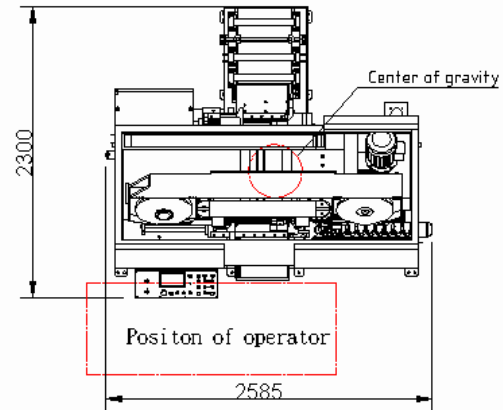
1.2 Specification

Cutting Capacity		● 20~330mm
		■ 400x330mm
Bundle Cutting (W x H)		160x50~280x150mm
Blade Speed		20~90mpm (68~290fpm)
Blade Tension		Hydraulic
Blade Size		4570L x 34W x 1.1T
Motor	Blade	3.7KW 5HP
	Hydraulic	1.5KW 2HP
	Coolant	0.1KW 1/8HP
Table Height		760mm
Clamp Vises Type		Hydraulic
Hydraulic Tank		80 L
Coolant Tank		80 L
Max. Single Feed Stroke		500mm
Packing Measurement (WxLxH)		2400x2300x2100mm
Machine Weight (N.W./G.W.)		2100kgs / 2500kgs

2 MACHINE INSTALLATION

2.1 Machine Installation

Please figure out enough space for working, inspection and maintenance afterward.
Refer to the machine floor space drawing below:



2.2 Machine Transportation

Be careful to take apart the outer package and fixing screw. Please make use of forklift truck or overhead crane to transit the machine. During the process, please keep the machine balance in the forklift truck and avoid to have any impact or tremble happened when machine was transported by the overhead crane.

(Note: please hang the machine from the hook exactly)

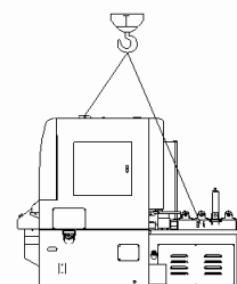
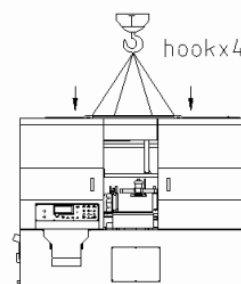
(Machine Weight: 2500kgs)



T = 3 t



T = 3 t



2.3 Clean

After positioning the machine, clean up the anticorrosive from the machine, then lay on a coat of thin oil.

(Please removes the shipping fixed plate between saw frame and table before machine operation.)

2.4 Adjust Level and Fixing

To calibrate the machine level for the correct flow direction of coolant and accurate saw cutting. There are ten adjusting screws at the base for adjusting the machine level.

2.5 Hydraulic Oil Level

Check the oil drain port screw was tighten or not then look over the level of hydraulic oil in the oil tank from the oil gauge. If the oil level is too low, please open the oil tank cover and pour into the standard capacity. Before the machine delivery, the oil tank was loaded with enough capacity previously.

2.6 Coolant

Before the machine delivery, the coolant should be drained out completely.

Please infuse the enough coolant into the machine before operation.

Check the drain screw was tighten or not and then implant the suitable water volume.

The aperture of filling is under the meshed hole of steel blade brush.

2.7 Power Supply

1. Before connect the power please make sure the wire is long enough to connect between the power supply and machine. (Only certificated electricians could be appointed to do this matter)
2. Switch OFF the power supply and connect the machine wire. Please confirm the power voltage is matched with machine. Connect the power wire and ground wire precisely.
3. Before switch ON the power supply, please check the wire connection is correct or not.
4. Draw up the emergency switch and turn on the power, at this time the power indicator lamp will be lighted up to show the power was connected completely.
5. Press the hydraulic button on the control panel. (Note: Please removes all of the transport fixing screw before this procedure)
6. Press the UP button of saw frame.
7. Press the emergency switch to cut off the power supply.
8. Turn off the power supply switch.
9. Exchange the two wires of the power supply.
10. Repeat the step of 3 and 6.

2.8 Inspection Before Operation

After the complete machine installation, please do the final inspection properly.

The item is listed as below:

1. Take all of the fixing plate for transporting purpose off.

2. Check screws and fixing items.
3. Check water pipe and wire guide tube.
4. Make sure the coolant is enough and hydraulic pressure is normal.
5. Tools or other materials should not be left on the machine.

2.9 Advise for the Operator

- Check, the line voltage is the same as the voltage required by the machine's motor.
- Check the efficiency of your electric supply and grounding system; connect the power cable of the machine to the socket and the ground lead (yellow- green in color) to the grounding system.
- When the machine is in suspended mode (or stopped) the blade must not move.
- Only the blade section used for cutting must be kept unprotected. To remove guards to expose more of the cutting blade adjust the blade guides.
- It is forbidden to use the machine without its shields.
- Always disconnect the machine from the power socket before blade change or carrying out any maintenance job, even in the case of abnormal machine operation.
- Always wear suitable eyes protection.
- Never put your hands or arms into the cutting area while the machine is operating.
- Do not shift the machine while it is cutting.
- Do not wear loose clothing like: shirts with sleeves that are too long, gloves that are too big, bracelets, chains or any other object that could get caught in the machine during operation. Tie back long hair.
- Keep the area free of miscellaneous object; i.e. equipment, tools, etc...
- Perform only one operation at a time. Never have several objects in your hands at the same time. Keep your hands as clean as possible.
- All internal operations, maintenance or repairs, must be performed in a well-lit area or where there is sufficient light from extra sources to avoid the risk of accidents.

3 OPEARTION METHOD

3.1 The Description of Operation Panel



(1) Emergency Stop Button

Press the button to stop all of the machine function. (picture 1)



(picture 1)

(2) Power Light

When the emergency stop switch was drew up, the power lamp will be lighted up to show the normal connection of electric power. (picture 2)



(picture 2)

(3) Hydraulic Start and Stop Button

Press this button to start and stop the hydraulic motor. (picture 3)
Indicator light will light after start the pump.



(picture 3)

(4) Blade Start and Stop Button

Press this button to start the saw blade motor and coolant pump at the same time. The saw frame will descend according to the speed of flow control valve. Indicator light will light after start the pump. (picture 4)



(picture 4)

(5) The Button For Material Origin Point Search of Automatic Feed

Under the clamping situation of feed clamp (Manual mode).

Load material to protrude the feeding vise approximate 65mm, the materials will be clamped to move ahead by feed table to the origin point automatically. (**the material original cutting point**)

The button lamp will be lighted up after the finish of this process.

Afterward, for trim cut, setting the trim cut length. Before choose auto cycle cutting or single cutting as the requirement, and press the start button of blade. The material will be cut as the previous job setting. (picture 5)



(picture 5)

(6) The Switch for Choosing Coolant


* Turn to the position of ☀ to start the coolant pump and make the cooling water flow. The switch could be turned on independently without the start of blade motor.


* Turn to the position of ● to stop the coolant pump. (picture 6)



(picture 6)

(7) The Switch For Hydraulic Carbide guide

* Turn the position to  the carbide guide will be clipped tight.

* Turn the position to  the carbide guide will be loosen.
(Carbide guide is under the situation of being clipped, when the blade was started). (picture 7)



(picture 7)


(8) The Switch For Work Light


For work light use only. (picture 8)



(picture 8)

(9) The Selecting Switch for Blade Tension

* Turn the position to  the blade tension will be tighten properly.

* Turn the position to  the blade tension will be loosen. (picture 9)



(picture 9)


(10) The Switch For Blade running Speed

To control the blade running speed. Clockwise turn for acceleration, counterclockwise one for deceleration. (picture 10)




(picture 10)

(11) The Switch for Circulation And Manual Mode Changeover

* Turn the position to  Materials will be cut under the mode of circulation by repeat.


* Turn the position to  for manual operation.


* Turn the position to  for single circulation work. (picture 11)




(picture 11)

(12) The Adjusting Button for Movable Vise of Feeding Table

Press this button  the work piece will be clipped tight by the movable clamp vise.

When the lamp  was lighted on, the clipping process was finished completely.


Press this button  the work piece will be loosen. (picture 12)


If the blade guide base is not higher 20mm than the movable vise, the moving measure of the clamp will be 1 inch for one step.




(picture 12)


(13) The Adjusting Button for Movable Clamp of Feeding Table

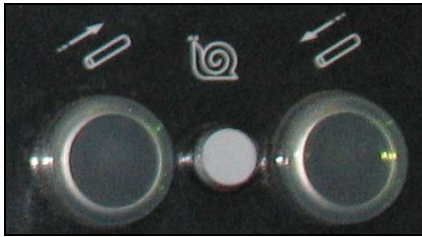
Press this button  the work piece will be clipped tight by the vise.

When the lamp  was lighted on, the process was finished completely.


Press this button  the work piece will be loosen. (picture 13)

(14) The Button for the Movement of Feed Table

Press this button  to make the feed table move back. (picture 14)



(15) The Button for Saw Frame UP And Down

Press this button  to make the saw frame DOWN (picture 15)



(16) The Switch of Hydraulic Flow Control Valve

A close-up photograph of a white, semi-circular dial. The dial has a scale from 0 to 10, with major tick marks at every integer. A red arrow is positioned at the top of the dial, pointing directly at the number 5. The dial is mounted on a dark, possibly black, background.

(17) The Switch of Pressure Control for Blade Cutting

3.2 Operation Panel Description

(1) Worm Gear Reducer



A close-up photograph of the motor assembly of the robotic gripper. A black arrow points to the motor, which is labeled "Motor". The motor is connected to a black cable. The gripper body is white and has a red label with the text "Robotics" and "University of Michigan" on it.

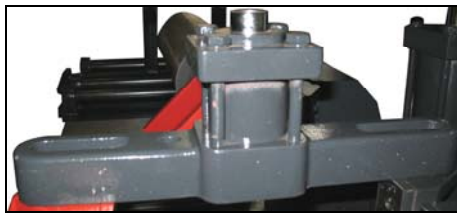
(2) Chip Conveyer

A close-up photograph of a metal spiral drill bit, showing the sharp cutting edges and the helical design. The bit is positioned horizontally, and the background is dark and out of focus.

(picture 19)

(3) Upper Impaction Device For Bundle Cutting

It is mobile and for the purpose of prevention the bundle material slip out of looseness during the process. (picture 20)



(picture 20)

(4) The Adjustment of Movable Guide Arm

The left guide arm should be adjusted properly to close to the work piece.

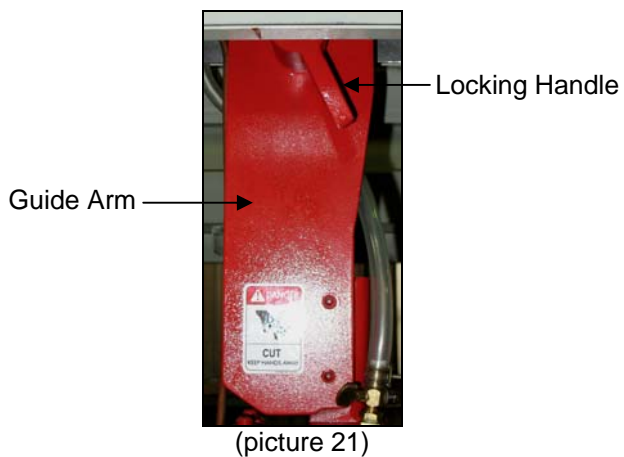
Step 1: loose blade carbide guide

Step 2: loose locking handle

Step 3: move the guide arm near to the work piece

Step 4: lock the handle

(picture 21)

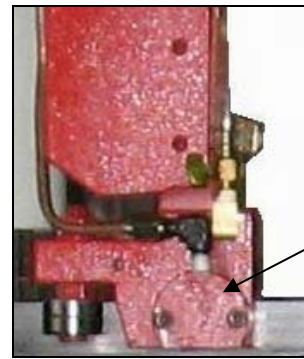


(picture 21)

(5) The Blade Carbide Guide Operated by Hydraulic

Hydraulic blade carbide guide system makes the blade cutting more stable.

Hydraulic guide pressure keeps in 20kg/cm². Carbide material is more wear-resisting. (picture 22)



(picture 22)

(6) Wheel Cover Safety Switch

When the guard cover be opened, the blade cutting will be stopped automatically.

(picture 23)



(picture 23)

(7) Micro Clamp Device of Table

To avoid the material scrape out of the direct contact, this clamp will step back by small extent during the feeding vise open.



(picture 24)

(8) Washing Gun

Flush the machine table surface or wash cutting chip away.

(picture 25)



(picture 25)

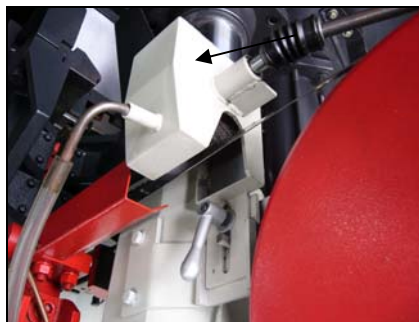
3.3 Installation of the Saw Blade



picture 26



picture 27



picture 28

Step 1: Make the saw frame ascend to the position higher than the vise clamping.

Step 2: Open the right and left wheel covers (Picture 26 above)

Step 3: Turn the adjusting switch of hydraulic

carbide guide to the open position to (picture 7 of Page 3)

Step 4: Turn the adjusting switch of blade tension to

the loosen position of (picture 9 of Page 4)

Step 5: Remove two blade guards (Picture 27) and lower the chip brush by loosen the handle (Picture 28). **(Note: Please wear the glove to take the blade out)**

Step 6: Install the blade on the main driving pulley.

Step 7: The teeth of blade was faced down and turned to the right.

Step 8: The back of saw blade was little touched the flange edge of drive and driven blade wheel.

Step 9: Turn the blade tension switch to the position of (picture 9 of Page 4)

Step 10: Turn the carbide guide switch to the

position of (picture 7 of Page 3)

Step 11: Adjust the position of blade brush.



Step 12: Replace two blade guards and close the wheel covers and lock them.

3.4 Operation Direction

Three are three-operation mode.

1. **Circulation By Repeat**
2. **Manual Way (manual operation for every function of machine)**
3. **Single Circulation Work**

Steps as below:

Switch on the main power on the control box door.

(a) Start the hydraulic pump , and choose the

mode of manual

(b) Confirm the saw blade was installed well.

(c) Make the movable guide arm close to the work piece.

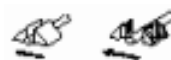
(d) Load the materials to the clamping vises

* Make the saw frame ascend and the position is higher than clamp.

* Make the clamp open and large than the material in width.

* Move the material carefully to the position of front clamp.

* Press the button of front & rear clamp vise



until the lamp was lighted on when the material was clipped tight.

(e) According to the material and size of work piece to set the proper cutting flow rate, pressure and blade speed.

(f) Set and choose the cutting jobs (Green color changes to red color).

Note: Process of above should only be fulfilled when the blade has been stopped.

Then make the following choice:

Auto Cycle Cutting



or Single Cutting



*** Auto Cycle Cutting for example:**

(a) Turn the switch to the cycle cutting as position of



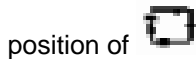
(b) Press the start button of blade.

(c) After repeat of cutting, blade will be stopped when the setting was carried out.

(d) Take off the remainder.

*** Single Cutting for example:**

(a) Turn the switch to the manual mode as the



(b) Press the start button of blade.

(c) After the completion of one single cutting, blade will be stopped directly.

4 MAINTENANCE

After Every Day Work:

1. Turn off the machine power.
2. Clean up the cutting chip on the machine.
3. Clean up the cutting chip on the carbide guide.

1. Every Day

Before operate the machine, please check the following procedure:

- (1) Check the hydraulic oil level and refill the capacity if it is not enough.
- (2) Check the cutting coolant level and refill the capacity if it is not enough.
- (3) Check the saw blade if it was installed on the saw frame or not.
- (4) Check the brush contact to the saw blade exactly or not.

2. One Week

Refill the lubrication for: drive & driven blade wheel.

3. Every Six Months

Replace the gearbox lubrication oil.

Note: please replace the gear oil of gearbox after the period of 3 months or 600 hours, and the gear oil of hollow shaft reducer for 6 months or 1,200 hours.

The variety of gear oil:
STORK, HIGH CLASS THUBAN 140

4. Every Year

Please leak out the used oil and refill the capacity in enough.

The variety of hydraulic oil:
ISO-VG grade NO.68
DATKYO,PIOLUBE ALLPUR A315

5 SAFE MATTERS

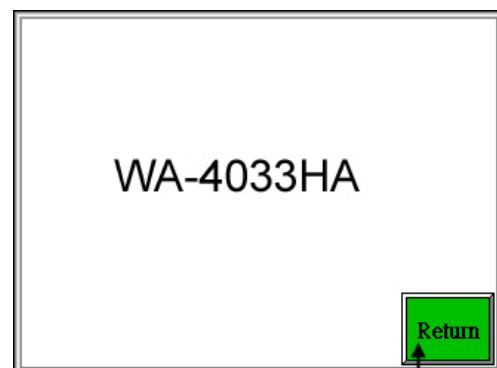
1. Please don't approach the machine inside when the saw blade is on working.
2. Any maintenance will be forbidden during the machine operation.
3. Please offer the proper material measurement for machine cutting.
4. During the machine operation, please don't play pranks around.
5. Please don't smoke in the factory or put any flammable article nearby.
6. Please press the emergency button to stop the operation if any accident happened.



7. The guidance of qualified professional was required for the first operation of the beginner.
8. Please wear the glove for the saw blade installation to avoid the blade wound.

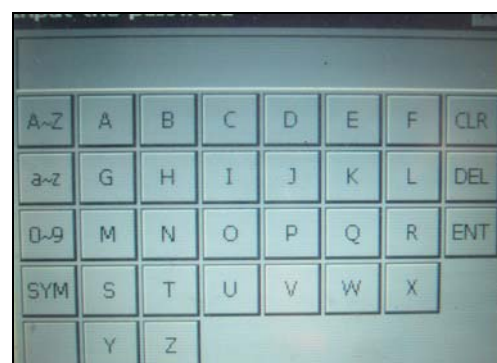
6 CONTROL PANEL DESCRIPTION

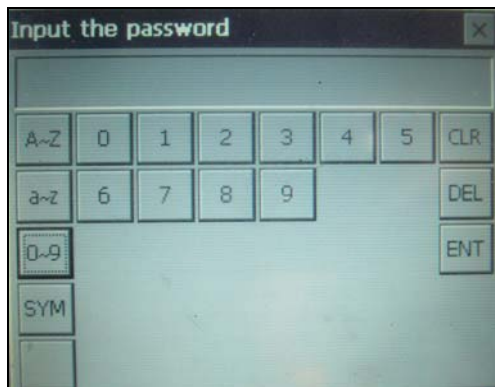
6.1 Main Page



Return to the operating and setting page

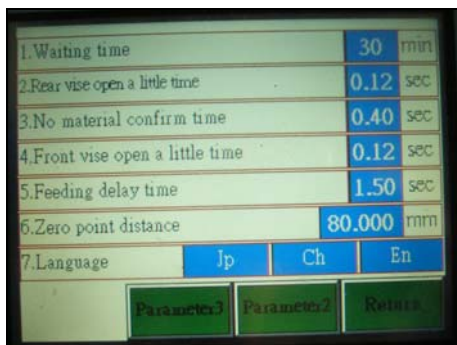
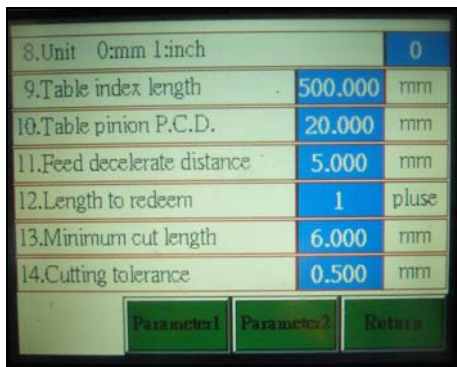
6.2 Parameter setting and language selection



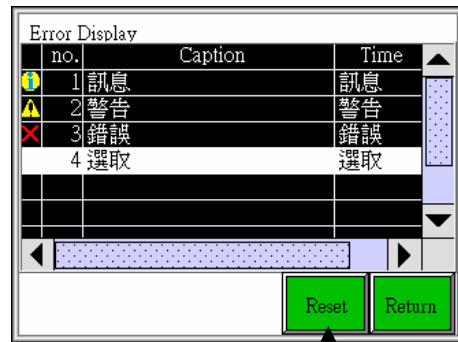
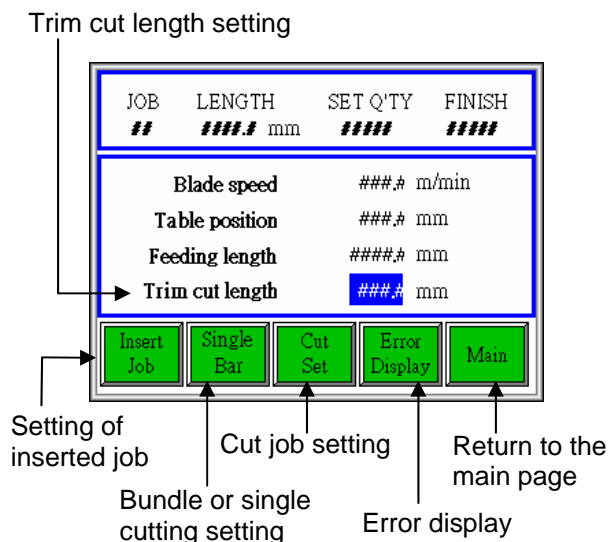


- Touch the first page
- Choose 0~9 column and key in the password (xxxx) to the machine parameter setting and language selection.

6.3 Touch the Parameter 2 to the language

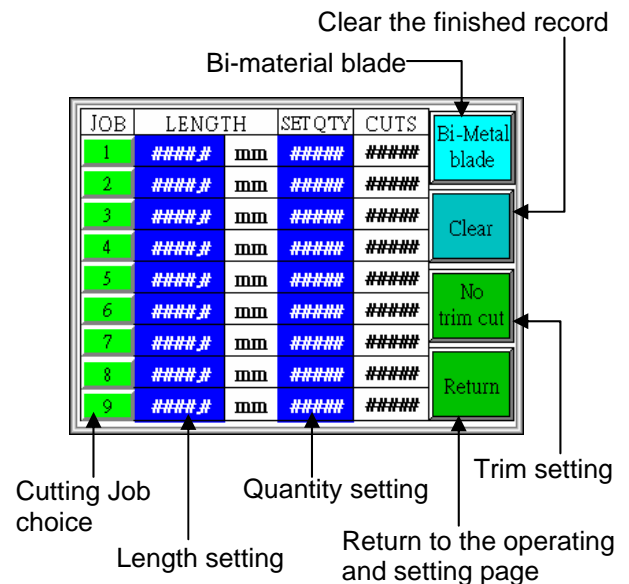


6.4 Operating and Setting page

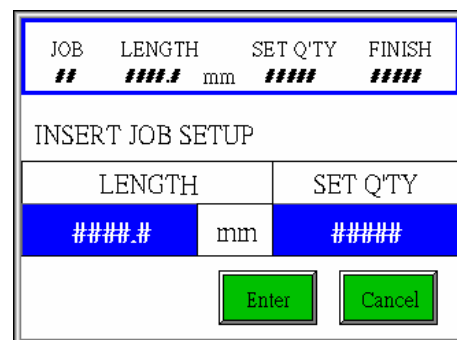


Return to the operating and setting page

6.5 Job Setting

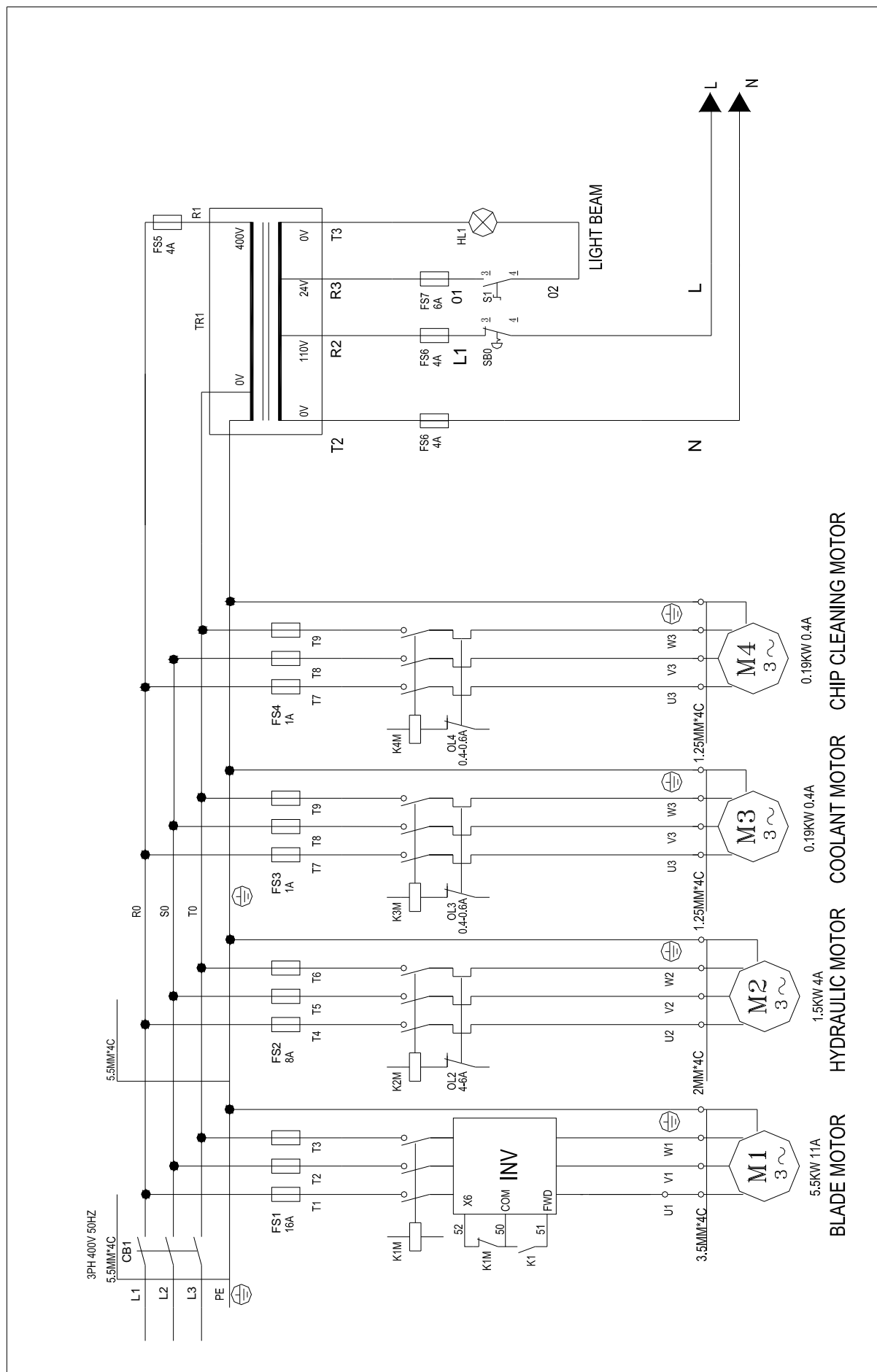


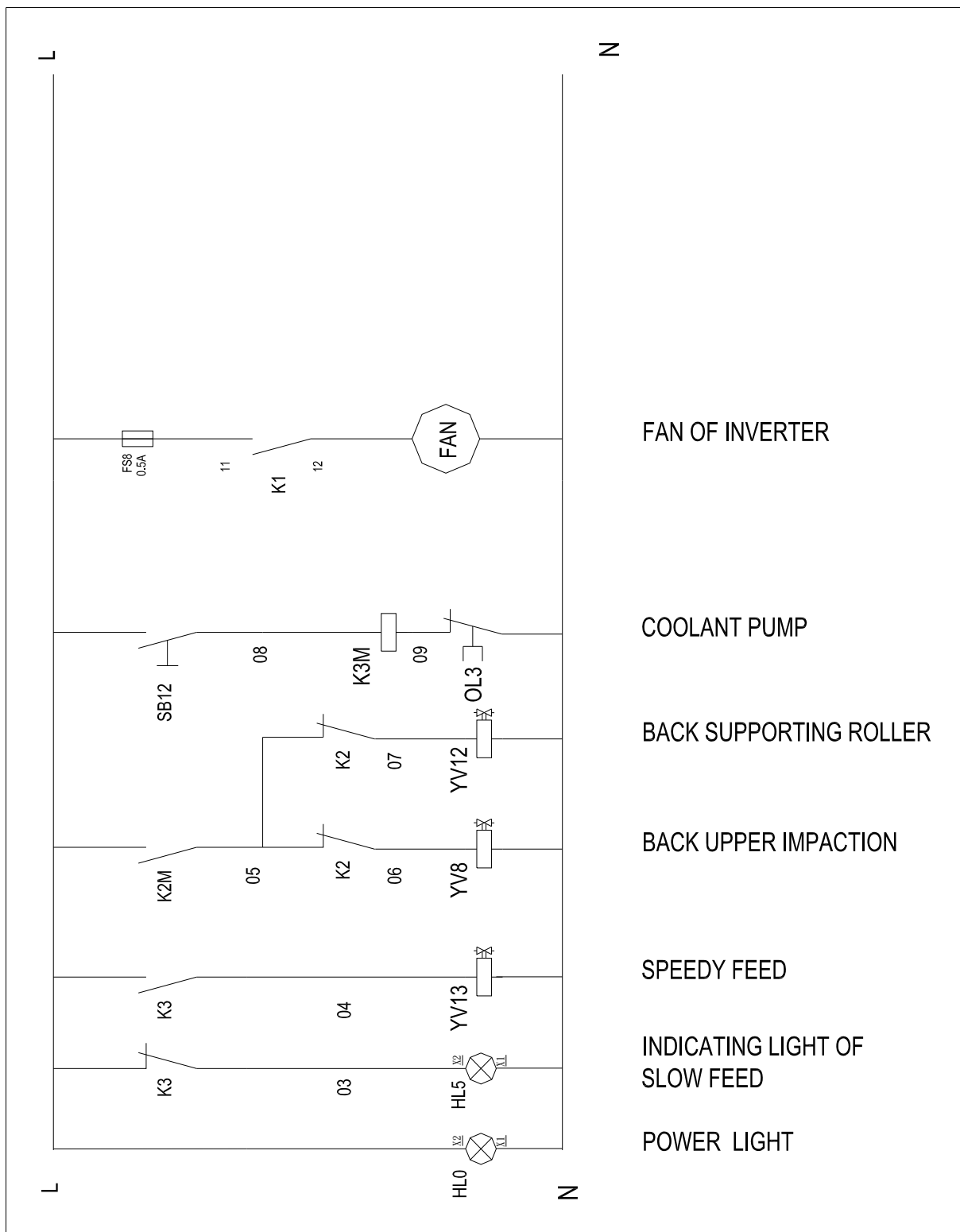
6.6 Insert Job

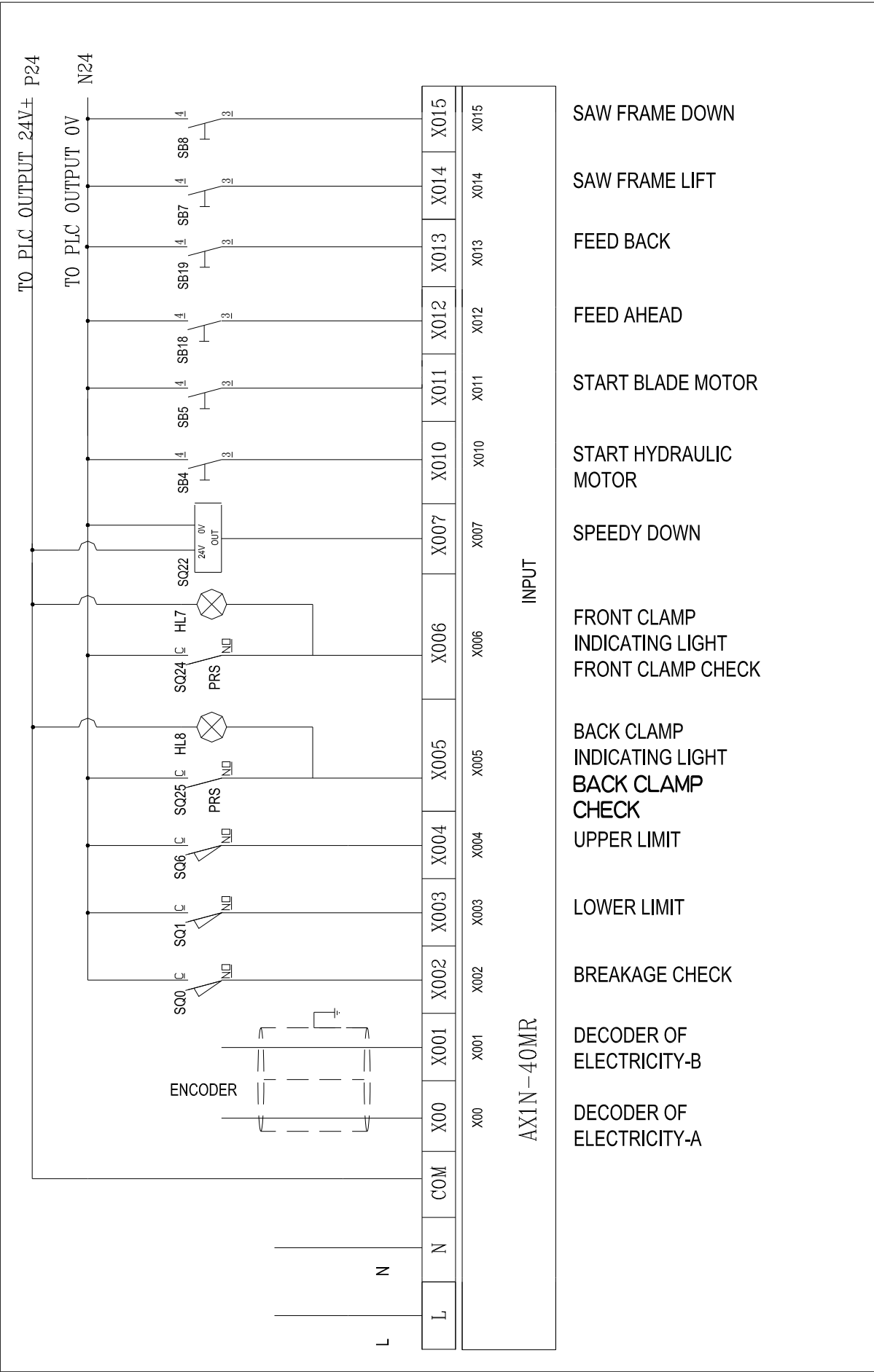


- Insert job setup is to insert cutting job immediately to the being cutting job that means interrupt the cutting job in the auto cycle cutting, the machine will insert the insert job to cut automatically, don't select the cutting job or stop the machine in same material.
- When insert job be finished the machine will cut unfinished cutting job again.

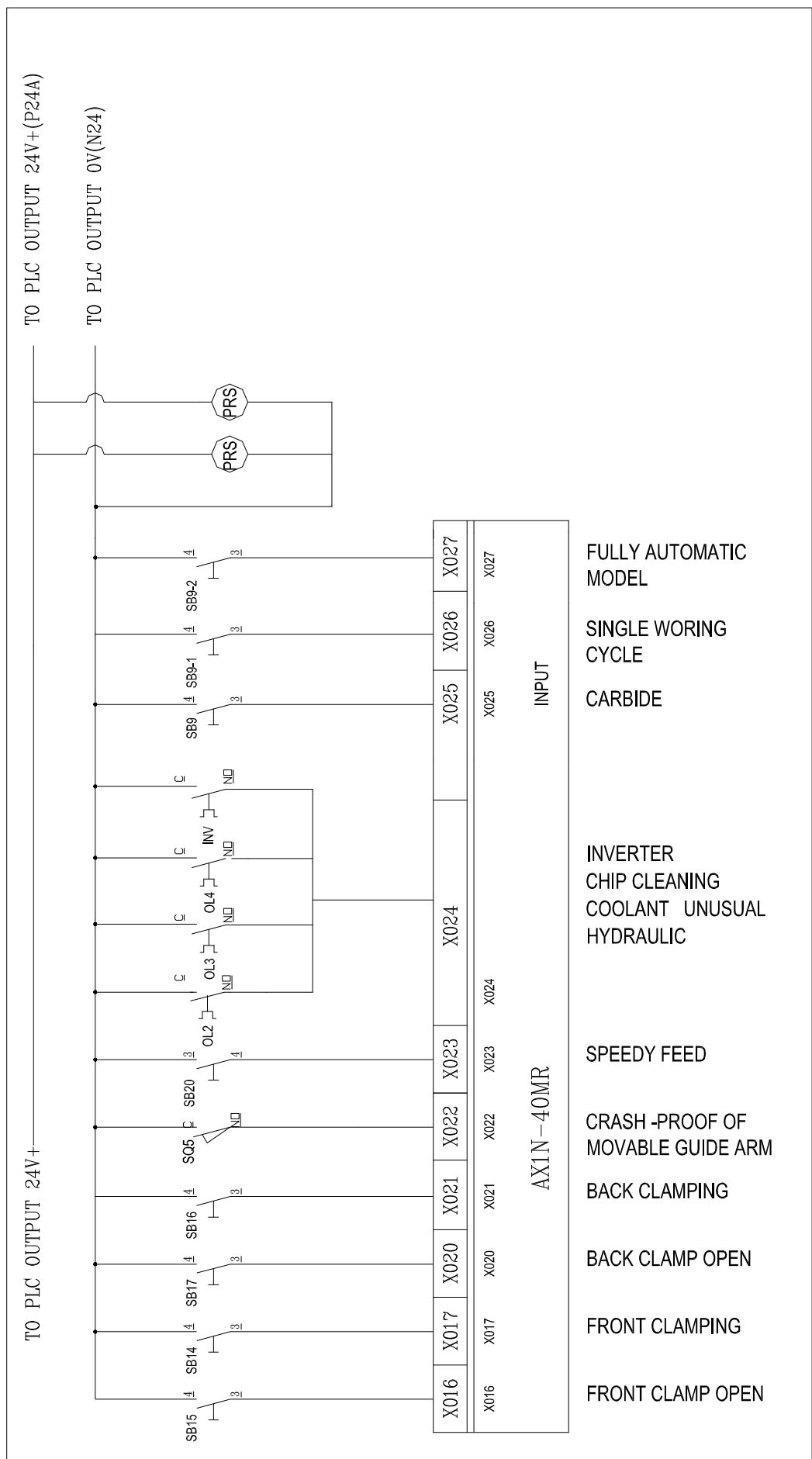
WIRING DIAGRAM

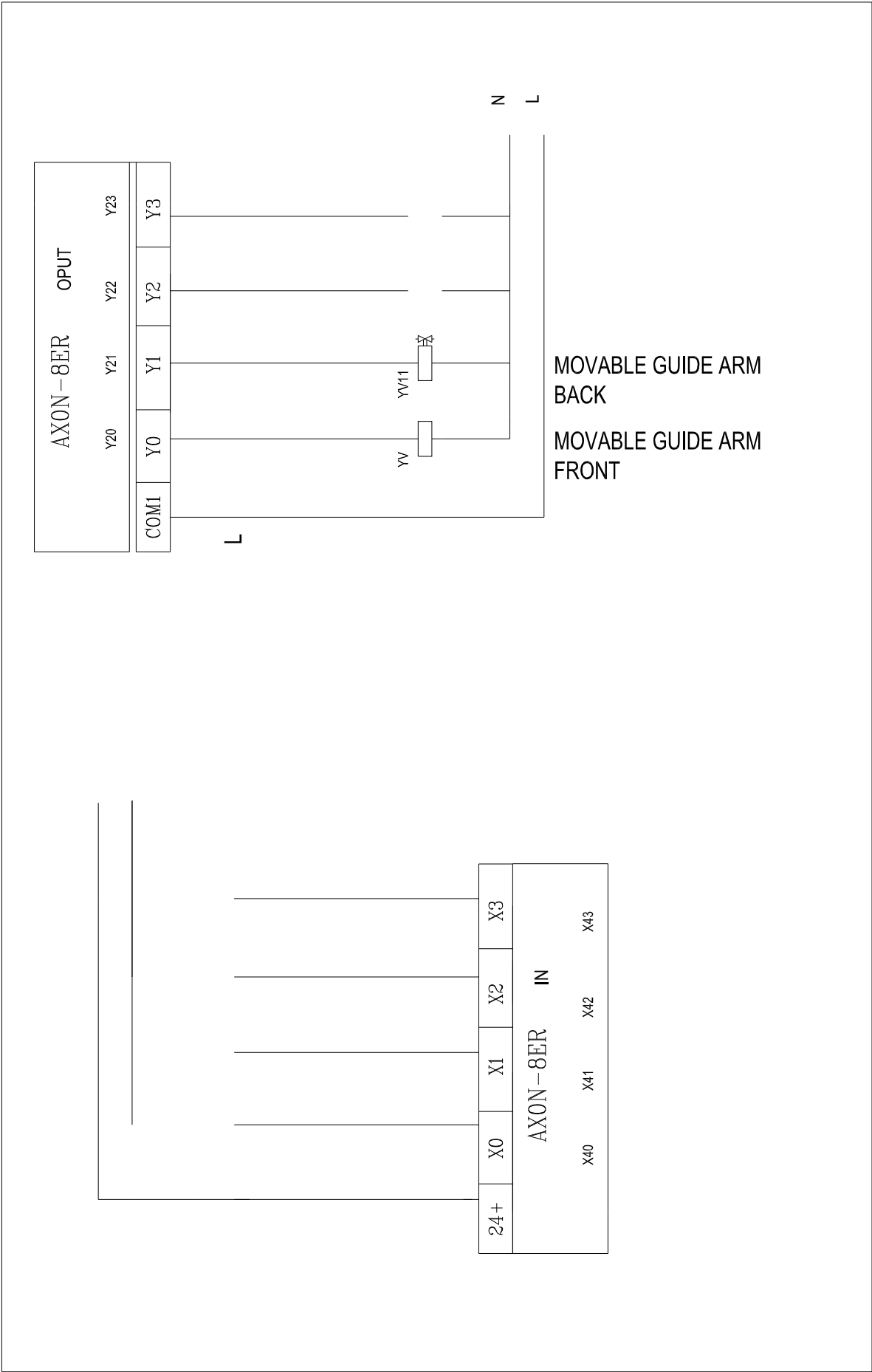








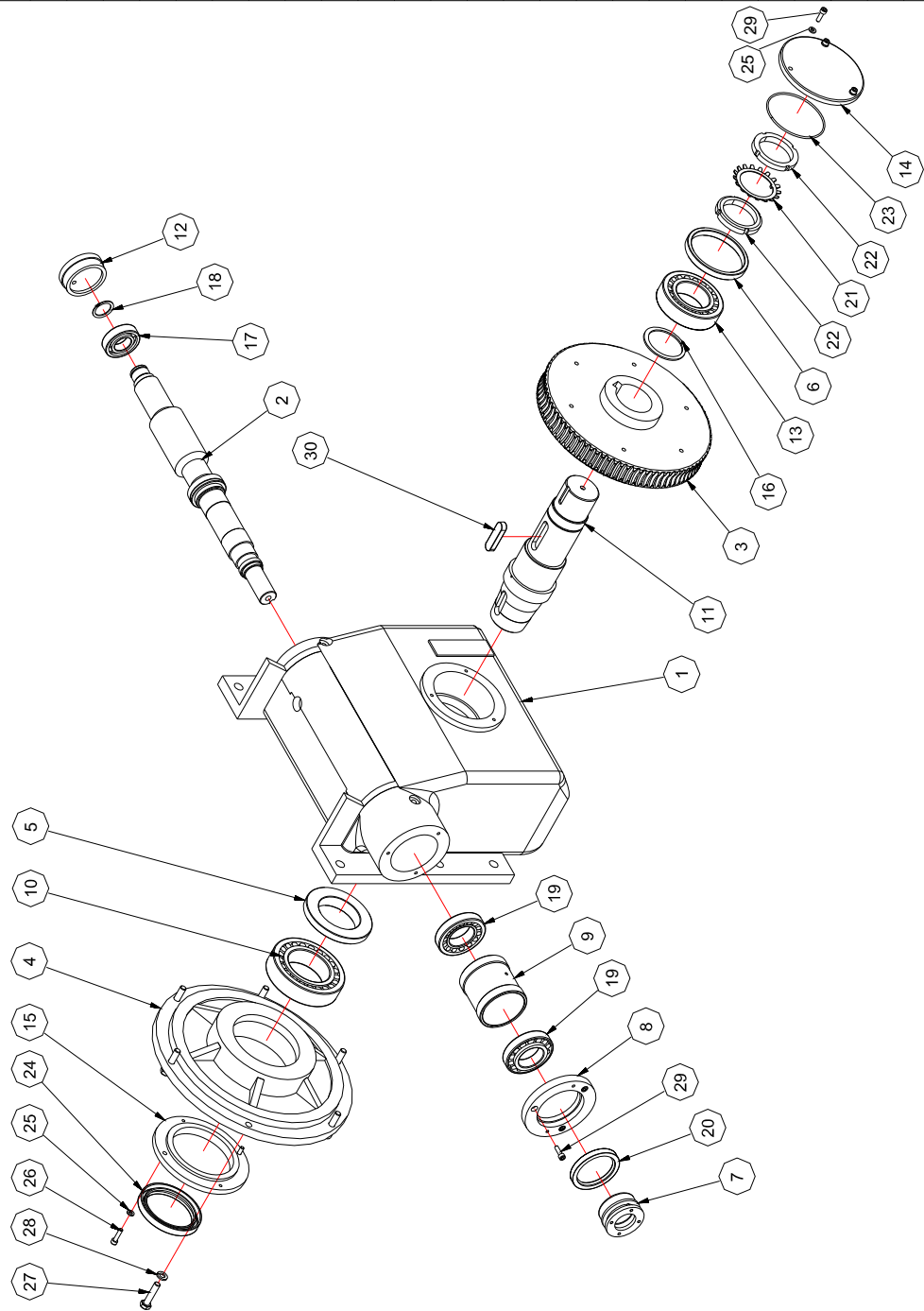




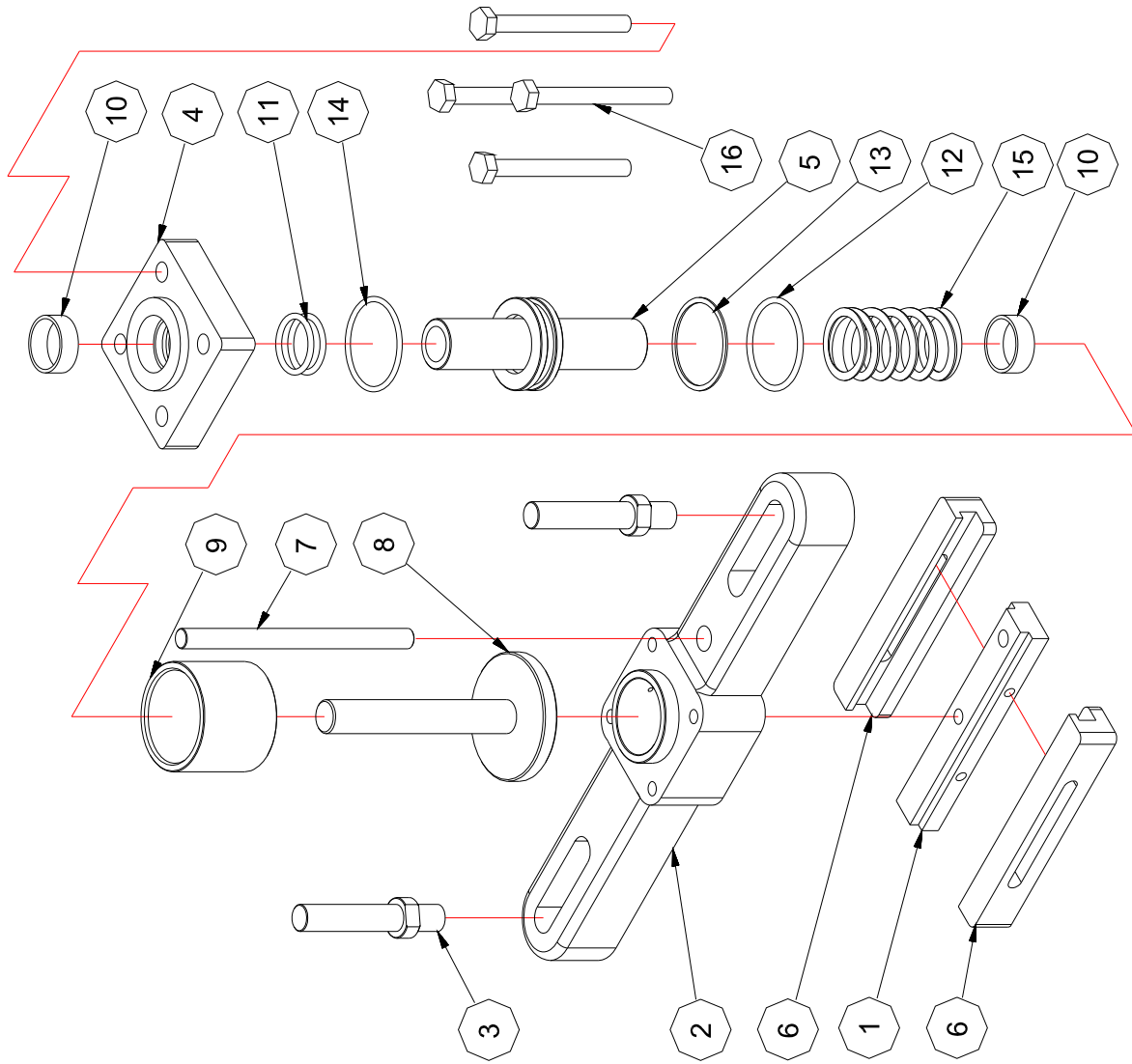
PART LIST & EXPLOSION DRAWINGS

No.	Parts No.	Description	Qty
1	B02022300	Reducer Case	1
2	B02020200	Worm Shaft	1
3	B02020500	Worm Gear	1
4	B02020600	Top Cover	1
5	B02020900	Worm Sleeve	1
6	B02021000	Bear Spacer	1
7	B02021300	Shaft Nut	1
8	B02021200	Bearing Cover	1
9	B02021400	Shaft Spacer	1
10	22215	Taper Bearing	1
11	B02020100	Drive Shaft	1
12	B020021100	Rear Cover	1
13	22212	Taper Bearing	1
14	B02020700	Bottom Cover	1
15	B02020800	Sealing Cover	1
16	65x2.5t	C Ring	1
17	6206	Ball Bearing	1
18	30x1.6t	C Ring	1
19	30209J3	Taper Bearing	2
20	4TC65-85-10	Oil Sealing	1
21	AW12	Gear Washer	1
22	AN12	Bearing Nut	2
23	4OR-G100	O Ring	1
24	4TC85-110-13	Oil Sealing	1
25	BMST6	Spring Washer	5
26	M6x25	Socket Screw	2
27	M10x45	Hex. Cap Bolt	6
28	M6	Spring Washer	6
29	M6 x 20	Socket Screw	6
30	16x10x60	Round Heads Key	1

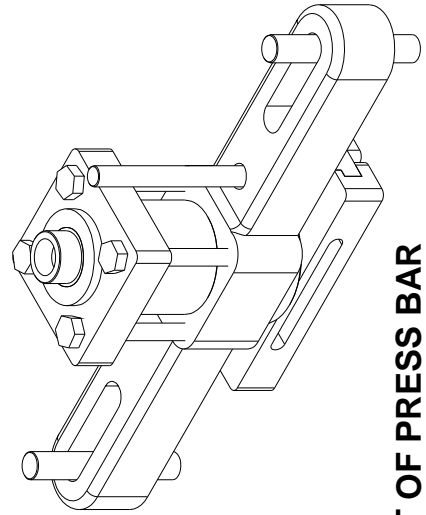
A020008 Gear Reducer

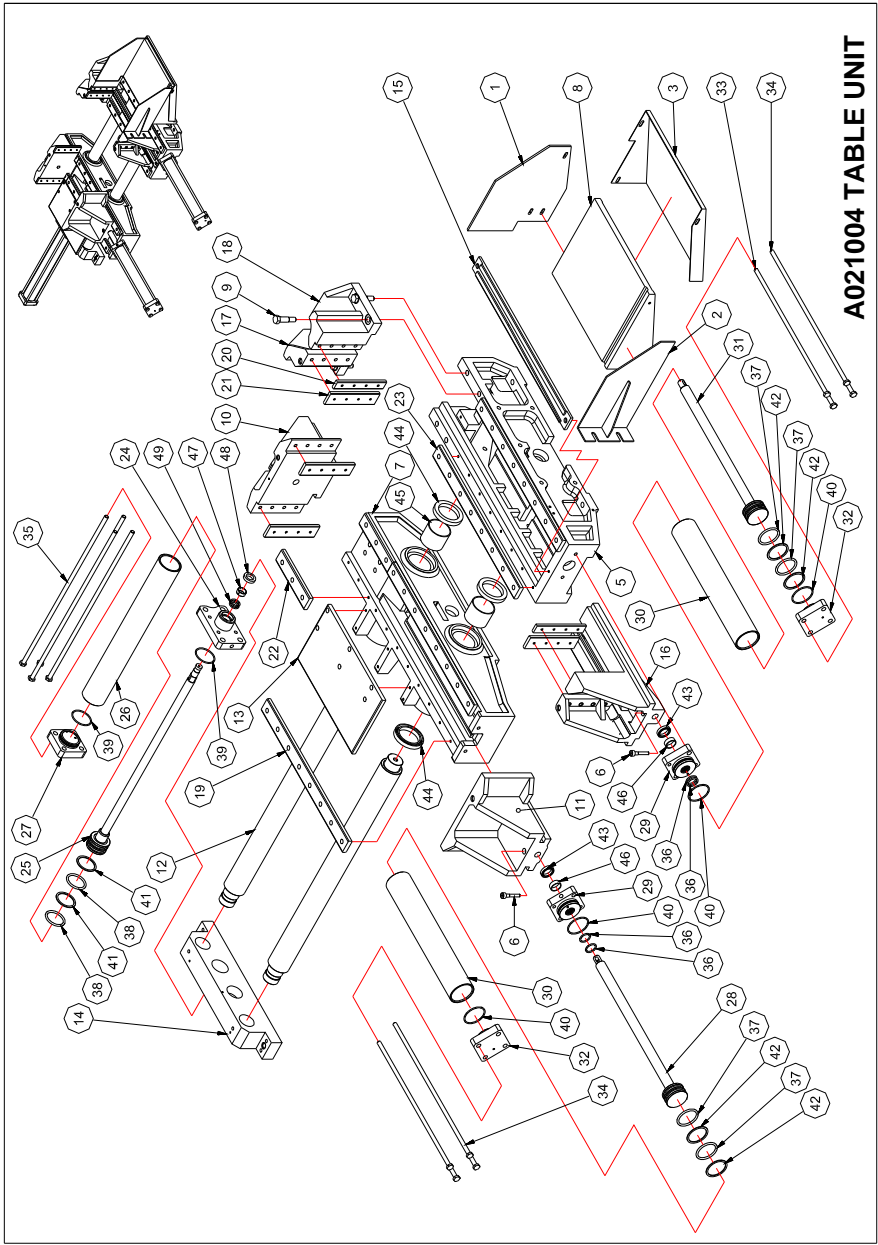


No.	Part No.	Description	Q'ty
1	B02140200	PRESS BLOCK	1
2	B02140300	DRESS BASE	1
3	B02140400	GUIDE SCREW COLUMN	2
4	B02161500	BACK COVER	1
5	B02161600	PISTON BAR	1
6	B02140700	MOBIL BLOCK	2
7	B02140900	GUIDE BAR	1
8	B02141200	ADJUSTING DISK	1
9	B02161400	CYLINDER	1
10	2DU3012	LUBRICATING BEARING	2
11	P30	O RING	2
12	P49	O RING	1
13	TP49	BACKING UP RING P49	1
14	G50	O RING	1
15	70L 5 CIRCLE INSIDE DIAMETER 3 3	COMPRESS SPRING	1
16	M10xP1.5 x100L	HEX HEAD CAP SCREW	4



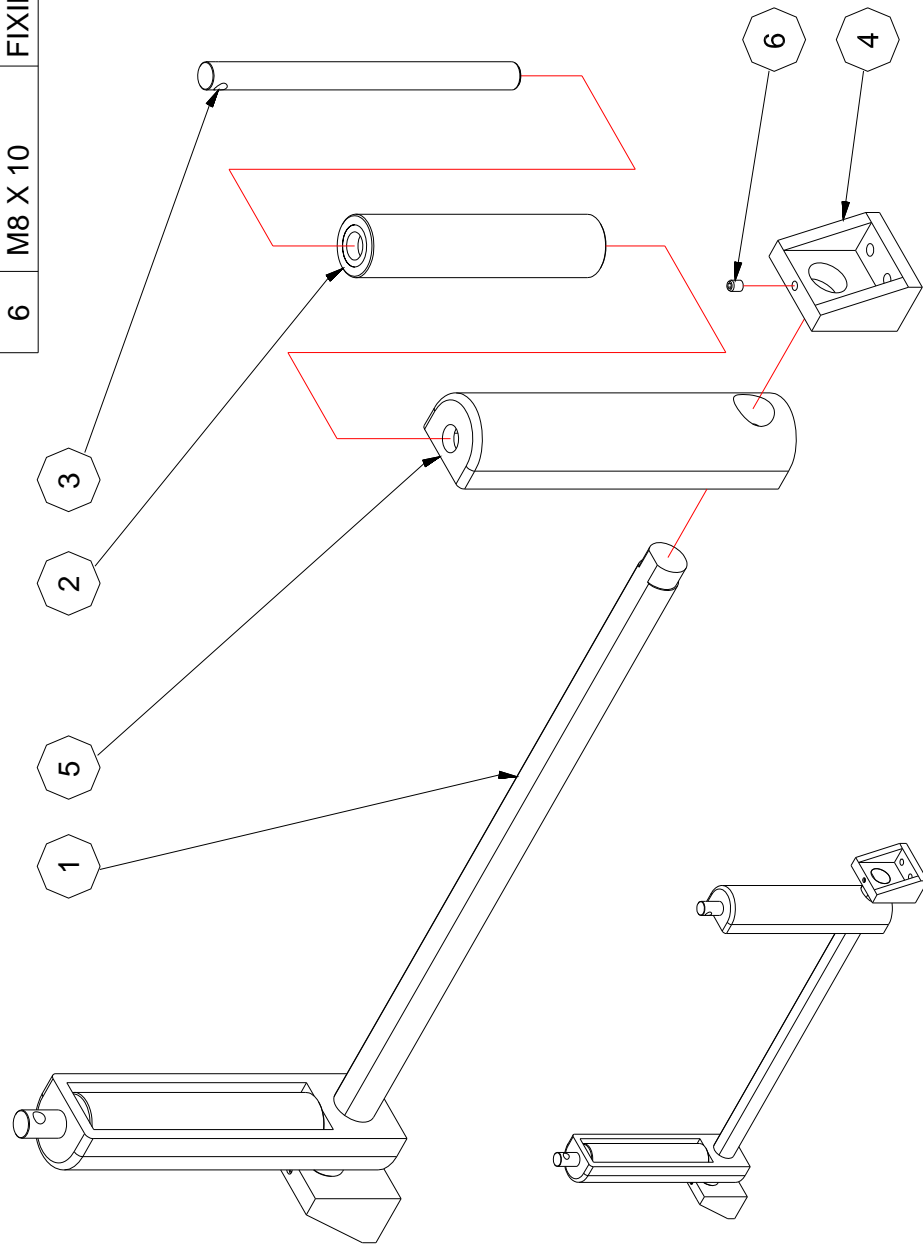
A021002 HYDRAULIC UNIT OF PRESS BAR





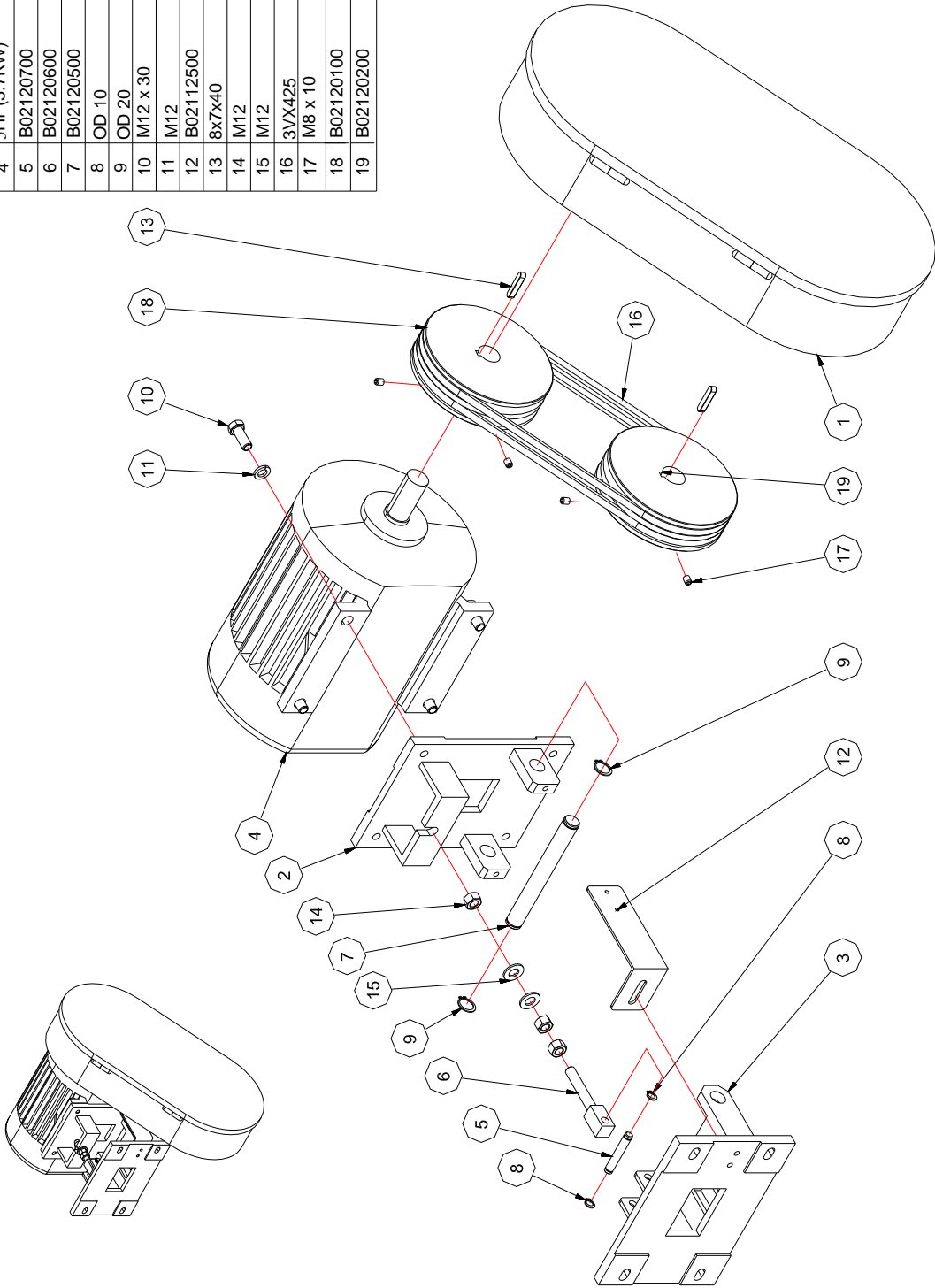
No.	Part No.	Description	Qty	Part No.	Description	Qty
1	B02110900	FALLING-PROOF PLATE	1	27	BACK COVER OF FEEDING CYLINDER	1
2	B021111000	MATERIAL HOLD CLAMP	1	28	CLAMP PISTON BAR	1
3	B02111200	WATER-STOP PLATE	1	29	FRONT COVER OF CLAMP CYLINDER	2
5	B02130100	TABLE	1	30	CLAMP CYLINDER	2
6	B02130200	FIXING PIN SCREW	2	31	PISTON BAR	1
7	B02130400	MOVABLE TABLE	1	32	BACK COVER OF CLAMP CYLINDER	2
8	B02130600	MATERIAL HOLD CLAMP	1	33	CLAMP SHORT DRAW BAR SCREW	4
9	B02130700	CLAMP LOCATING SCREW	4	34	CLAMP LONG DRAW BAR SCREW	4
10	B02130900	MOVABLE CLAMP (LEFT)	1	35	FEED DRAW BAR SCREW	4
11	B02131000	MOVABLE CLAMP (RIGHT)	1	36	ORING	4
12	B02131100	GUIDE COLUMN	2	37	ORING	4
13	B02131200	MATERIAL HOLD PLATE	1	38	ORING	2
14	B02131300	BACK BASE	1	39	ORING	2
15	B02131600	WEAR PLATE	1	40	ORING	4
16	B02132800	MOVABLE CLAMP (RIGHT)	1	41	BACKING UP RING	2
17	B02132900	FIXED CLAMP (LEFT)	1	42	BACKING UP RING	4
18	B02133000	FIXED CLAMP (RIGHT)	1	43	OIL SEAL	2
19	B02133100	WEAR PLATE	2	44	OIL SEAL	4
20	B02133200	WISE PRESS BLOCK	2	45	LUBRICATING BEARING	4
21	B02133400	WISE PRESS BLOCK (WIDE)	4	46	LUBRICATING BEARING	2
22	B02133600	WEAR PLATE	2	47	LUBRICATING BEARING	1
23	B02133700	WEARING PLATE OF FIXED TABLE	2	48	OIL SEAL	1
24	B02160100	FRONT COVER OF FEEDING CYLINDER	1	49	ORING	2
25	B02160200	PISTON BAR	1			
26	B02160300	CYLINDER	1			

No.	Part No.	Description	Q.ty
1	B02141000	ADJUSTING BAR	1
2	B02132500	VERTICAL ROLLER	2
3	B02141100	VERTICAL ROLLER SHAFT	2
4	B02140800	ADJUSTING BASE	2
5	B02132200	OUTER COVER OF VERTICAL ROLLER	2
6	M8 X 10	FIXING SCREW	2



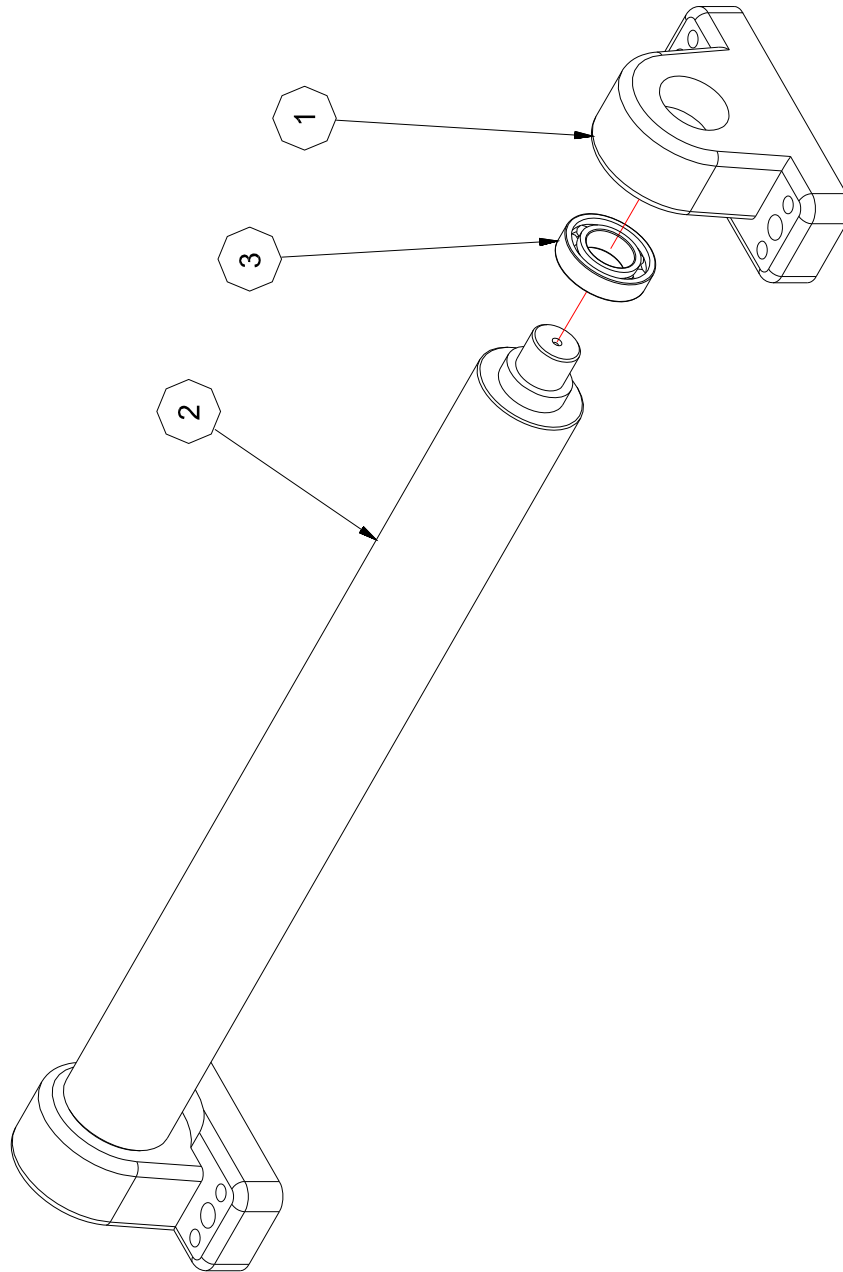
A021005 VERTICAL ROLLER UNIT

No.	Part No.	Description	Q'ty
1	A021008	Belt Cover	1
2	B02120300	Motor Bracket	1
3	B02120400	Motor Bracket Base	1
4	5HP(3.7KW)	Motor	1
5	B02120700	Adjusting Bolt Shaft	1
6	B02120600	Adjusting Bolt	1
7	B02120500	Bracket Shaft	1
8	OD 10	C Ring	2
9	OD 20	C Ring	2
10	M12 x 30	Hex. Cap Screw	4
11	M12	Spring Washer	4
12	B02112500	Cover Bracket	1
13	8x7x40	Key	2
14	M12	Nut	3
15	M12	Washer	2
16	3VX425	Belt	2
17	M8 x 10	Hex. Socket Screw	4
18	B02120100	Motor Pulley	1
19	B02120200	Driven Pulley	1



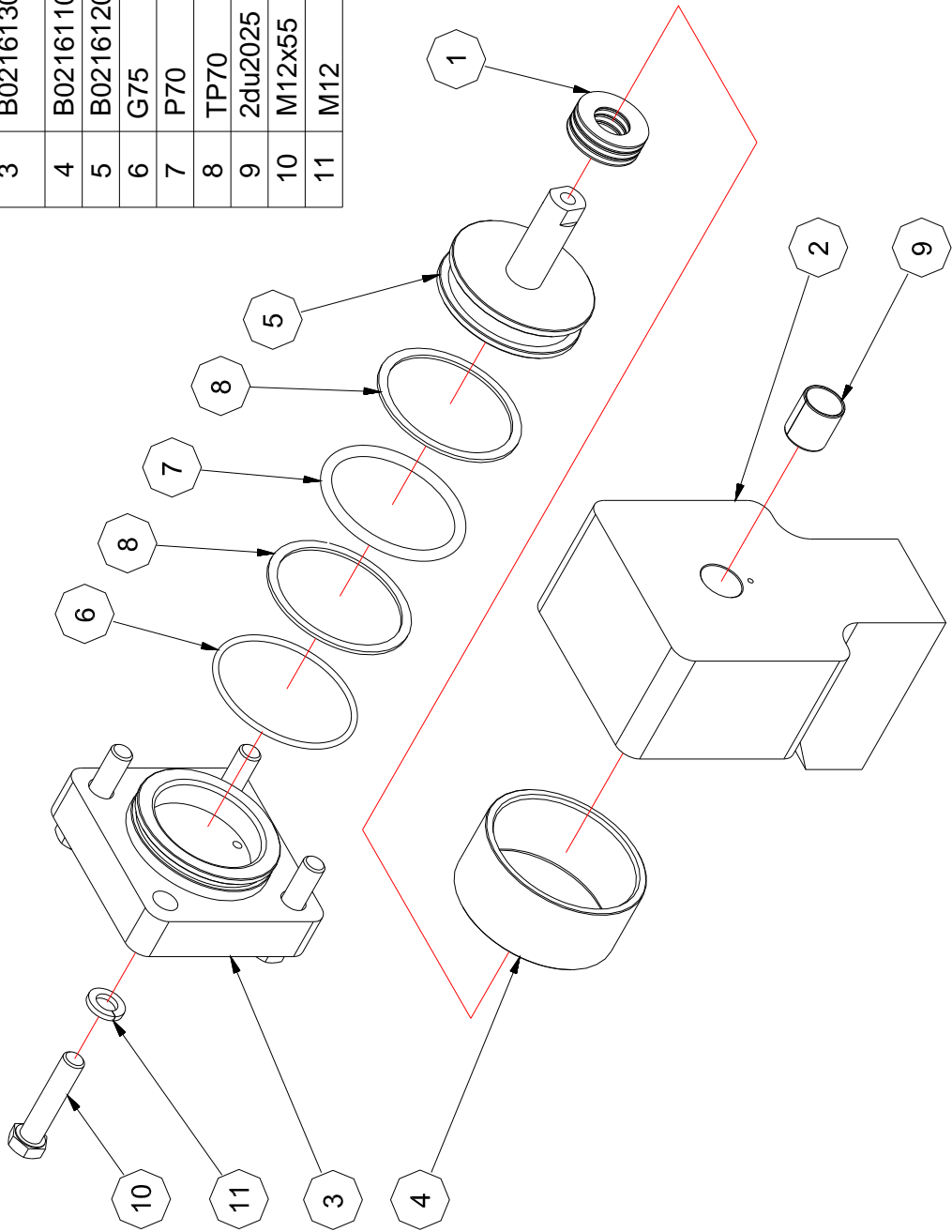
A021006 Motor Bracket Set

No.	Part No.	Description	Q'ty
1	B02132400	BEARING BASE	2
2	B02132300	FEED ROLLER	1
3	6005	BALL BEARING	2



A021007 FEED ROLLER UNIT

No.	Part No.	Description	Qty
1	20-40x6	DISC SPRING	6
2	B02161000	CYLINDER BASE	1
3	B02161300	BACK COVER OF CYLINDER	1
4	B02161100	CLAMP CYLINDER	1
5	B02161200	CLAMP PISTON	1
6	G75	O RING	1
7	P70	O RING	1
8	TP70	BACKING UP RING	2
9	2du2025	LUBRICATING BEARING	1
10	M12x55	HEX BOLT	4
11	M12	SPRING WASHER	4

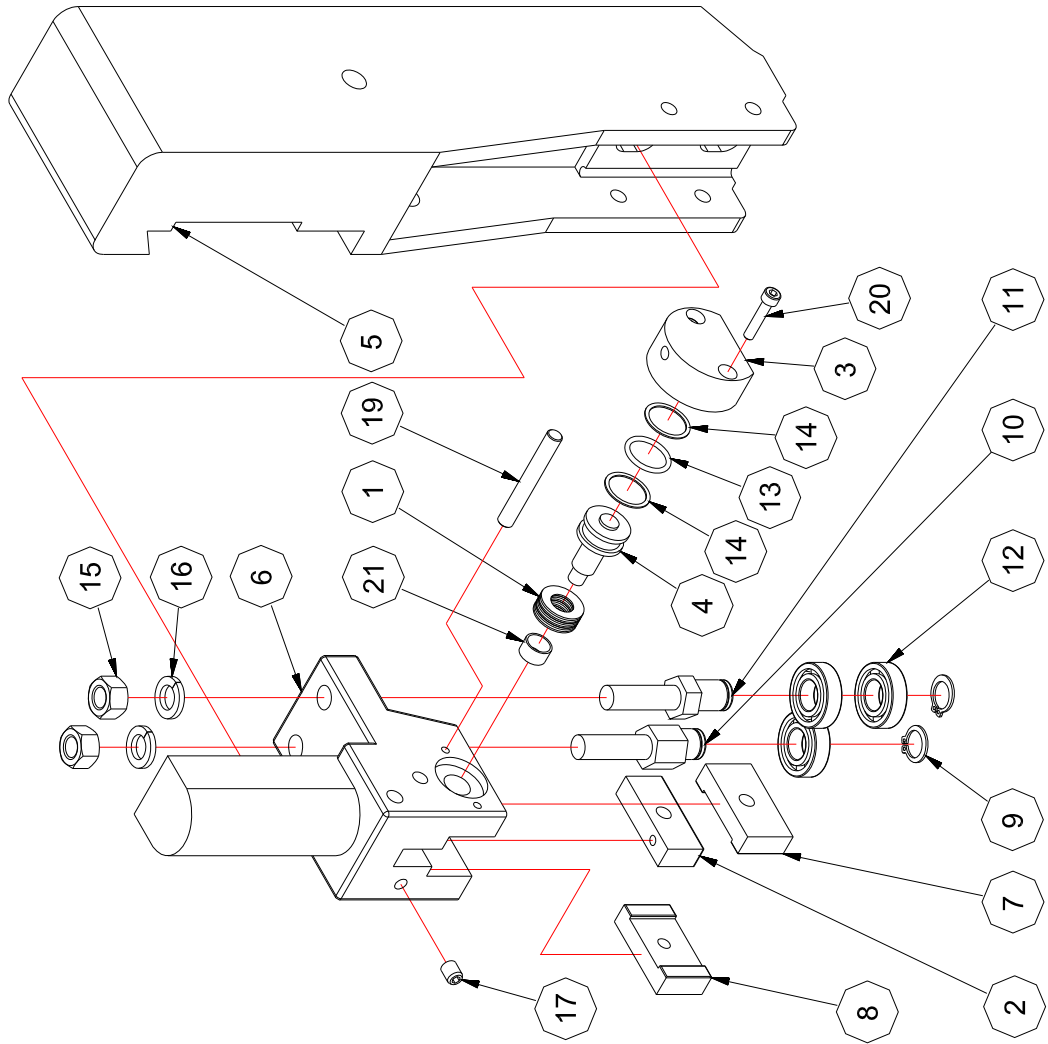


**A021009 CYLINDER UNIT OF
MOVABLE CLAMP**

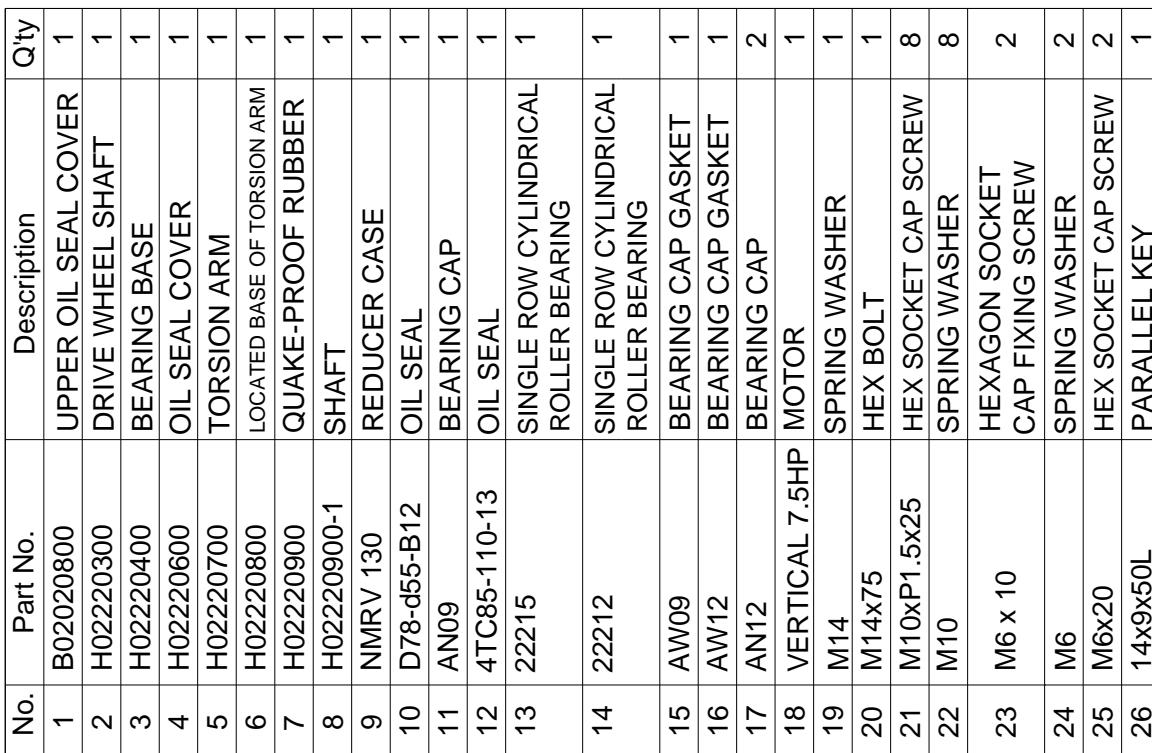
No.	Q'ty	Part No.	Description
1	6	ø12.2Xø23X1t	DISC SPRING
2	1	H02241100	LEFT GUIDE WHEEL BASE (HYDRAULIC)
3	1	B02041100	UPPER CARBIDE FIXTURE
4	1	B02044100	SHORT ECCENTRIC SHAFT
5	1	H02241900	LONG ECCENTRIC SHAFT
6	1	B02062600	GUIDE PLATE CYLINDER
7	1	B02062700	GUIDE PLATE PISTON
8	1	H02241200	LEFT FRONT CARBIDE FIXTURE
9	1	H02241300	LEFT BACK CARBIDE FIXTURE
10	3	6002	BALL BEARING
11	2	SHAFT OD 15	C TYPE RETAINING RING
12	1	H02240900	LEFT GUIDE ARM
13	1	ø8X60L	STRAIGHT PIN
14	1	P20	O RING
15	2	TP20	BACKING UP RING
16	1	M8 x 10	HEXAGON SOCKET CAP FIXING SCREW
17	1	M8 x 20	HEX SOCKET CAP SCREW
18	2	M5x25	HEX SOCKET CAP SCREW
19	2	M12	HEX NUT
20	2	M12	SPRING WASHER
21	1	2DU1208	LUBRICATING BEARING

A022002 HYDRAULIC
LEFT GUIDE WHEEL BASE

No.	Q'ty	Part No.	Description
1	6	Ø12.2XØ23X1t	DISC SPRING
2	1	B02041100	UPPER CARBIDE FIXTURE
3	1	B02062600	GUIDE PLATECYLINDER
4	1	B02062700	GUIDE PLATE PISTON
5	1	H02240800	RIGHT GUIDE ARM
6	1	H02241000	RIGHT GUIDE WHEEL BASE (HYDRAULIC)
7	1	H02241400	RIGHT FRONT CARBIDE FIXTURE
8	1	H02241500	RIGHT BACK CARBIDE FIXTURE
9	2	SHAFT DIAMETER 15	C TYPE RETAINING RING
10	1	H02241900	LONG ECCENTRIC SHAFT
11	1	B02044100	SHORT ECCENTRIC SHAFT
12	3	6002	BALL BEARING
13	1	P20	O RING
14	2	TP20	BACKING UP RING
15	2	M12	HEX NUT
16	2	M12	SPRING WASHER
17	1	M8 x 10	HEXAGON SOCKET CAP FIXING SCREW
18	1	M8 x 20	HEX SOCKET CAP SCREW
19	1	Ø8X60L	STRAIGHT PIN
20	2	M5x25	HEX SOCKET CAP SCREW
21	1	2DU1208	LUBRICATING BEARING

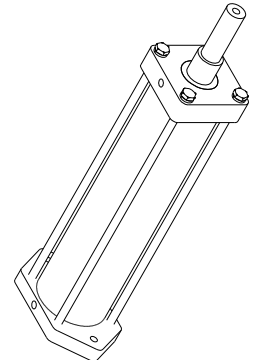
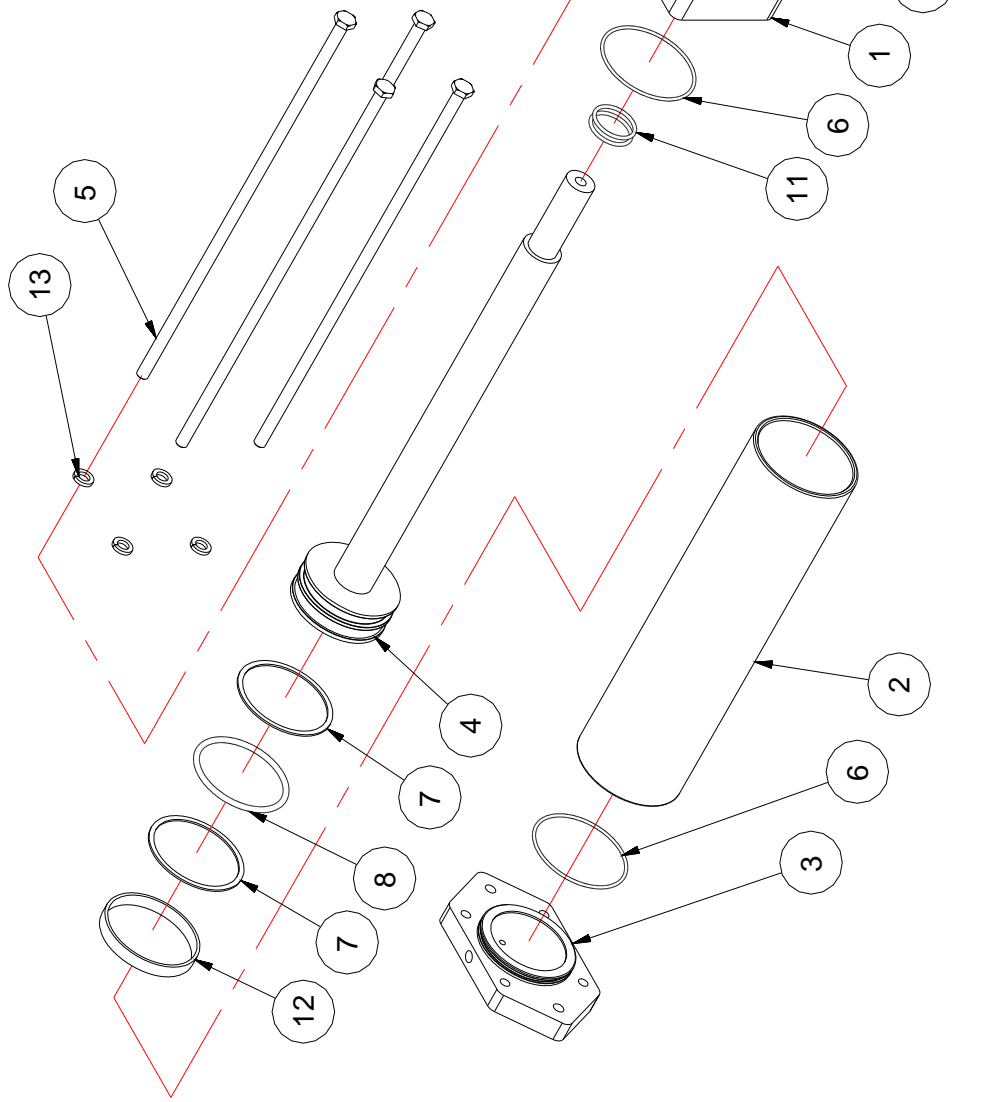


**A022003 HYDRAULIC RIGHT
GUIDE WHEEL BASE**



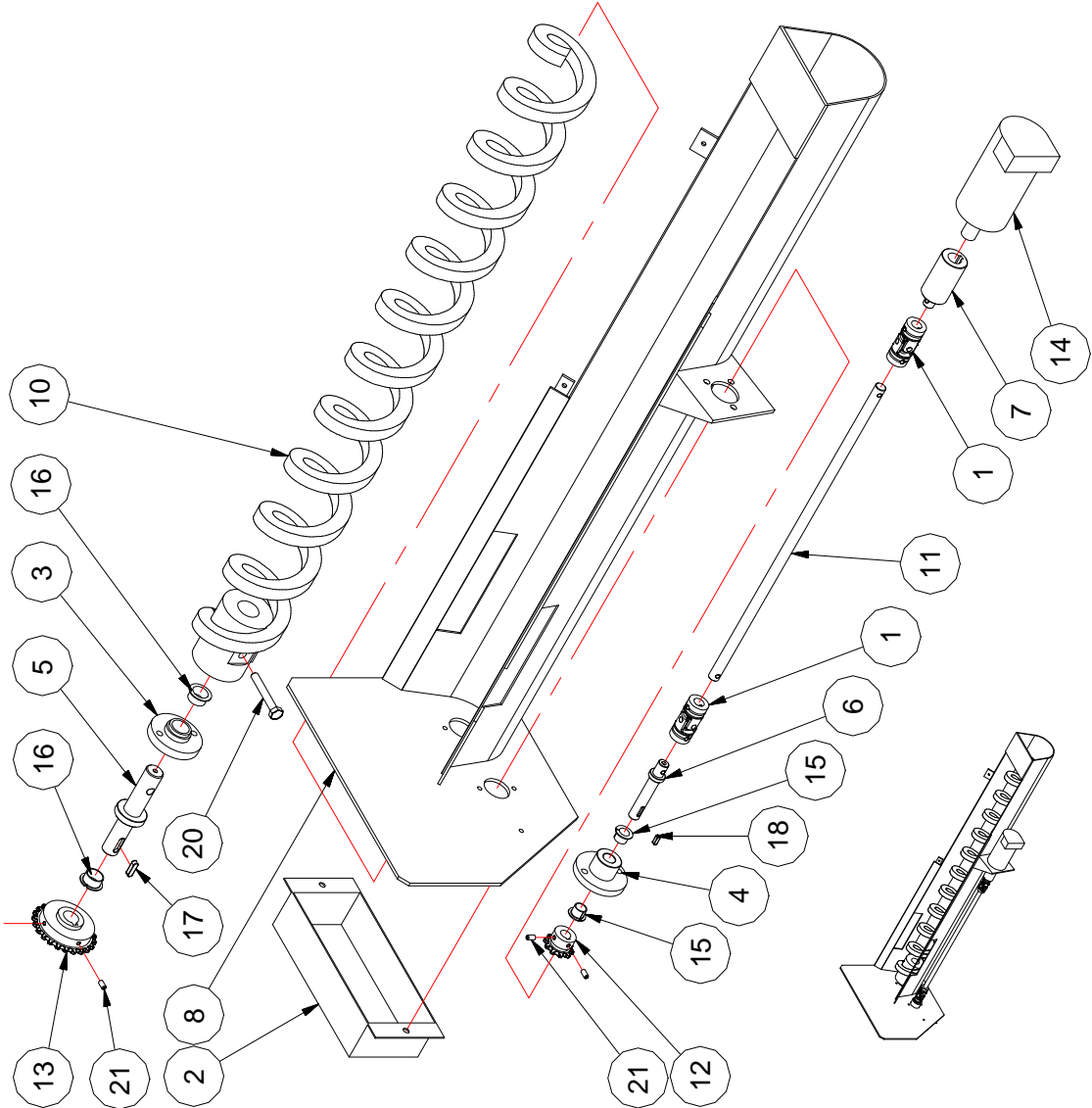
A022004 REDUCER UNIT

No.	Part No.	Description	Q'ty
1	B02061300	LIFTING UPPER COVER	1
2	H02260100	LIFTING CYLINDER	1
3	B02061100	LIFTING UNDER COVER	1
4	H02260300	LIFTING PISTON	1
5	H02260200	LIFTING DRAW BAR SCREW	4
6	G95	O RING	2
7	TP90	BACKING UP RING	2
8	P90	O RING	1
9	2DU4012	LUBRICATING BEARING	1
10	4TC40-58-8	OIL SEAL	1
11	P40	O RING	2
12	MWR100	WEAR RING	1
13	M12	SPRING WASHER	4



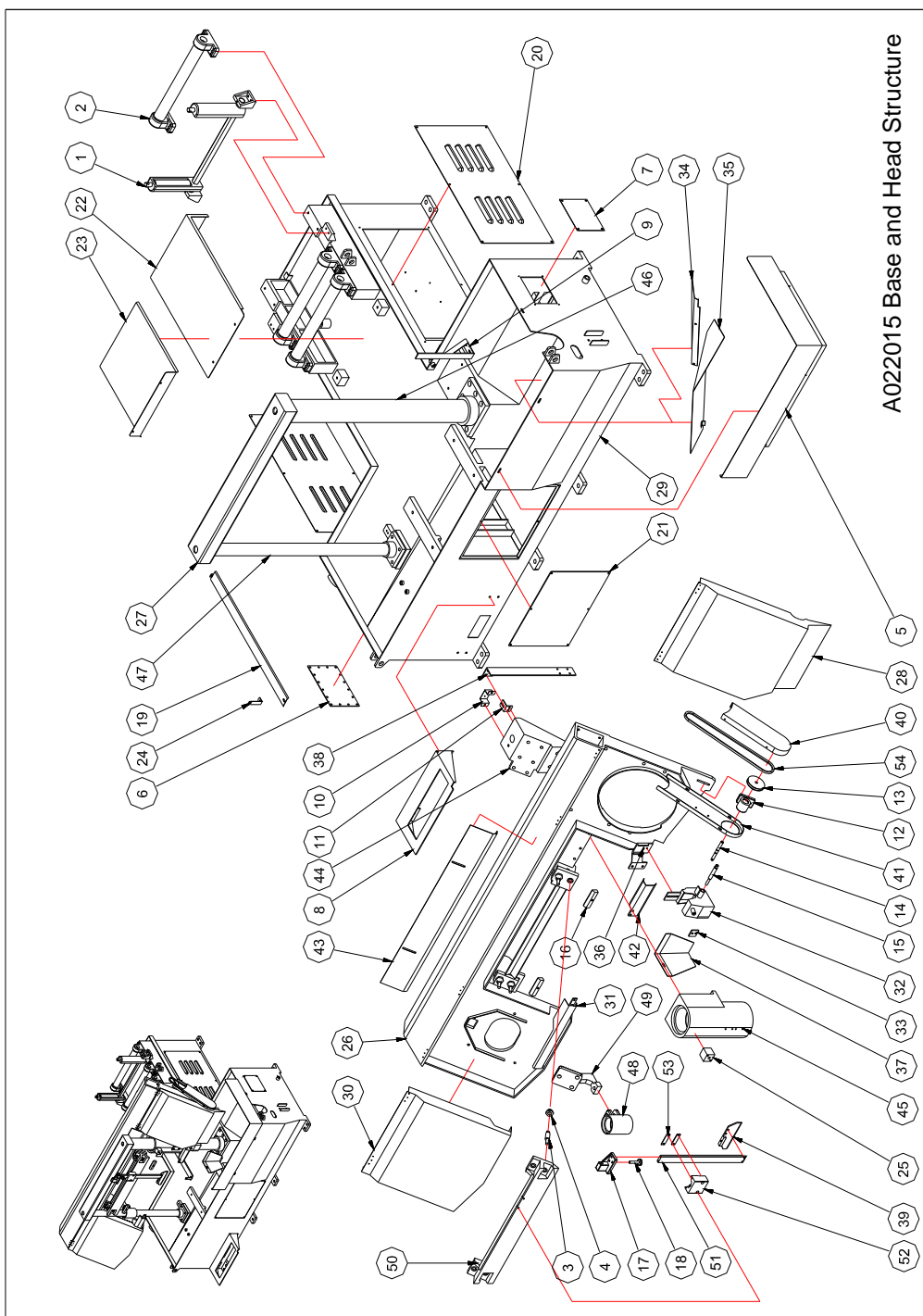
**A022007 LIFTING
CYLINDER UNIT**

No.	Q'ty	Part No.	Description
1	2	5UJ-NJ12	UNIVERSAL JOINT
2	1	B02013400	CHAIN WHEEL COVER
3	1	B02031500	FLANGE BASE
4	1	B02031600	ADJUSTING BASE
5	1	B02031700	SHAFT
6	1	B02031800	CHAIN WHEEL SHAFT
7	1	B02031900	MOTOR COUPLING
8	1	H02212100	CHIPPING DISCHARGE TUBE
10	1	H02230300	CHIPPING DISCHARGE SCREW
11	1	H02230400	CHIPPING CLEAN SCREW
12	1	B02032900	DRIVING CHAIN WHEEL
13	1	B02033000	DRIVED CHAIN WHEEL
14	1	3HM-OMM32	MOTOR
15	2	2DUF1210-20	STEEL PLATE LUBRICATING BEARING
16	2	2DUF1810-26	STEEL PLATE LUBRICATING BEARING
17	1	6x6x20	CAP KEY
18	1	5x5x15	CAP KEY
19	1	M8	SPRING WASHER
20	1	M8x55	HEX BOLT
21	4	M5 x 10	HEXAGON SOCKET CAP FIXING SCREW



A022012 CHIPPING
DISCHARGE CHASE UNIT

No.	Parts no.	Description	Qty	Parts no.	Description	Qty	
1	A021005	Vertical rolls	1 set	20	H02210501	Machine Base	1
2	A021007	Feeding rollers	1 set	30	H02211501	Idle wheel cover	1
3	H01040200	Guide Adjusting Screws	4	31	H02211600	Blade guard	1
4	H01040300	Lock screws	4	32	H02213300	Brush Cover	1
5	H02010500	Front tray	1	33	H02213600	Plate	1
6	H02011600	Hydraulic tank cover	1	34	H02213801	Left chip tray	1
7	H02011600	Coolant tank cover	1	35	H02213901	Right chip tray	1
8	H02012600	Control box base	1	36	H02214200	Blade cover seal	1
9	H02013700	Limit touch bracket	1	37	H02214500	Guide chip plate	1
10	H02013900	Lower limit sw. seat	1	38	H02214600	Low limit Stopper	1
11	H02014000	Bracket (—)	1	39	H02212300	Touch Plate	1
12	H02020000	Pulley seat	1	40	H02216000	Blade cover	1
13	H02022100	Brush pulley	1	41	H02215800	Inner belt cover	1
14	H02022200	Pulley shaft	1	42	H02215100	Blade guard (R)	1
15	H02023200	Brush shaft	1	43	H02215300	Blade guard (L)	1
16	H02030000	Lock block	2	44	H02230100	Assembly block	1
17	H02042000	Stopper	1	45	H02230200	Main Sleeve	1
18	H02103000	Adjusting screw	1	46	H02240101	Main post	1
19	H02103000	Protect cover	1	47	H02240200	Subsidiary post	1
20	H02110400	Large cover	2	48	H02240500	Subsidiary sleeve	1
21	H02110500	Front cover	1	49	H02240600	Adjusting seat	1
22	H02112600	Cylinder cover	1	50	H02240700	Guide bar	1
23	H02112700	Guide end cover	1	51	H02241700	Approach plate	1
24	H02113100	Cover Bracket	1	52	H02241800	Approach plate seal	1
25	H02162700	Hydraulic fitting	1	53	H02242000	[DI] Plates	2
26	H02210201	Saw bow	1	54	Belt	3Mx130L	1
27	H02210300	Connecting bar	1				
28	H02210402	Wheel cover	1				



A022015 Base and Head Structure