4685 Horizontal Band Resaw

Owner's Manual

Oliver Machinery **M-4685 10/2013**

Seattle, WA

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www.olivermachinery.net

Warranty

Oliver makes every effort possible to assure that its equipment meets the highest possible standards of quality and durability. All products sold by Oliver are warranted to the original customer to be free from defects for a period of 2 (two) years on all parts, excluding electronics and motors, which are warranted for 1 year. Oliver's obligation under this warranty shall be exclusively limited to repairing or replacing (at Oliver's option) products which are determined by Oliver to be defective upon delivery F.O.B. (return freight paid by customer) to Oliver, and on inspection by Oliver. This warranty does not apply to defects due, directly or indirectly, to misuse, abuse, negligence, accidents, unauthorized repairs, alterations, lack of maintenance, acts of nature, or items that would normally be consumed or require replacement due to normal wear. In no event shall Oliver be liable for death, personal or property injury, or damages arising from the use of its products.

Warning

Read this manual thoroughly before operating the machine. Oliver Machinery disclaims any liability for machines that have been altered or abused. Oliver Machinery reserves the right to effect at any time, without prior notice, those alterations to parts, fittings, and accessory equipment which they may deem necessary for any reason whatsoever.

For More Information

Oliver Machinery is always adding new Industrial Woodworking products to the line. For complete, up-to-date product information, check with your local Oliver Machinery distributor, or visit www.olivermachinery.net

WARNING

Some dust created by power sanding, sawing, and grinding, drilling, and other construction activities contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

Some examples of these chemicals are：

- Lead from lead-based paints.
- Crystalline silica from bricks, cement, and other masonry products.
- Arsenic and chromium from chemically treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals：works in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

Specifications

Model HP-400P HORIZONTAL RE-SAW BAND SAW	
Max. Workpiece Size	250mm(W) x 250mm(H)（10"x10"） 400mm(W) x 250mm(H)（12"x10"）
Conveyor Belt Size	235mm(W)x 5480mm(L) 385mm(W)x 5480mm(L)
Saw Wheel Diameter	28"
Saw Wheel Width	1"
Saw Blade Size	180" (L) x 1"(W)
Dust Hood Diameter	4" x 2
Main Specifications：Digital Readout Type	A11
In-feed Speed	4~25 M/m
Max. cutting Length	50mm
Min. cutting Thickness	3mm
Controlling Blade Tension	Hand press pump
Main Motor：Horsepower	25HP
Voltage / Phase / Cycle	
Hydraulic Motor：In-feed Speed	OMP250
Out-feed Speed	OMP160
Elevation Motor：Horsepower	1/4HP x 6P
Construction：Base Construction	Steel
Saw Wheel	Steel
Conveyor Table	Steel
Conveyor Belt	Rubber
Saw Blade Guide	Ceramic
Machine Dimensions	2780mm(L) x 2150mm(W) x 1880mm(T)
Machine Weight	1350kgs
Packing Type	Pallet
Packing Dimensions	2870mm(L) x 2260mm(W) x 2050mm(T)
Packing Weight	1600kgs
Country of Origin	Taiwan
Warranty	1 year

Table Of Contents

SECTION 1：SAFETY

WARNING：

For Your Own Safety, Read Instruction Manual before Operating this Equipment

The purpose of safety symbols is to attract your attention to possible hazardous conditions. This manual uses a series of symbols and signal words which are intended to convey the level of importance of the safety messages. The progression of symbols is described below. Remember that safety messages by themselves do not eliminate danger and are not a substitute for proper accident prevention measures.

DANGER：

Indicates an imminently hazardous situation which, if not avoided, WILL result in death or serious injury.

WARNING：

Indicates a potentially hazardous situation which, if not avoided, COULD result in death or serious injury.

CAUTION：

Indicates a potentially hazardous situation which, if not avoided, MAY result in minor or moderate injury. It may also be used to alert against unsafe practices.

NOTICE：

This symbol is used to alert the user to useful information about proper operation of the equipment.

WARNING：

Safety Instructions for Power Tools

1. Keep guards in place and in working order.
2. Remove adjusting keys and wrenches. Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning on.
3. Keep work area clean. Cluttered areas and benches invite accidents.
4. Do not use in dangerous environment. Do not use power tools in damp or wet locations, or where any flammable or noxious fumes may exist. Keep work area well lighted.
5. Keep children and visitors away. All children and visitors should be kept at a safe distance from work area.
6. Make workshop child proof with padlocks, master switches, or by removing starter keys.

7. Do not force tool. It will do the job better and safer at the rate for which it was designed.
8. Use right tool. Do not force tool or attachment to do a job for which it was not designed.
9. Use proper extension cord. Make sure your extension cord is in good condition. Conductor size should be in accordance with the chart below. The amperage rating should be listed on the motor or tool nameplate. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. Your extension cord must also contain a ground wire and plug pin. Always repair or replace extension cords if they become damaged.

Minimum gauge for extension cords

AMP RATING	LENGTH		
	25ft	50ft	100ft
0-6	16	16	14
7-10	16	16	14
11-12	16	16	14
13-16	14	12	12
17-20	12	12	10
21-30	10	10	No

10. Wear proper apparel. Do not wear loose clothing, gloves, neckties, rings, bracelets, or other jewelry which may get caught in moving parts. Non-slip footwear is recommended. Wear protective hair covering to contain long hair.
11. Always use safety glasses. Also use face or dust mask if cutting operation is dusty. Everyday eyeglasses only have impact resistant lenses, they are not safety glasses.
12. Secure work. Use clamps or a vise to hold work when practical. It is safer than using your hand and frees both hands to operate tool.
13. Do not overreach. Keep proper footing and balance at all times.
14. Maintain tools with care. Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
15. Use recommended accessories. Consult the instruction manual for recommended accessories. The use of improper accessories may cause risk of injury.
16. Reduce the risk of unintentional starting. On machines with magnetic contact starting switches there is a risk of starting if the machine is bumped or jarred. Always disconnect from power source before adjusting or servicing. Make sure switch is in off position before reconnecting.
17. Many woodworking tools can “kickback” the workpiece toward the operator if not handled properly. Know what conditions can create “kickback” and know how to avoid them. Read the manual accompanying the machine thoroughly.
18. Check damaged parts. Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.
19. Never leave tool running unattended. Turn power off. Do not leave tool until it comes to a complete stop.
20. Never operate a machine when tired, or under the influence of drugs or alcohol. Full mental alertness is required at all times when running a machine.
21. Never allow unsupervised or untrained personnel to operate the machine. Make sure any instructions you give in regards to the operation of the machine are approved, correct, safe, and clearly understood.

WARNING：

Additional Safety Instructions for Bandsaw

1. Do not operate with dull or badly worn blades. Dull blades require more demand on the motor and are less likely to cut precisely. Inspect blades before each use.
2. Never position fingers or thumbs in line with the cut. Serious personal injury could occur.
3. Do not operate this bandsaw without wheel guards, pulley guards, and blade guards in place.
4. When replacing blades, make sure the teeth face toward the front of the saw.
5. Cuts should always be fully supported against the side of the conveyor table and by the pressure rollers.
6. Do not back workpiece away from the blade while the saw is running. If you need to back the work out, stop the bandsaw and wait for the blade to stop. Do not twist or put excessive stress on blade while backing work away.
7. Blade should be running at full speed before beginning a cut.
8. Always feed stock evenly and smoothly. Do not change conveyor speeds during a cut.
9. This machine is not designed to cut metal or other material except wood.
10. Do not manually stop or slow blade after turning the saw off. Allow it to come to a complete stop before you leave it unattended.
11. All inspections, adjustments, and maintenance must be done with the power off and the circuit breaker shut off. Wait for all moving parts to come to a complete stop.
12. Habits – good and bad – are hard to break. Develop good habits in your shop and safety will become second- nature to you.
13. If at any time you are experiencing difficulties performing the intended operation, stop using the bandsaw. Then contact our service department or ask a qualified expert how the operation should be performed.
14. Make sure blade is properly tensioned before operating machine.
15. Keep loose clothing and long hair away from moving conveyors!

WARNING：

Like all power tools, there is danger associated with the Model HP-400P. Accidents are frequently caused by lack of familiarity or failure to pay attention. Use this tool with respect and caution to lessen the possibility of operator injury. If normal safety precautions are overlooked or ignored, serious personal injury may occur.

CAUTION：

No list of safety guidelines can be complete. Every shop environment is different. Always consider safety first, as it applies to your individual working conditions. Use this and other machinery with caution and respect. Failure to do so could result in serious personal injury, damage to equipment, or poor work results.

WARNING：

Additional Safety Instructions for Hydraulics

1. Be familiar with the hazards of hydraulic injection injuries. Leaking hydraulic fluid may have enough pressure to penetrate skin. Never use your hands to check for suspected hydraulic leaks.

   Hydraulic fluid that is injected into skin is a medical emergency that may cause infection, disability, amputation or death.

   The average injection injury may be a small wound that has barely broken the skin. Do not be fooled by this type of injury. Immediately get to an emergency medical facility!

   Minimizing the time between the injury and when the injected material is removed is critical to minimizing the seriousness of the injury.

2. Use a piece of cardboard to check for suspected hydraulic leaks. Pressurized hydraulic fluid may cause injection injuries and can be extremely hot. Never use your hands to check for suspected hydraulic leaks.

3. Protect your eyes around hydraulic systems. Safety glasses may not always protect your eyes from hot, pressurized fluid. The best way to protect yourself is to stay away from leaks until you can depressurize the system.

4. Stop the machine if you notice a hydraulic leak. Allowing the machine to continue running with a leak may increase the hazard of the situation.

5. Depressurize the hydraulic system before attempting to adjust any hydraulic lines or fittings. Stop the resaw, open the conveyor speed valves, and make sure the pressure gauge reads 0 psi.

6. Depressurize the hydraulic system before attempting any maintenance or service. Stop the resaw, open the conveyor speed valves, and make sure the pressure gauge reads 0 psi.

7. Regularly inspect and perform the proper maintenance on the hydraulic system. A well-maintained hydraulic system will have much few problems and hazards than a neglected system.

8. Make sure any hydraulic system maintenance is performed in a clean and dust-free work area. Remove any sawdust, grime or water from hydraulic system openings or components before maintenance. Always use lint-free rags when wiping components.

9. Only use high pressure hydraulic hose and steel hydraulic fittings when replacing components in the hydraulic system. Do not use brass or aluminum.

SECTION 2：CIRCUIT REQUIREMENTS

WARNING：

Serious personal injury could occur if you connect your machine to the power source before you have completed the setup process. Do not connect the machine to the power source until instructed to do so.

The Model HP-400P is rewiring for 3-phase operation.

The Model HP-400P has three 25 HP main motor and three 1/4 HP elevation motor.

Circuit Breaker Requirements

Install your bandsaw on a dedicated circuit to reduce the possibility of overloading the circuit and tripping the circuit breaker. However, if an unusual load does not exist, and the circuit breaker still trips, have the circuit inspected by a qualified electrician. Never use a larger circuit breaker than stated below, or you will increase the risk of fire.

Connection Type

Because of the high amperage draw from this machine, we recommend that you hardwire it directly to your circuit breaker and install a locking shut-off lever near the machine as a way to quickly disconnect the power.

Your factory Circuit Capacity

Always check to see if the wires in your circuit are capable of handling the amperage draw from your machine, as well as any other machines that could be operating on the same circuit. If you are unsure, consult a qualified electrician.

If the circuit breaker trips or the fuse blows regularly, your machine may be operating on a circuit that is close to its amperage draw capacity. However, if an unusual amperage draw does not exist and a power failure still occurs, refer to the troubleshooting section in this manual or contact a qualified electrician or our service department.

CAUTION：

Be sure that your particular electrical configuration complies with local and state codes. The best way to ensure compliance is to check with your local municipality or a licensed electrician.

SECTION 3：GENERAL INFORMATION

WARNING：

If you do not read this entire manual before operating the machine, you will greatly increase your chances of serious personal injury. To protect yourself, read and understand this entire manual.

Commentary

BLUE STEEL MACHINERY CO. is proud to offer the Model HP-400P Horizontal Band resaw. This band resaw is part of BLUE STEEL's growing family of fine woodworking machinery. When used according to the guidelines stated in this manual, you can expect years of trouble-free, enjoyable operation, and proof of BLUE STEEL's commitment to customer satisfaction.

We are also pleased to provide this manual for the Model HP-400P. It was written to guide you through assembly, review safety considerations, and cover general operating procedures. It represents our latest effort to produce the best documentation possible.

If you have any comments or criticisms that you feel we should address in our next printing, please write to us at：

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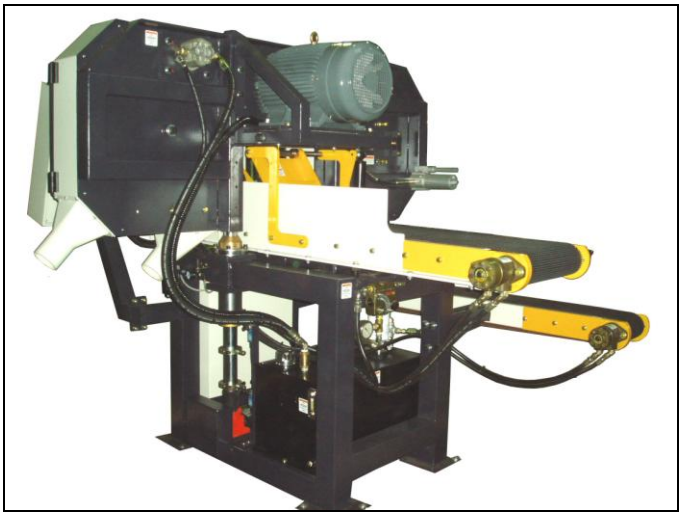
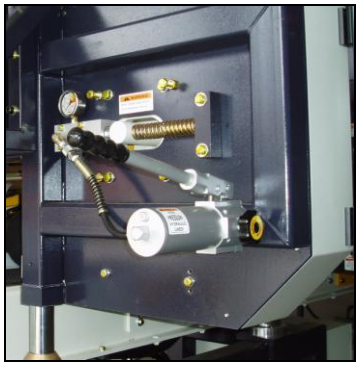
SECTION 4：MACHINE FEATURES

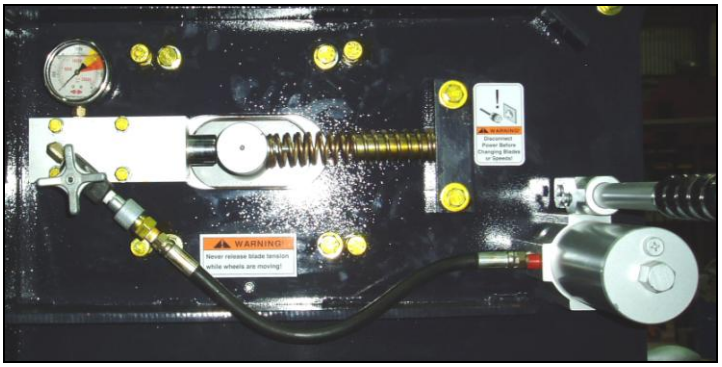
Main Features



1. **Infeed Pressure Rollers**：Maintain downward pressure on the board to keep it sturdy whiles the blade cuts through it.

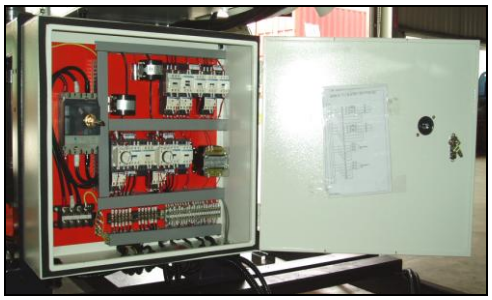
2. **Blade Tensional**：Provides a mechanical means for properly tightening the blade.



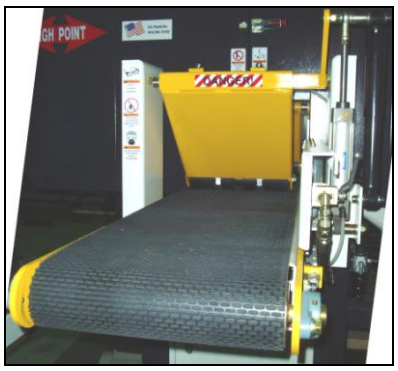


3. **Head Elevation Motor**：Responsible for moving the head (the part of the saw that contains the wheels and blade) up or down as needed.

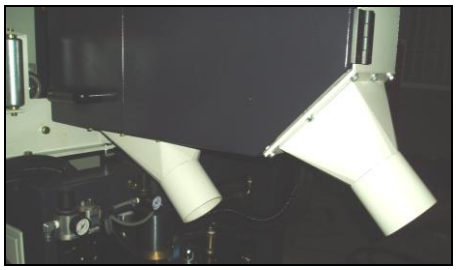
4. **Electrical Control Box**：Main area for wiring, rewiring, and changing the fuses. Should never be opened when the machine is connected to the power source!



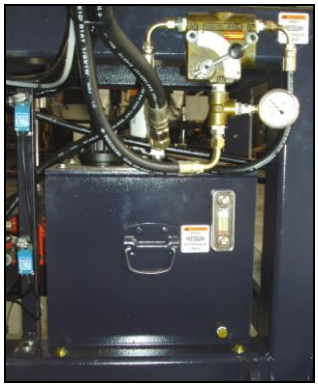
5. **Infeed Conveyor**：Moves the board through the bandsaw blade during cutting.

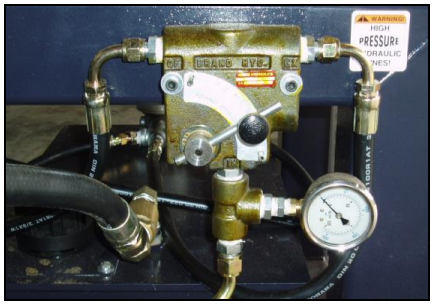


6. **4" Dust Port**：Allows the resaw to be connected to a dust collection system.



7. **Infeed Conveyor Speed Dial**：Controls the speed that the infeed conveyor belt moves.





8. **Infeed Conveyor Engagement Lever**：Allows the operator to stop and start the infeed conveyor while the blade is moving.

9. **Control Panel**：The part of the resaw where the operator can control the starting and stopping of the motor, the various height changes, and the calibration of the blade height to the conveyor. The control panel also houses a load meter that allows the operator to monitor the load being placed on the resaw during operation.

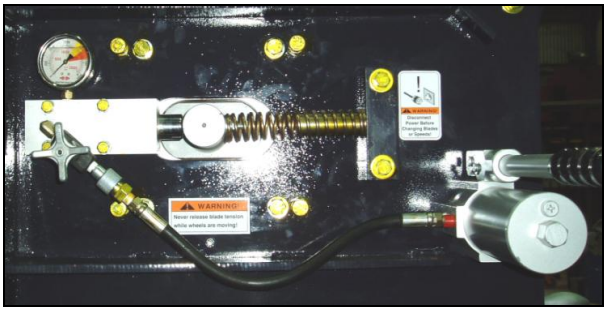
10. **Main Motor**：Powers the saw wheels for blade movement and drives the hydraulic pump for conveyor

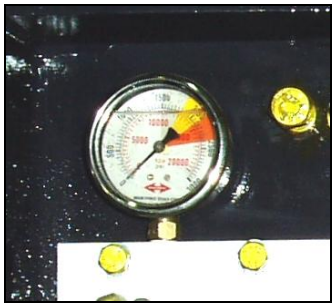
movement.

11. **Hydraulic Pump**：Creates hydraulic oil flow which drives the conveyor motors.

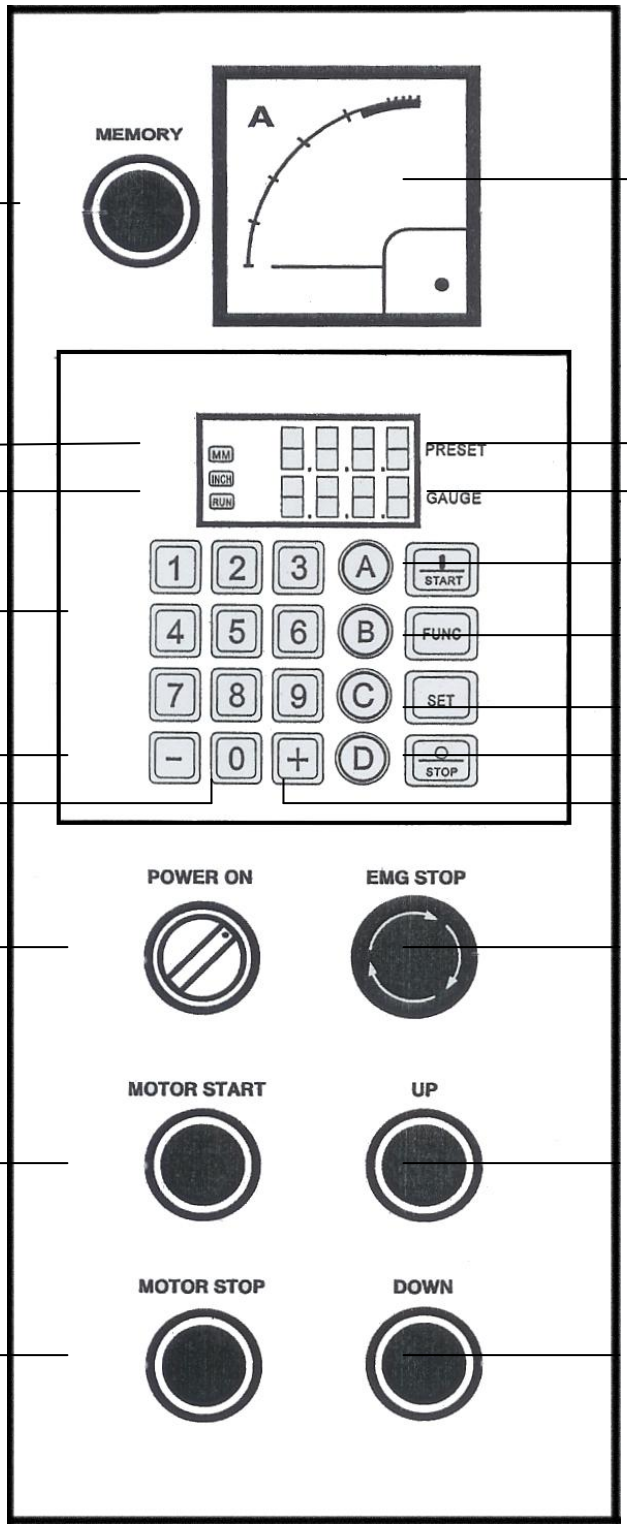
12. **Hydraulic Tank**：Holds the hydraulic fluid for the hydraulic system.

13. **Blade Tension Gauge**：Shows the current blade tension.

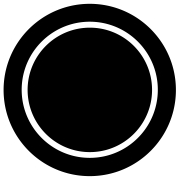
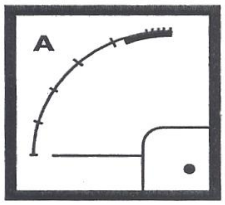
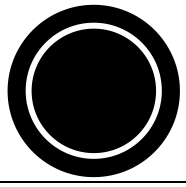
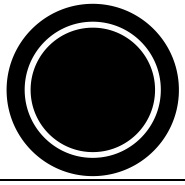
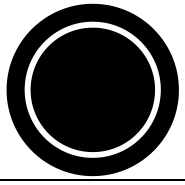
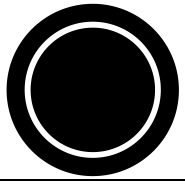




Function Description on Control Pane



1. MEMORY
2. AMP.METER
3. MM/INCH indicator light
4. Running indicator light
5. Number 0-9
6. Button of down dim.
7. Button of up dim.
8. 4 digits preset display
9. 4 digits gauge display
10. Start button
11. Setting preset button
12. Setting gauge button
13. Stop button
14. Saving Dimension
15. POWER ON
16. MOTOR START
17. MOTOR STOP
18. EMG STOP
19. UP
20. DOWN

	MEMERY This button is used for constant thickness setting. It provides convenient repetitive thickness setting without need to set the sizes again.
	AMP.METER This meter indicates the load condition of the saw wheel drive motor. Once overload occurs, the thermal relay pin on the magnetic switch will trip, Iocated in the control box.
	POWER ON SWITCH Turning this switch for power on and the indication lamp lights on.
	MOTOR START Used for starting saw wheels running and the indication lamp lights on.
	MEMORY This button is used for constant thickness setting. It provides convenient repetitive thickness setting without need to set the sizes again.
	EMERGENCY STOPSWITCH During operation, in case any abnormal motion occurs, press this switch then all machine motions stop, except the LED display IS still power on.
	UP KEY Press this switch for raising saw wheels.
	Down KEY Press this switch for lowering saw wheels

1.SPECIFICATIONS：

PLEASE OBEY THIS REGULATION!

1. Power Input：AC (380V) 5OHZ +20%
2. Signal Input：Standard Encoder A,B Phase Signal (DC12V).
3. Signal Output：Relay Panel point output .
   Down / Back movement ==>R 1　　Up / Forward movement ==>R2
4. The with Standing Pressure of The Output Panel of the Relay：AC (250v - 1A).
5. Unit of measurement：MM / INCH.
6. Route distance：MM 000.1 to 999.9　　INCH 000.0 to 99.99
7. Inertia teaching：After 3-5 times start running,
   The controller will automatically adjust to the best operation conditions.
8. Safety Limit Switch：When using this controller, the stroke safety limit switch must be adopted. Please use NC, C , in the electromagnetism on-off return circuit to protect automatically. (Serious Warning) To make sure the safety of people and machinery operation, the safety limit switch must be equipped.
9. Please be sure to add fuse on AC input (Fuse don't surpass 3A in AC load, please calculate fit amperage by yourself.) To avoid motor or contactor out of order.
10. For reducing controller interference. Please separate signal wire and power wire.
11. Please add Varistor on AC load for reducing interference.
12. Don't connect the shielded cable of the Induction unit to circuit 0 volt or GND.
13. The programmable controller is intended of use in Zone B typical industrial environment.
14. All interfacing cables are less than 3M.

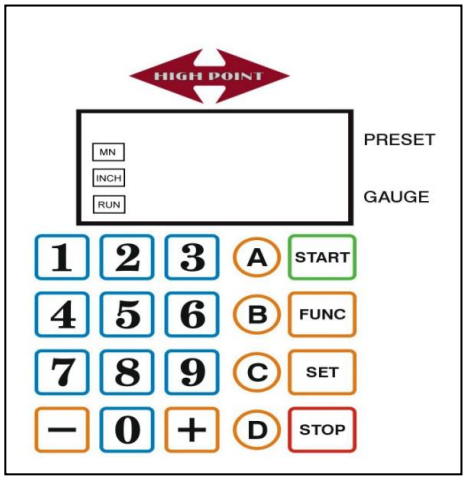
WARNING：

The electricians and operators have to pay their attention not to make any change personally on the above mentioned 14 points. Otherwise, the controller is possible to be ensure the safety of people, please caution.

2.CHARACTERISTICS：

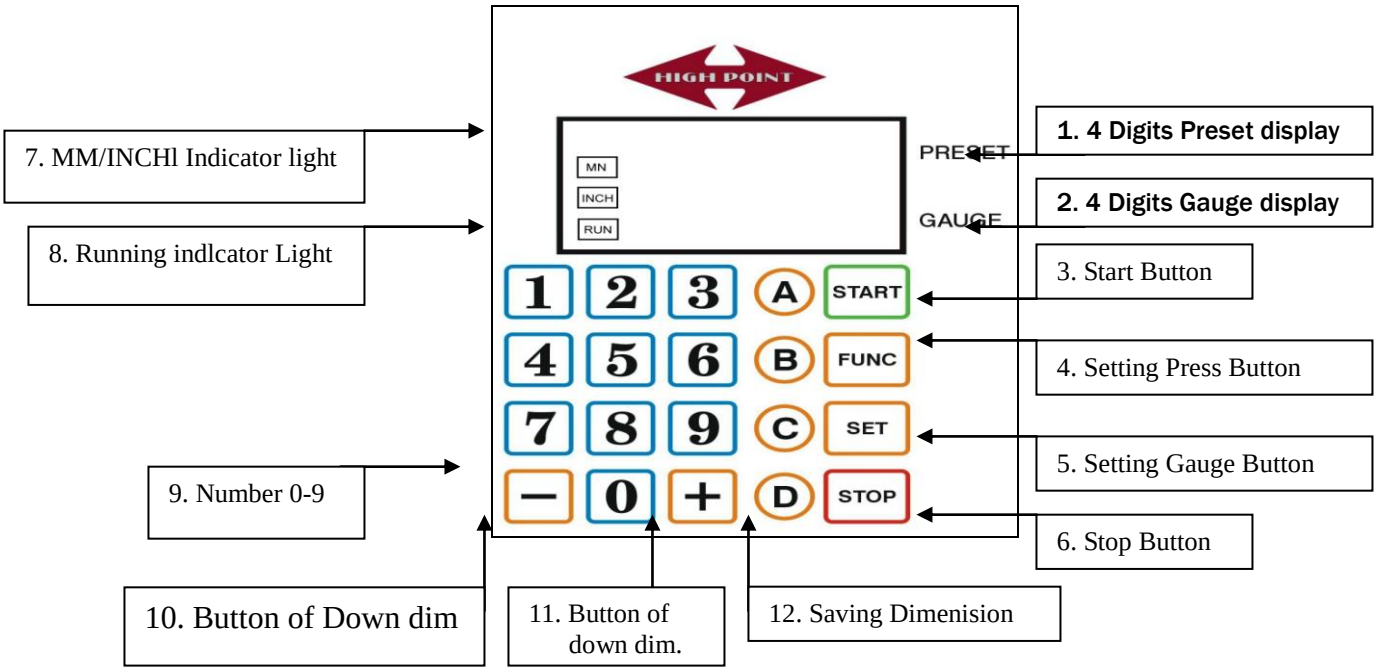
1. The Micro-Computer single chip is adopted in this controller.
   The stability and safety can be assured under long time running.
2. Even though the power voltage is different or the drive construction is worn out day by day and the change of return circuit can effect completely the function of dimension clamping.
3. lf any error in motor drive of gyration no signal, automatic safety monitoring system circuit will stop the machine to protection electric circuit.
4. The memory is a limitless use.
5. Easy operation and learning.
6. RAM 1280 bytes.

Diagram 1：



3. PANEL DISPLAY AND DESCRIPTION OF BUTTON FUNCTIONS

Diagram 2：



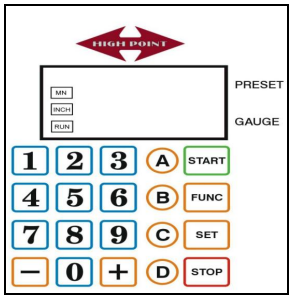
1. **4 Digits display of Preset.**
2. **4 Digits display of Gauge.**
3. START **After set dimension. It's an auto running button.**
4. FUNC **Button for input preset digits.**
5. SET **Button for input gauge digits.**
6. STOP **Button for stop running and operating.**
7. **MM/INCH indicator light.**
8. **Running indicator light.**
9. 1 2 3 4 5 6 7 8 9 **Figure buttons for input dimension size.**
10. — **Manual operation, button for decrase.**
11. + **Manual operation, button for increase.**
12. A B C D **：Saving input Dimension.**

4. OPERATING INSTRUCTION FOR CORRECTING CURRENT DIMENSION：

1. Using vernier gages or surveying instruments to measure the thickness of workpiece after sanding, e,g.18.5mm.
2. Press button SET
3. GAUGE Digital flash .
4. Press Number button 1 8 5
5. Press button SET
6. 18.5mm is appear on the screen.
7. Completing size input.

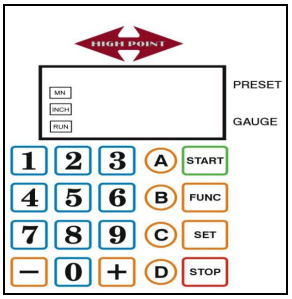
PS：When correcting existing data, the button STOP if the current figure show on the 28.8 and correction in 18.5, the step to operate are as the following diagrams demonstrated.

Diagram 3



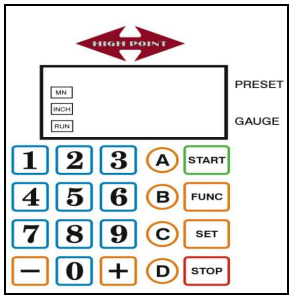
STEP 1：

Press button SET 000.0 is shown on the GAUGE display, and start flash.



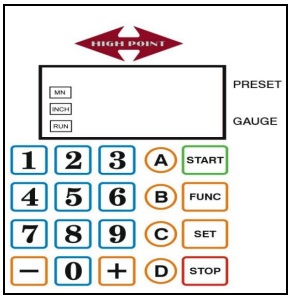
STEP 3：

Press button 8 001.8 is shown on the display and continue flash.



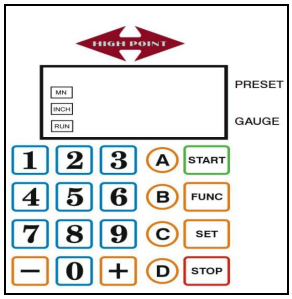
STEP 2：

Press button 1 000.1 is shown on the display and continue flash.



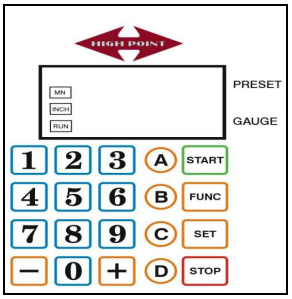
STEP 4：

Press button 5 018.5 is shown on the display and continue flash.



STEP 5：

Press button SET and keep on pressing until display is stop flash. (2-3sec)



STEP 6：

After display is stop flash, release button SET the gauge data change to 18.5mm.

PS：Press button STOP prior to press SET, the display will stop flashing .

WARNING：

In order not to cause any danger by the wrong dimension of machinery operation, except electricians, it's prohibited to operate or make any change.

5. JOG AND MANUAL JOG

1. JOG

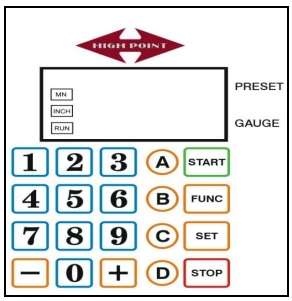
Press + or − button several times and inching will be completed.
The function is especially suitable for little size adjustment.

A. The original size is 18.5mm. If work size will be adjusted to 18.7mm, press + button two times thus 18.7mm will be got.

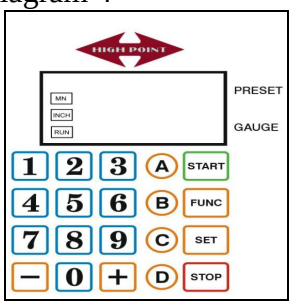
B. Press + button two times. The running indicator light will be on. The 18.7mm will be obtained.

C. The same theory for − movement.

Diagram 4

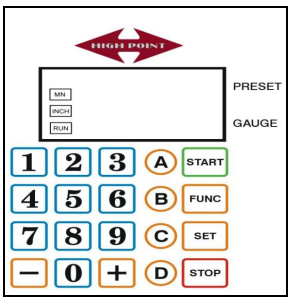


Current figure showns 18.5mm



STEP 1：

Press button + twice wait 1 second.



STEP 2：

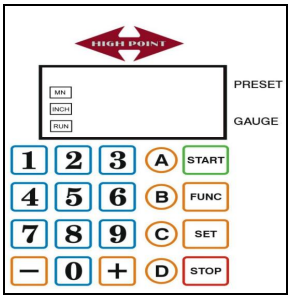
Preset data change to 18.7mm and controller is auto running until gauge to 18.7mm.

2.JOG：

A. Press button + and keep on motor will be running, gauge display continue show gauge data.

B. Release button + then motor will be stop.

C. The same theory for +.

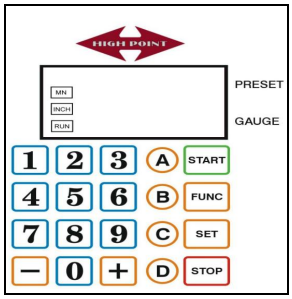


Press + and keep on the controller will be running the gauge display will be show gauge data.

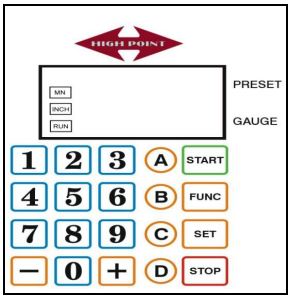
6. DESCRIPTION OF AUTOMACTIC START OPERATING

1. Workpiece size is 18.7mm , after sanding the workpiece is 12.3mm. Please follow as below：
2. Press FUNC .then 1 2 3 figure button.
3. Press START ,The working table start move, running indicator light is on, the screen stop to flash and shows current data.(size)
4. If operation indicator light is off, the operation ends.
5. During operation or input data if necessary, please press STOP button to stop action of the controller.

Diagram 5

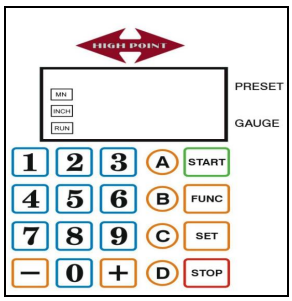


Current figure shown is 18.7



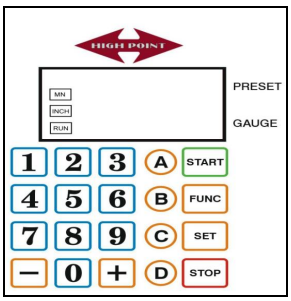
STEP 3：

Press 2 001.2 is shown on the display and start to flash.



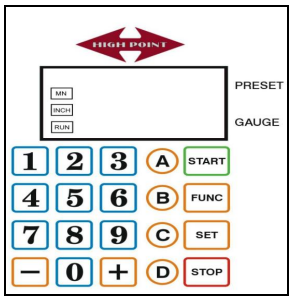
STEP 1：

Press FUNC 000.0 is shown on the preset display and start to flash.



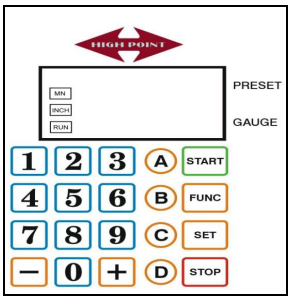
STEP 4：

Press 3 012.3 is shown on the display and start to flash.



STEP 2：

Press 1 000.1 is shown on the display and start to flash.



STEP 5：

Press START the controller start to run and the figure on the display change back to 18.7mm and start to deduct to12.3mm.

WARNING：

To avoid and danger, while operating this function, please note that raw material can not be put into the machine until the operation is completed.

7. SAVING THE WORKING PIECES DIMENSION

1. (A) (B) (C) (D) Is (PRESET) memory button. 4 buttons are same the function and operation.

2. TO change the memory：

For example：(A) the Preset size is 123.4,change to 032.1
The step to operate are as the following diagrams 6 demonstrated.

STEP 1：Press (A) button. Target size is 123.4 and flash.

STEP 2：Press figure button [0] [3] [2] [1] .

STEP 3：Press (A) button 3 seconds. The working piece cut memory size is completed.

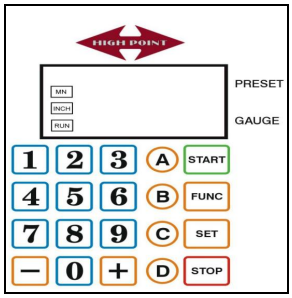
3.TO Start operation：

The step to operate are as the following diagrams 7 demonstrated

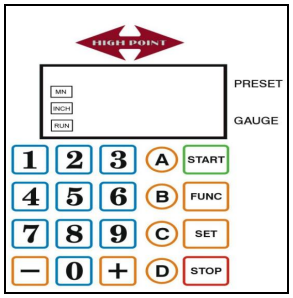
STEP 1：Press (A) button, the PRESET size shows 032.1and flash.

STEP 2：Press [START] button, the PRESET size stop to flash, running indicator light is on and Working table start to move to target size, after arrived the running indicator light off and PRESET return to 000.0 the GAUGE shows 32.1

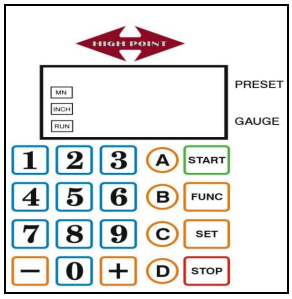
Diagram 6



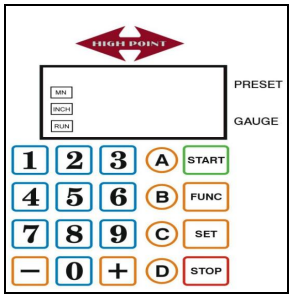
STEP 1：
Press (A) button (PRESET) shows 123.4 and flash.



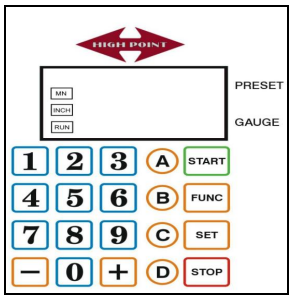
STEP 4：
Press [2] button (PRESET) display shows 403.2 and flash.



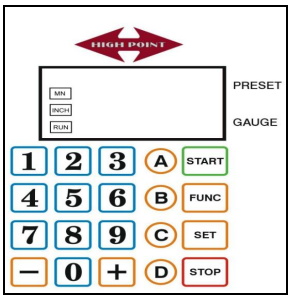
STEP 2：
Press [0] button (PRESET) display shows 234.0 and flash.



STEP 5：
Press [1] button (PRESET) display shows 032.1 and flash.

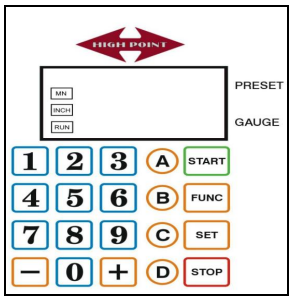


STEP 3：
Press 3 button (PRESET) display shows 340.3 and flash.

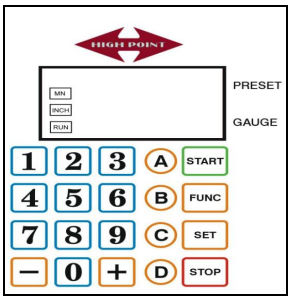


STEP 6：
Press A button 3 sec. (PRESET) display shows 000.0 and stop to flash.

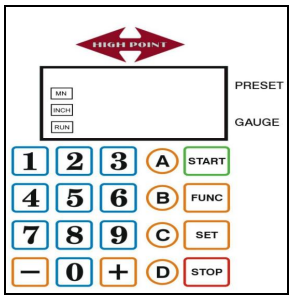
Diagram：7



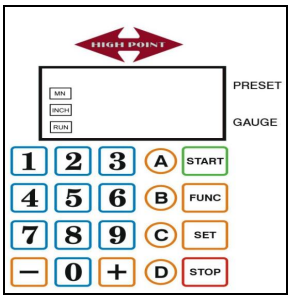
This display shows 18.5mm (Gauge)



STEP 2：
Press button working table start move to the preset dimension.



STEP 1：
Press button the preset dimension is show 032.1 and flash.



STEP 3：
To reach the press dimension 032.1 the preset digit show 000.0

WARNING：

In order not to cause any danger by the wrong dimension of machinery operation, except electricians, it's prohibited to operate or make any change.

PS：Press A button and then press START button, the display will stop to flash and run.

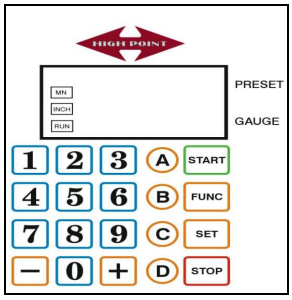
8. SETTING WORKING PIECES CUTTING DIMENSION

For example：

The working piece cut dimension is 20mm change to 30.0mm.

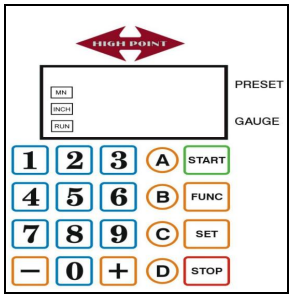
1. Press FUNC button, then press 3 0 0 figure button, and then press SET button until the display stop to flash and shows 030.0
2. If input the wrong figure, please press SET button or STOP button.
3. After setting workpiece size completed, external memory buttons and A.B.C.D Key can be use.

Diagram 8



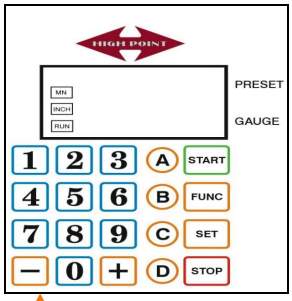
STEP 1：

Press FUNC 000.0 is shown on the preset display and start to flash.



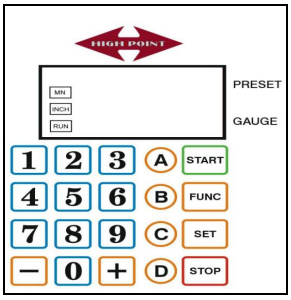
STEP 2：

Press 3 000.3 is shown on the display and start to flash.



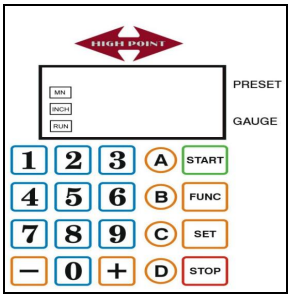
STEP 3：

Press 0 003.0 is shown on the display and start to flash.



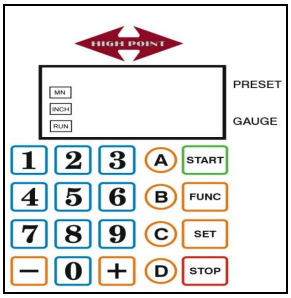
STEP 4：

Press 0 030.0 is shown on the display and start to flash.



STEP 5：

Press SET button wait for display stop to flash.



STEP 6：

Preset stop to flash.

Release the button SET the figure on the display change to 030.0MM.

WARNING：

To avoid and danger, while operating this function, please note that raw meterial can not be put into the machine until the operation is completed.

Note：The max. pneset working thickness is 150mm, The Digital Readout won't work for any sizes are over 150mm.

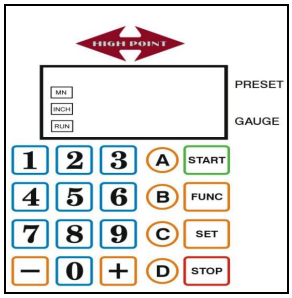
9. DIMENSION UNIT SELECTING

The user can choose MM or INCH inaccordance with their common use.

To turn off the power and Press SET button, then turn on the power to change the dimension unit.

DIAGRAM 9：

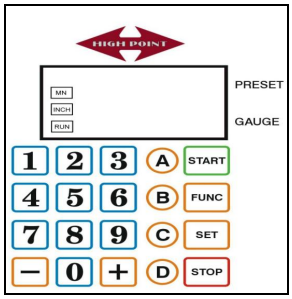
The current dimension unit shown is (MM)



To turn off the power.
Then Press the SET button and turn on the power.

The display shows automatically a new figure on basis of MM unit and right one decimal point.

The current dimension unit shown is (INCH)



To turn off the power.
Then Press the SET button and turn on the power.

The display shows automatically a new figure on basis of INCH unit and right two decimal point.

10. OBVIATION & CAUSE OF THE DISPLAY MINUS

1. Controller shows [ ] It means wrong dimension.

The controller can't running in the minus range.

2.Correcting way：Please reload correct dimension data.

3. Please reference Page 2 chapter 4.

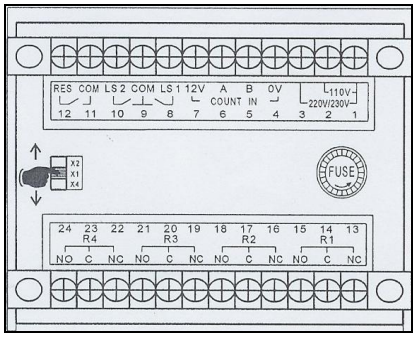
11. FAULT SITUATION AND TROUBLE-OBVIATING

FAULT SITUATION	SEARCH FOR FAILURE	TROUBLE-OBVIATING
1.The display fails to show figures.	1. Check if the voltage of the power is normal.	Please re-input correct voltage.
	2. Check if the fuse is burnt out and fused to be broken.	Replace a new 1A fuse
	3. If the above two point are checked to be normal, that means this controller is out of order.	Send back to the supplier for repair.
2.The display does show, but the figures are abnormal.	1. The figures shown are incorrect.	Correct dimension of the controller in accordance with the actual dimension.
	2. The parameter is incorrect.	Calculate correct parameter and input again.
	3. After finishing point 1 & 2 turn off the power and turn on again	If it's still abnormal, please send back to the supplier for repair.
3.The display does show figures, but when the up-down motor operates, the figure fails to change in accordance with the change of the machine's dimension.	1. If the proximity switch is used and under normal induction, the instruction light of the induction switch will be illuminated or put out in accordance with the table moves up or down.	If the instruction lights fail to be illuminated, please change the proximity switch.
	2. If the distance between the induction unit and induction sheet is more than 1MM.	Adjust the distance between the induction unit and induction sheet to be less than 1MM.
	3. If ENCODER is used, check if ENCODER runs in accordance with the table moves up or down.	If the axle connector of ENCODER and the table got off or damaged, please replace a new one or have it replaired.
	4. Check if phase A.B is with the change of DC12V and 0V, please measure with Watt-hour meter.	If there is no change on phase A.B, please replace ENCODER.
4.travel dimension is incorrect.	If the correction is made at 30mm but the dimension at 150mm isn't complied with the scale, but back to 30mm, the dimension is complied with the scale.	The parameter of the controller isn't complied with the machine, please correct the parameter.
5.The display only dot is lighting.	The digit reader is " minus " range.	Replace correct dimension data reference page 3.

FAULT SITUATION AND TROUBLE OBVIATING FAULT SITUATION

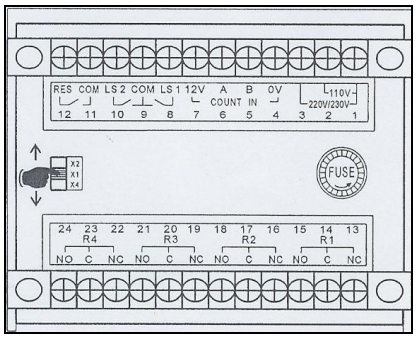
FAULT SITUATION	SEARCH FOR FAILURE	TROUBLE OBVIATING
The display fails to show figures.	Check if the Voltage of power AC 220V or AC 11 OV is normal.	Please make sure power voltage.

PS. Please input correct power voltage user have to make sure this controller if the power voltage of the power AC.11 OV or AC 220V.

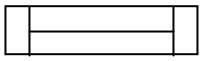


Please make sure that terminal (1) and terminal (2) have the voltage AC 110V or terminal (1) and terminal (3) have the voltage AC 220V.

Check input power line normal follow next page.
Check input power line abnormal please inform to the supplier.



Check if the fuse is burnt out and fuse to be broken.

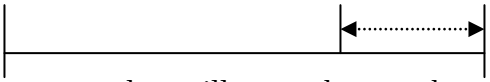


Dimension 20mm fuse (1A)
When the fuse is burnt out please renew fuse 1A by yourself.
When the fuse isn't burn please send back to the supplier for repair.
PS. To renew fuse's dimension, dimension standard equal 1A.

FAULT SITUATION	SEARCH FOR FAILURE
The figures show on can't match with the actual dimension.	1. correct dimension of the controller latch with the actual if it is mistake. 2. To make sure the parameter. 3. Check if the sensor under normal induction. 4. To make sure magnification selecting switch.

HOW TO OBVIATING

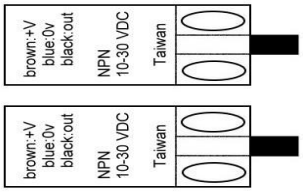
1. Please make sure the actual dimension and after re-enter correct data.



2. Parameter data will go to change when the drive construction is different than before please to reach consignee they will show you instruction handbook (teach you how to calculate correct parameter data and enter formula) Function will follow kinds of controller and has difference.

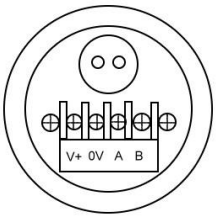
3. Please ask machine consignee about sensor setting and sensor style.

A. Proximity Switch



A. The proximity switch is used and under normal induction the red LED will be illuminated or put out in accordance with the table moves up or down if red LED fail to be unusual illuminated means proximity isn't good.

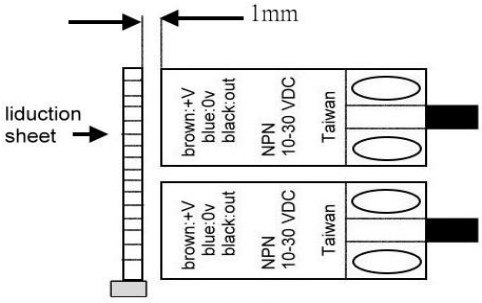
B. ENCODER.

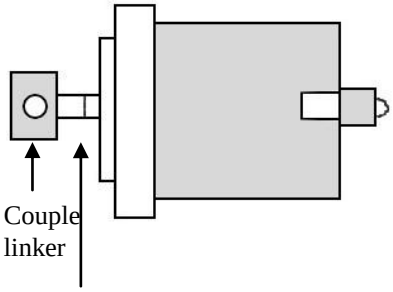


B. lf ENCODER is used the red LED will be illuminated or put out in accordance with the table moves up or down, if red LED fail to be unusual illuminated means ENCODER isn't good or couple loose.

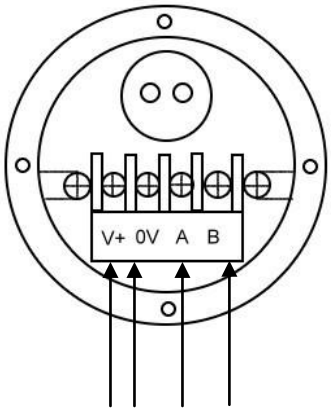
FAULT SITUATION	SEARCH FOR FAILURE
The display does show figures when the up or down motor operates the figure fail to change in accordance with the change of machine's dimension.	1. The distance between the induction unit and induction sheet isn't more or less than 1mm. 2. lf ENCODER is used, check if ENCODER runs in accordance with the table move up or down. 3. Check If phae A.B is with the change of DC12V and 0v, please measure with Watt-hour meter.

HOW TO OBVIATING





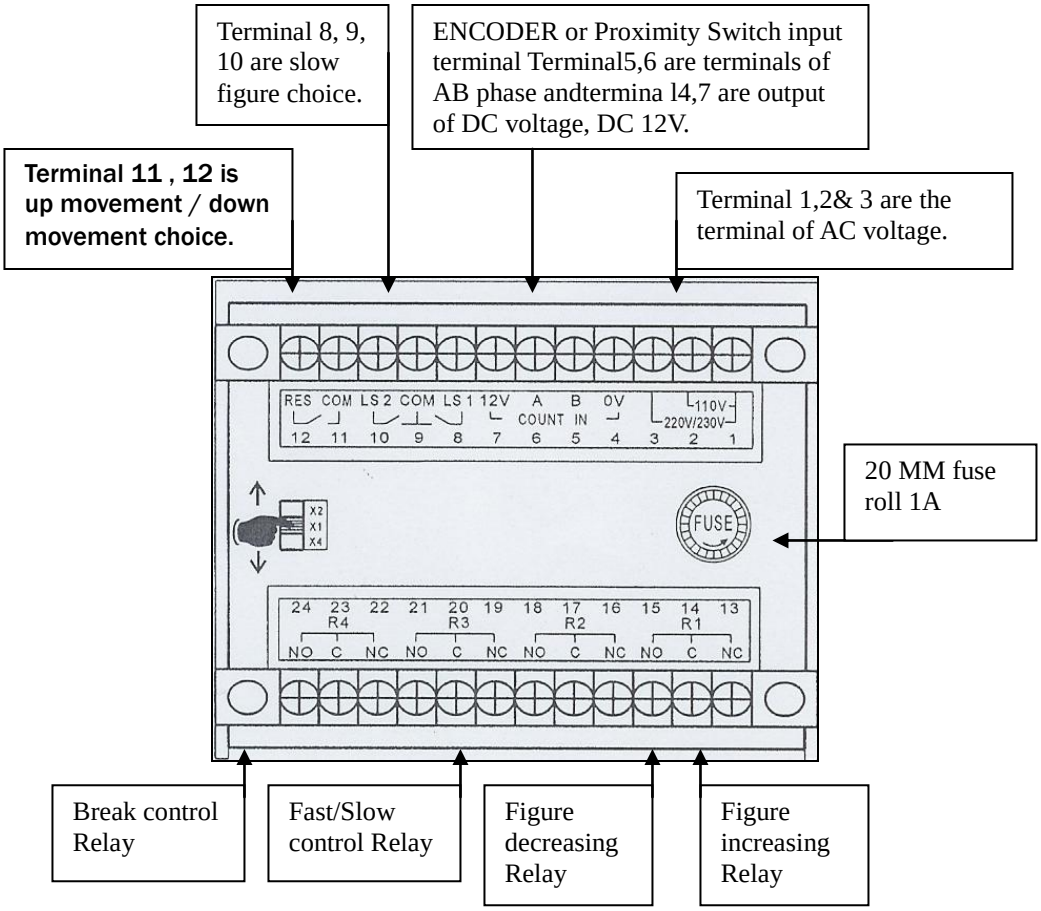
Check if ENCODER runs in accordance with the table move up or down or convey link’s screw has loose.



Check if phae A.B is with the change of DC12V and 0V, please measure with Watt-hour meter.

12. DESCRIPTION OF THE FUNCTION OF THE TERMINAL PLATE & RELAY

DIAGRAM 6：



1. Terminal 1, 2 & 3 are the input terminals of AC voltage. If the power is AC110V, please input through terminal 1 & 2. If the power is AC 220V / 230V, please input through terminal 1 & 3.
   PS：To avoid the controller being destroyed, please make sure to join to Correct position.

2. Terminal 4, 5, 6 & 7 are the input terminals of ENCODER or PROXIMITY SWITCH.
   Terminal 4 is the output terminal of DC 0V and terminal 7 is the output of DC 12V.Both of the set two output terminals supply voltage DC 12V for ENCODER & PROXIMITY SWITCH.

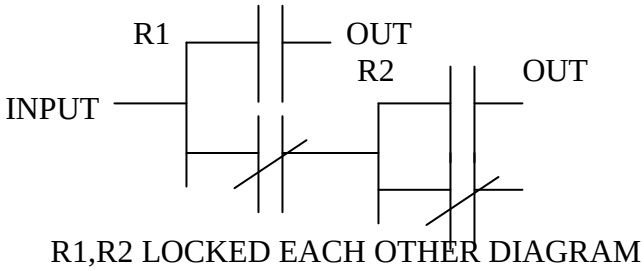
3. Terminal 8, 9, 10 ==>LS1, Ls2 & COM are slow distance. This controller slow distance is 1MM.
   Terminal 8 & 9 (LS1,COM) are short circuit, the slow figure is 5MM.
   Terminal 9 & 10 (COM,LS2) are short circuit, the slow figure is 15MM.
   Terminal 8, 9, 10 (LS1,LS2.COM) are short circuit, the slow figure is 30MM.
   PS：THIS FUNCTION IS DEPEND ON THE MACHINE CHARACTER USE OR NOT.

4. This controller can choice up movement or down movement.
   The original controller is movement.
   The down movement is terminal 11(COM) & terminal 12(RES) are short circuit.
   PS：THIS FUNCTION IS DEPEND ON THE MACHINE CHARACTER.

5. R1 (terminal 13, 14 & 15) is the junction of figure increasing control relay. It can be made by connecting in parallel terminal 14 & 15 to the control switch of mechanical figure increasing.
   PS：R1 & R2 must be locked each other.

6. R2 (terminal 16, 17 & 18) is the junction of figure decreasing control relay. It can be made by connecting in parallel terminal 17 & 18 to control switch of mechanical figure decreasing.
   PS：R1 & R2 must be locked each other.

Reference Diagram：



R1,R2 LOCKED EACH OTHER DIAGRAM

WARNING：

In order not to cause any danger by the wrong dimension of machinery operation, except electricians, it's prohibited to operate or make any change.

SECTION 5：SET UP

About this Section

The purpose of this section is to guide you through the required steps to get your machine out of its packaging and into operating condition.

WARNING：

This machine presents serious injury hazards to untrained users. Read through this entire manual to become familiar with the controls and operations before starting the machine!

WARNING：

Wear safety glasses during the entire setup process!

Unpacking

The Model HP-400P is shipped from the manufacturer in a carefully built crate. If you discover the machine is damaged after you have signed for delivery, please immediately call Customer Service at (886) 4-26201608 for advice.

Save the containers and all packing materials for possible inspection by the carrier or its agent. Otherwise, filing a freight claim can be difficult.

When you are completely satisfied with the condition of your shipment, you should inventory its parts.

Piece Inventory

After all the parts have been removed from the crate, you should have：

- Band resaw Machine
- Bandsaw Blade Master C 180" x 1"
- Tool Box
- Combination Wrench Set
- Hex Wrench Set
- Instruction Manual

In the event that any non-proprietary parts are missing, we would be glad to replace them, or for the sake of expediency, replacements can be obtained at your local hardware store.

Clean Up

The unpainted surfaces are coated with a waxy oil to protect them from corrosion during shipment. Remove this protective coating with a solvent cleaner or citrus-based degreaser such as the degreaser. To clean thoroughly, some parts may need to be removed. For optimum performance from your machine, make sure you clean all moving parts or sliding contact surfaces that are coated. Avoid chlorine- based solvents as they may damage painted surfaces should they come in contact. Always follow the manufacturer's instructions when using any type of cleaning product.

WARNING：

Gasoline and petroleum products have low flash points and could cause an explosion or fire if used to clean machinery. Do not use gasoline or petroleum products to clean the machinery.

WARNING：

Smoking near solvents could ignite an explosion or fire and cause serious injury. Do not smoke while using solvents.

CAUTION：

Many of the solvents commonly used to clean machinery can be toxic when inhaled or ingested. Lack of ventilation while using these solvents could cause serious personal health risks or fire. Take precautions from this hazard by only using cleaning solvents in a well ventilated area.

Site Considerations

1. Floor Load：
The Model HP-400P represents a large weight load in a large footprint. Most commercial floors are suitable for your machine. Some residential floors may require additional build up to support both the machine and operator.

2. Working Clearances：
Consider existing and anticipated needs, size of material to be processed through each machine, and space for auxiliary stands, work tables or other machinery when establishing a location for your machine.

3. Lighting and Outlets：
Lighting should be bright enough to eliminate shadow and prevent eye strain. Electrical circuits should be dedicated or large enough to handle amperage requirements. Outlets should be located near each machine so power or extension cords are clear of high-traffic areas. Observe local electrical codes for proper installation of new lighting, outlets, or circuits.

CAUTION：

Unsupervised children and visitors inside your shop could cause serious personal injury to themselves. Lock all entrances to the shop when you are away and Do not allow unsupervised children or visitors in your shop at any time.

Removing Resaw from Iron Pallet

WARNING：

The Model HP-400P is a heavy machine that weighs approximately 1350 kgs. Serious personal injury may occur if safe moving methods are not followed. To be safe, you will need assistance and power equipment when moving the shipping crate and removing the machine from the iron pallet.

To remove the resaw from the iron pallet：

1. Remove the lag bolts from the stand feet that secure the resaw to the iron pallet.
2. Using a wrench, remove the pressure gauge that is located on top of the hydraulic reservoir.
   Note—This step is optional, but highly recommended to avoid damaging the pressure gauge. If you do this step, plug the hydraulic port to keep contamination out.
3. Using a forklift, lift the resaw from the frame location, and move it to your predetermined location.
4. After placing the resaw, make sure that you replace the hydraulic pressure gauge before continuing to the next step.

Mounting Resaw to the Floor

Although not required, we recommend that you mount your new resaw machine to the floor. Because this is an optional step and floor materials may vary, floor mounting hardware is not included.
Note—The instructions below are given for a typical heavy-duty shop floor made of 6" thick concrete. Also, anchor studs may be substituted for lag bolts, but are more difficult to deal with if you decide to move your machine at a later point.

To mount the resaw machine to the floor：

1. For these steps you will need：
   - Hammer drill
   - A 1/2" punch
   - A 1/2" hammer drill bit that is at least 6" long
   - Twelve (12) 5/16" x 3" lag shields
   - Twelve (12) 5/16" x 4" lag bolts
   - Twelve (12) 5/16" extra-wide flat washers
2. Put on safety glasses and a dust mask before starting!
3. Use the mounting holes in the resaw stand feet to act as a guide for drilling into your floor, and drill approximately 3 1/2" deep into the concrete floor.
4. Using compressed air and a vacuum hose, blow out and suck the concrete dust from the newly drilled holes.
5. Pound the lag shields into the concrete. Use the punch to pound the lag shields below the stand feet and flush with the surface of the concrete.
6. Secure the resaw to the floor with the 5/16" lag bolts and washers.

Installing Blade

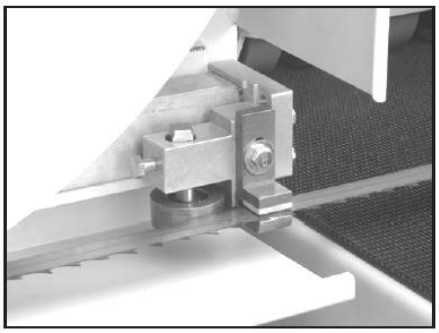
WARNING：

These instructions present a serious injury hazard if done while machine is connected to power. Do not connect to power until instructed.

Blade installation can be done by one person but is easiest if done with two people.

To install the blade：

1. Put on safety glasses and heavy leather gloves.
2. Open the wheel cover to gain access to the wheels.
3. Hold the blade from each side, and position it in front of the wheels so the blade teeth are facing the front of the machine.
4. Carefully fit the blade over each wheel, and position it between the blade guides. Make sure the teeth point toward the right-hand side of the machine, as you are facing the front.



Blade positioned between blade guides.

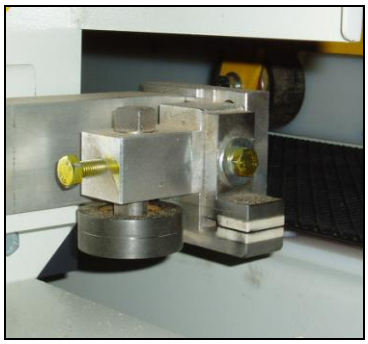
Blade positioned on wheel.

5. Position the blade on the wheels so that the tooth gullet is approximately 1/16" over the edge of the wheel.

Adjusting Blade Guides

Each blade guide assembly consists of Guide Blocks and a Support Bearing.

The blade guides keep the blade stable during operation, so make sure they are properly adjusted before starting the bandsaw.



WARNING：

These instructions present a serious injury hazard if done while machine is connected to power. Do not connect to power until instructed.

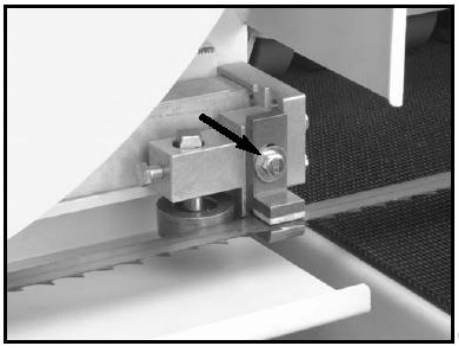
Guide Blocks

The guide blocks consist of an upper and lower ceramic block that stabilize the blade from up/down movement during operation.

The lower block is designed to remain in a fixed position, and the upper block is designed to be adjusted during each blade change. When the machine is new, the lower block is set at the factory and should not need to be adjusted. The upper block, however, should be adjusted every time you install a new blade or re-install an old blade.

To adjust the upper guide block：

1. Loosen the guide block adjustment.



Guide block adjustment bolt.

2. Slide the upper guide block up, place a dollar bill underneath the upper guide block, then let the upper guide block slide down to sandwich the dollar between the blade and the upper guide block.


Dollar bill upper guide block and blade.

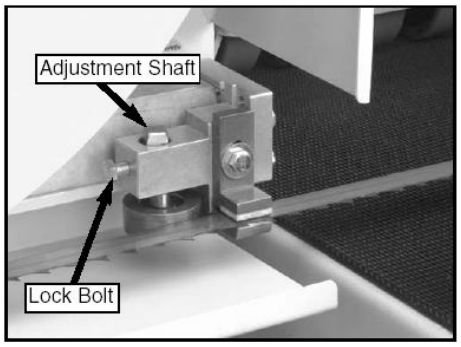
3. Keep the dollar bill in place and tighten the upper guide block.

4. Remove the dollar bill.

5. Repeat steps 1-4 with the blade guide on the other side of the conveyor.

Support Bearing

The support bearing is positioned behind the blade to brace it from pushing backwards during a cut. Please see below, the support bearing components to clarify the adjustment instruction.



Support bearing components.

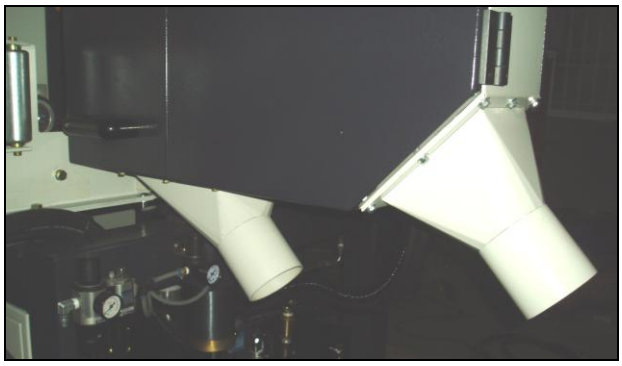
To adjust the Support Bearings：

1. Loosen the lock bolt approximately 1/4 turn.
   Note—If you loosen the lock bolt too much, the support bearing will fall out of place.
2. Turn the adjustment shaft until the support bearing is positioned approximately 0.016" behind the back of the blade. Use a feeler gauge or four thicknesses of a dollar bill to check this.
3. Tighten the lock bolt, and repeat with the other support bearing.
4. Test the adjustment of the support bearings by spinning the wheels by hand, at full blade tension, in the same direction of operation. While you are spinning the wheels, the support bearings should not turn. (The support bearings should only turn during cutting operations.)

Connecting to Dust Collector

To be effective, the dust collection system that you connect to the resaw must be able draw at least 1000 CFM at the point where you connect your hose to the machine.
Note—This number is an approximation and has been provided for estimation purposes only.

To connect the resaw to a dust collector：
Attach a 4" dust hose to the dust port as shown in below, and be sure to tighten the hose clamp to ensure a snug fit.



Connecting to Power Source

If you have performed all of the previous setup instructions, you are ready to connect the resaw to the power source.

To connect the resaw to the power source：

1. Read through Section 3：Circuit Requirements to double-check that your setup follows the safety and circuit requirements, and that the power cord you have chosen meets the minimum requirements for this machine.
2. Open the electrical panel on the machine.
3. Connect the cord to the machine circuit breaker terminals.
4. Close and latch the electrical panel on the machine.
5. Shut off the main power at the circuit breaker and install the cord to the disconnect switch.

Test Run

WARNING：

Before starting the resaw, make sure you have performed the preceding assembly and adjustment instructions, and you have read through the rest of the manual and are familiar with the various functions and safety issues associated with this machine. Failure to follow this warning could result in serious personal injury or even death.

To test run the resaw：

1. Make sure the wheel cover is closed and all tools or other objects are cleared away from the resaw.
2. Put on safety glasses and make sure any bystanders are also wearing safety glasses.
3. Turn the POWER ON switch clockwise.
4. Press the UP and DOWN buttons to make sure the resaw head moves in the proper direction.
   －If the resaw head moves in the opposite direction as the buttons state, then the power needs to be disconnected and the power wires need to be switched at the circuit breaker in the electrical box.
5. Once you have performed steps 1-4 and everything is okay with the machine and set up, press the MOTOR START button. As you are standing in front of the machine, make sure that the blade is moving from left to right.
6. Press the conveyor lever forward to test the conveyor belt. If the conveyor belt does not turn after pushing the conveyor lever forward, adjust the conveyor speed knob.
   －If any problems occur, press the EMG STOP button. Investigate and correct the problem before operating the machine further. If you need help, refer to the troubleshooting section in the back of this manual.

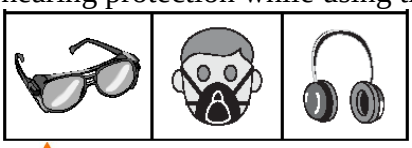
SECTION 6：OPERATIONS

Operation Safety

Your safety is important! Please follow the warnings below：

WARNING：

Damage to your eyes, lungs, and ears could result from failure to wear safety glasses, a dust mask, and hearing protection while using this machine.



WARNING：

Loose hair and clothing could get caught in machinery and cause serious personal injury. Keep loose clothing rolled up and long hair tied up and away from moving machinery.

NOTICE：
The following section was designed to give instructions on the basic operations of this machine. However, it is in no way comprehensive of all of the machine's applications.

Stock Preparation

The Model HP-400P is capable of resawing rough cut lumber or slicing boards as thin as 1/16" with a high degree of precision.

Always make sure that any stock you plan on cutting is clean and free of nails, staples, or embedded stones. Also, keep in mind that precision cuts require a much greater preparation process than do rough cuts.

To prepare the stock for a precision cut：

1. Surface Plane on a Jointer—
   The concave face of the workpiece should be planed flat on a jointer.
2. Surface Plane on a Thickness Planer—
   The opposite face of the workpiece should be planed flat with a thickness planer.
3. Edge Joint on a Jointer—
   The concave edge (viewed from end-to-end) of the workpiece should be edge jointed flat on a jointer. This flat edge will glide along the fence rollers during the resaw operation.

Resawing

To perform a resawing operation：

1. Make sure the blade is installed and tensioned correctly.

2. Make sure the blade is tracking correctly. See “Adjusting Blade Guides”.

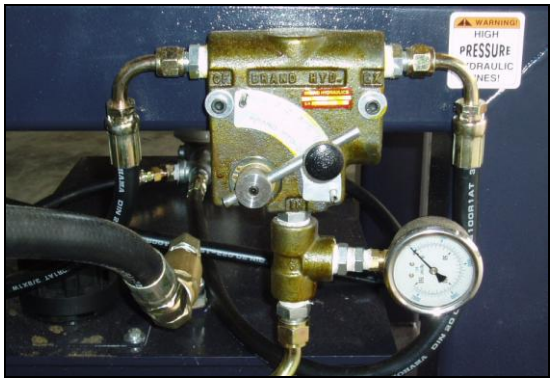
3. Turn the control panel POWER ON switch clockwise to supply power to the machine.

4. Set the blade height through the control panel.

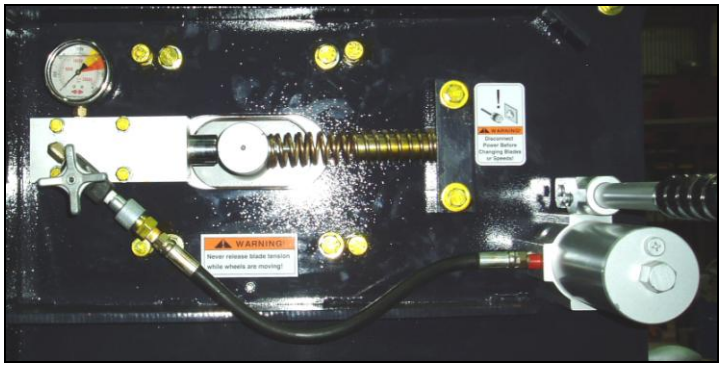
   Note—The accuracy of the blade height shown on the digital display can only be assured if the calibration process has been performed.

5. Press the MOTOR START button to start the bandsaw blade.

6. Push the infeed conveyor engagement lever forward to start the infeed conveyor. Turn the infeed conveyor speed dial counter-clockwise to increase the speed and clockwise to decrease the speed.



7. Double check the blade tension.

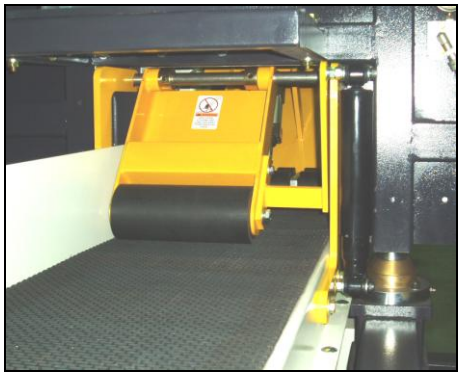


8. The workpiece should be prepared on a jointer and a thickness planer as described in the previous subsection.

9. Begin feeding the workpiece under the front pressure rollers with the jointed edge against the guide rollers.

10. Receive the workpiece on the outfeed side of the machine.

Note—If a second person is receiving the workpieces, use the return conveyor to send them back to the person on the infeed side.



Blade Information

Blade choices are limited due to the specialized nature of the Model HP-400P. The only variables when selecting a blade are the type of cutting tooth and the number of teeth-per-inch (Tooth Pitch).

Blade Tooth Type

Carbon Steel—The least expensive type, carbon steel blades are adequate for most cutting applications; however, they dull quickly and for economical reasons they are usually replaced rather than resharpened.

Carbide-Tipped—The most expensive type, carbide- tipped blades are designed for continuous use in production shop situations. They hold a sharp edge longer than carbon steel and they can be resharpened many times before needing to be replaced.

Blade Length and Width

The required blade length for the Model HP-400P is 180"x1".

Blade Care

A bandsaw blade is a delicate piece of steel that is subjected to tremendous strain. You can obtain longer use from a bandsaw blade if you give it fair treatment and always use the appropriate feed rate for your operation.

A clean blade will perform much better than a dirty blade. A dirty blade passes through the cutting material with much more resistance than a clean blade. This extra resistance will also cause unnecessary heat. Maintain your blades with a cutting blade lubricant.

Blade Breakage

Blade breakage is unavoidable, in some cases, since it is the natural result of the peculiar stresses placed on bandsaw blades. Blade breakage is also due to avoidable circumstances. Avoidable breakage is most often the result of poor care or judgment on the part of the operator when mounting or adjusting the blade or support guides.

The most common causes of blade breakage are：

- Faulty alignment or adjustment of the guides.
- Using a blade with a lumpy or improperly finished braze or weld.
- Feeding the workpiece too fast.
- Tooth dullness or absence of sufficient set.
- Excessive or too little blade tension.
- Running the bandsaw excessively when not resawing.
- Not releasing blade tension after use.

SECTION 7：MAINTENANCE

WARNING：

Always disconnect power to the machine before performing maintenance. Failure to do this may result in serious personal injury.

Cleaning

Inside Wheel Cover

To keep the bandsaw working properly, regularly open the wheel cover and vacuum any sawdust from the machine that did not make it into the dust collector.

Conveyor Belts

Use compressed air to clean the built-up sawdust from the conveyor belts. Eye injuries frequently occur when cleaning with compressed air—wear safety glasses to protect you. Also wear a dust mask or respirator to protect your lungs from airborne dust particles.

Hydraulic Elevation Rams

Use a dry rag to remove sawdust from the hydraulic elevation rams, and then wipe the rams down with a light coat of hydraulic fluid.

Painted Surfaces

These areas may be cleaned with a dry or damp rag; however, make sure you Do not clean bare metal surfaces with a damp rag or they may rust.

Miscellaneous

Always be aware of the condition of your machine. Routinely check the condition of the following items and repair or replace as necessary：

- Loose mounting bolts
- Worn switch
- Worn or damaged blade
- Worn or damaged support bearings or guide bearings

V-Belts

To ensure optimum power transmission from the motor to the blade and to the hydraulic pump, the V-belts must be in good condition (free from cracks, fraying and wear) and operate under proper tension. Check the V-belts at least every 3 months；more often if the bandsaw is used daily.

Bearings

Sealed and pre-lubricated ball bearings require no lubrication for the life of the bearings. All bearings are standard sizes, and replacements can be purchased from our parts department or bearing supply store.

Greasing

The photos on this page label the grease fittings by number for easy identification. Wipe clean and lubricate the grease fittings with two pumps of high temp bearing grease. The proper greasing intervals are indicated by white boxes on the chart below.

Note—This page was designed to be copied and used as a check-off chart to help maintain a regular lubrication schedule.

□ Check white boxes after lubricating fittings. Date Started：

HP-400 GREASE SCHEDULE/CHECK-OFF CHART							
MACHINE AREA	FITTINGS	HOURS OF USE					
		160	320	480	640	800	960
Main Wheels	4, 9	■	■		■	■	
Blade Tension Device	2, 3, 17	■	■		■	■	
Main Conveyor	6, 11, 14						
Return Conveyor	7, 12, 13						
Lifting Posts	10, 16	■	■	■	■	■	
Pressure Rollers	8, 15	■	■	■	■	■	
Wheel Cover Bearings	1, 5	■	■	■	■	■	

Note — 160 hours is the equivalent of 1 month of regular use.

Hydraulic Fluid Schedule

Check the hydraulic fluid level daily.

The hydraulic system controls the movement of the conveyor belts. In order for this system to function properly and operate at the correct temperature, the hydraulic fluid level in the tank should be 2/3 full between the fill lines on the fluid sight window, which is located on the front of the tank.

Note—The 2/3 level is approximately the same as the 60℃ mark on the sight window thermometer.
To add hydraulic fluid, remove the breather cap shown . Use an ISO VG 10— Antiwear 10 Hydraulic Fluid or equivalent.

Hydraulic reservoir components.

Inspect and clean the breather cap and filler screen every 40 hours of regular use.

The breather cap is vented to allow the hydraulic system to breathe during operation. Below the breather cap is a plastic filler screen.

Visually inspect both the breather cap and the plastic filler screen. If there is visual contamination, clean both items with solvent and compressed air. Allow them to completely dry before installing back in place.

Hydraulic System Minor Service

The hydraulic system minor service consists of changing the fluid filter, cleaning the breather cap and filler screen, and inspecting the hydraulic fluid for signs of thermal breakdown, dust contamination and water contamination.

Perform a “Minor Service” every 960 hours or every 6 months of regular use.

WARNING：

The hydraulic system on this machine creates very high pressure and the hydraulic fluid gets hot. Always stop the resaw, open the conveyor speed valves, make sure the pressure gauge reads 0 psi, and make sure the fluid cools down before removing any lines or servicing the hydraulic system.

To change the filter：

1. Read the hydraulic safety instructions on page 6 before continuing.
2. Disconnect the two hydraulic lines that are over the filter cap and remove the pipe fitting so there is clear access directly over the filter cap.
3. Remove the filter cap by completely removing the three bolts that secure it in place.
4. Set aside the filter cap spring and O-ring, so that they do not fall into the tank when you remove the filter.
5. Lift the filter assembly out of the tank.

6. Separate the filter from the filter housing by pulling them apart.
   Note—If you only removed a bare filter, then the housing is still mounted in the tank. Remove it for cleaning.
7. Remove the O-ring from the shoulder of the filter housing and clean the filter housing in a solvent tank.
   Note—Do not gets solvent on O-rings or they will be damaged.
8. Dry the filter housing to remove any excess solvent and replace the O-ring.
9. Rub clean hydraulic fluid on the O-ring that is mounted on the bottom of the new filter and insert the new filter into the filter housing.
10. Rub clean hydraulic fluid on the O-ring that is on the filter housing shoulder and drop the entire filter housing in the tank in the same position as it was removed (shoulder side up).
11. Replace the filter cap spring and O-ring, and start the filter cap bolts by threading them into their holes two or three turns.
12. Place the filter cap on the spring so the prongs fit in the center of the spring, and push down and twist the cap into place.
13. Tighten the filter cap bolts in an even manner, replace the fitting, and reconnect the hydraulic lines.

To inspect the hydraulic fluid：

1. Look at the color of the hydraulic fluid in the sight window.
   —If the fluid is milky in appearance, then the hydraulic fluid is contaminated with water.
   —If the fluid is dark brown or opaque, then the hydraulic fluid is severing contaminated.
2. Smell the hydraulic fluid (remove breather cap).
   —If the fluid smells rancid or burnt, then thermal breakdown has most likely occurred.

Inspection Results

If you determine that your hydraulic fluid is contaminated or has experienced thermal breakdown, then you should perform a major service.

Hydraulic System Major Service

The hydraulic system major service consists of performing a complete “Minor Service,” draining the old hydraulic fluid, cleaning the tank screen, cleaning the tank, and filling the tank with new fluid.

WARNING：

The hydraulic system on this machine creates very high pressure and the hydraulic fluid gets hot. Always stop the resaw, open the conveyor speed valves, make sure the pressure gauge reads 0 psi, and make sure the fluid cools down before removing any lines or servicing the hydraulic system.

The hydraulic tank, when filled correctly at the sight window, holds approximately 13.5 gallons of hydraulic fluid. Before draining the hydraulic fluid, make sure you have a drain pan that will hold that much fluid or make sure that you are prepared to drain the tank, plug the tank, empty your drain pan, drain the tank, and so forth.

To drain the hydraulic fluid：

1. Read the hydraulic safety instructions on page 6 before continuing.
2. With your drain pan in place, remove the drain plug.
3. Replace the drain plug after the hydraulic tank is completely drained.

To clean the tank screen：

1. Remove the access plate on top of the hydraulic tank.
2. Remove the tank screen, clean it with solvent and compressed air, and allow it to dry.
3. Re-install the tank screen after you clean the bottom of the tank.

To clean the bottom of the tank：

1. Use a lint free rag to wipe up and remove the sludge from the bottom of the tank.
2. Use clean hydraulic fluid on a clean rag to clean additional contaminants from bottom and sides of the tank.

To fill the tank with new fluid：

1. Make sure that you have re-installed the tank screen, that the drain plug is tight, and that you have replaced the access plate on top of the tank.
2. Using an ISO VG 10—Antiwear 10 Hydraulic Fluid, fill the tank until the sight window is 2/3 full or the fluid level is at the 60℃ mark on the sight window thermometer.
   Note—This will take approximately 13.5 gallons.

Maintenance Log

Date	Approximate Hours Of Use	Maintenance Performed

SECTION 8：SERVICE ADJUSTMENTS

WARNING：

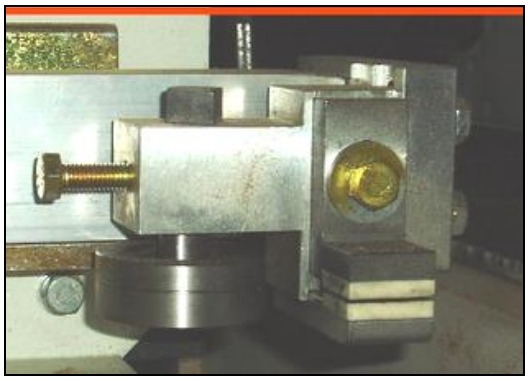
Always disconnect power to the machine before performing service adjustments. Failure to do this may result in serious personal injury.

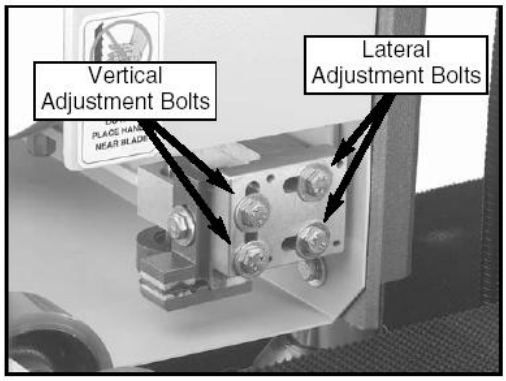
Adjusting Lower Blade Guides

The instructions on adjusting the upper guide blocks and support bearing are given in Section 5：Set Up. This section focuses on adjusting the lower blade guides, which is a non-routine adjustment that would typically be done before the upper blade guide and support bearing would be adjusted.

To adjust the lower blade guides：

1. Disconnect the resaw from the power source.
2. Open the wheel cover for easy access to the blade guide assemblies.
3. Make sure the blade is tensioned in the same manner that will be used for operation.
4. Loosen the lateral adjustment bolts.





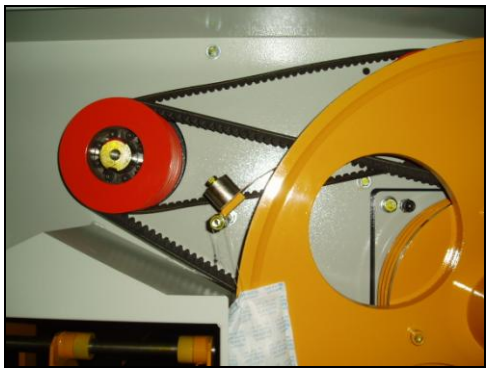
5. Adjust the assembly so the blade guides are approximately 1/16" behind the gullets of the blade teeth, and tighten the lateral bolts.
6. Loosen the vertical adjustment bolts.
7. Adjust the lower blade guide so it barely touches the bottom of the blade, and then tighten the vertical adjustment bolts.
8. Repeat steps 4-5 on the other blade guide.
9. Adjust the upper guide blocks and the support bearings.
10. Close the wheel cover.

Adjusting V-Belt Tension

Properly tensioned V-belts help the Model HP-400P operate at its best. However, adjusting the V-belts is not an exact science and does require personal judgement. Adjusting the belts too loose will decrease the performance of the machine and adjusting the belts too tight may cause premature wear of the bearings and other components attached to the belts.

On the Model HP-400P there is a triple-drive V-belt system that connects the motor to the wheel pulley and a single-drive V-belt system that connects the wheel pulley to the hydraulic pump.

On both systems, the belts should deflect no more than 1/2" and not less than 1/4" when pressing between the pulleys with your index finger.



To adjust the V-belt tension for the saw wheels：

1. Disconnect the resaw from the power source.

2. To tension the three V-belts that connect the motor to the wheel pulley, adjust the tension by moving the motor mount nuts up or down until the belts are in the proper deflection range.

   Note—The belts tighten when you move the motor mount up.

To adjust the tension for the hydraulic pump V-belt：

1. Remove the small pulley cover from the pump seat.

2. Adjust the belt tension by loosening the cap screws.

3. Rotate the pump seat up or down until the belt has the proper deflection.

4. Tighten the cap screws to lock the pump seat in place.

5. Re-install the pulley covers.

Replacing V-Belts

If the belts deteriorate or break, they will need to be replaced. When replacing one of the belts that connect the motor to the wheel pulley, you should replace all three at the same time to ensure optimum performance.

To replace the belts that connects the motor to the wheel pulley：

1. Disconnect the resaw from the power source!
2. Read the previous subsection titled “Adjusting V-Belt Tension” to become familiar with the V-belt tension controls.
3. Remove the large pulley guard.
4. Adjust the motor mount nuts down as far as they will go.
5. Remove the hydraulic pump V-belt from the wheel pulley by loosening the oil seat cap screws and pivoting the pump seat up.
6. Remove and replace all three V-belts that connect the motor to the wheel pulley.
7. Re-install and tension the hydraulic pump belt on the wheel pulley.
8. Tension the newly installed V-belts and replace the belt cover.

To replace the V-belt that connects the hydraulic pump to the wheel pulley：

1. Disconnect the resaw from the power source.
2. Remove the large pulley guard that covers the wheel pulley.
3. Remove the small pulley guard that covers the hydraulic pump pulley.
4. Loosen the pump seat cap screws and pivot the pump seat up to release the belt tension.
5. Remove the two cap screws that secure the pulley bracket to the pump seat.
6. Remove the pulley bracket w/assembly to split the connector and make it possible to remove the belt from the hydraulic pump pulley.
7. Remove the old V-belt and replace with a new V-belt.
8. Inspect the rubber seal that was between the connector pieces.
   —If the rubber seal is pliable and smooth, use it again.
   —If the rubber seal is dry and cracked, replace it.
9. Re-assemble the pulley bracket and tension the new V-belt.
10. Replace both pulley guards.

Adjusting Main Conveyor Table

The main conveyor table can be adjusted left-to right and front-to-back to make the table parallel to the blade in both directions. This is an involved procedure that requires you to cut up a piece of test stock and make many repeat adjustments.

Because of the complexity of this procedure, we will first give instructions on checking the table, so that you can be sure you need to perform the adjustment.

Before attempting these instructions, you need to have a perfectly squared up piece of stock that is as wide as possible and is at least two feet long. The wider the stock, the more accurate your procedure will be (we recommend using the maximum width that the resaw will allow). Also, you need to make sure that your blade is in good condition, the blade is tracked/tensioned properly and the blade guides are properly adjusted.

To check the main conveyor table alignment：

1. Cut a 1/4" slice off of your squared-up test stock.
2. Using a dial caliper, measure the thickness of the cut piece at all four corners and in even locations along the edges of the stock. As you take these measurements, write them directly on the stock, near the location where you took the measurement.
3. Study the written measurements on your test piece.
   Note—DO NOT place too much importance on the first and last six inches of the board, because the board will only have been under one pressure roller during that part of the cut.
   *If the measurements are more than 0.030" different from one side to the other, you will need to adjust the conveyor table.

To adjust the conveyor table：

1. Disconnect the resaw from the power source.
2. Use your test board to determine which direction the conveyor table needs to be moved. For example, if the right side of the board was thicker than the left side—you will need to move either the right side of the conveyor up or move the left side of the conveyor down.
3. Adjust the four adjustment bolts that control the conveyor table height as determined from step 5.
   Note—For adjustment bolt locations see the adjustment bolt.

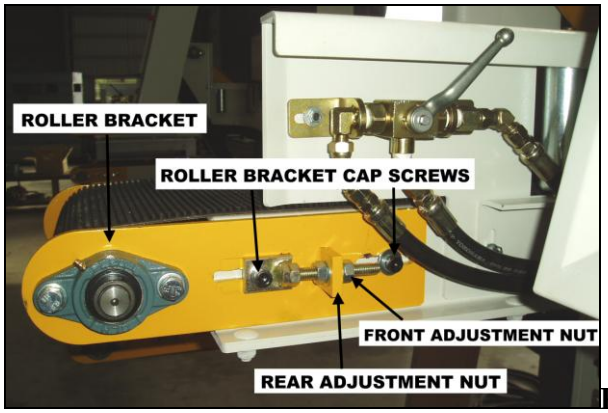
4. Tighten the lock nuts on the adjustment bolts, connect the resaw to the power, and repeat steps 1-6 until the measurements on your cut piece are within 0.030".

Tracking Conveyors

"Tracking" the conveyor belts means balancing the way they ride on the end rollers. The conveyors are tracking correctly when they are centered between the roller brackets on each side of the conveyor. If the conveyor belts start rubbing against the roller brackets, then you need to track them as described.

To set the conveyor tracking：

1. Loosen the two roller bracket cap screws about 3/4 of a turn. Do this on the both sides of the conveyor.



Roller bracket cap screws and adjustment nuts.

2 Loosen the rear adjustment nuts away from the bracket plates on both sides of the conveyor.

3. Start the conveyor belt.

4. On the side that the belt tracks toward, turn the front adjustment nut counter-clockwise half of a turn, and watch the belt tracking.

   Note—The effect of the adjustment can sometimes take two minutes before the results are fully apparent.
   —If the tracking was not corrected by this adjustment, proceed to step 5. If the tracking was corrected, skip to step 6.

5. On the side that the belt tracks away from, turn the front adjustment nut clockwise half of a turn, and watch the belt tracking.

   Note—If the tracking was not corrected by this adjustment, repeat step 4.

6. When the conveyor belt is tracking in the center of the roller brackets, run the conveyor for at least two minutes to ensure that it will remain tracking correctly.

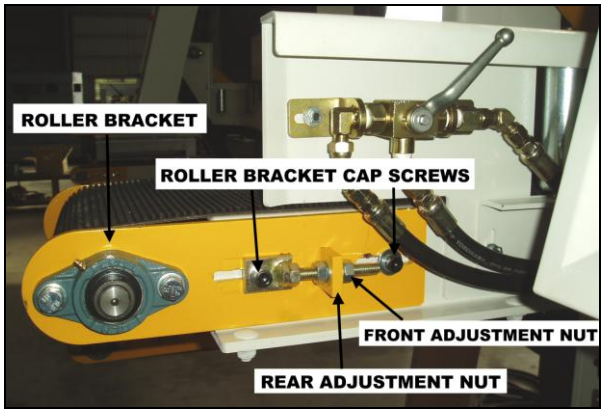
7. Tighten the rear adjustment nuts against the bracket plates, and then tighten the front adjustment nuts against the bracket plates to make sure that the tracking adjustment will not slowly change during normal operation.

Replacing Conveyors

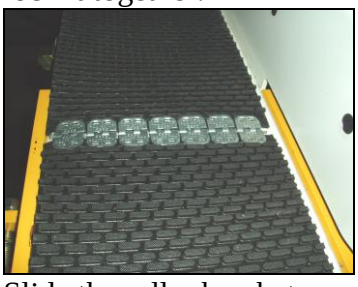
Although the conveyor belts have slight differences in size and access, the replacement instructions are the same.

To replace the conveyor belts：

1. Start the conveyor belt that you want to replace.
2. Stop the conveyor belt when the conveyor belt seam is accessible.
3. Disconnect the resaw from the power source!
4. Loosen the roller bracket by turning the roller bracket cap screws 3/4 of a turn.



5. Loosen the rear adjustment nuts away from the bracket plate.
6. Mark the front adjustment nut with a magic marker or a piece of tape, and thread the front adjustment nut ll the way up, while keeping track of the number of full turns that you moved the nut.
   Note—Write the number of turns down, so you do not forget. Remembering this number is an important part of the re-assembly process.
7. Slide the roller brackets toward the body of the resaw to loosen the belt.
8. Remove the stiff cable from the center of the seam to separate it.
9. Remove the old conveyor belt from the conveyor table, and replace the new conveyor belt in its place.
10. Mesh the seam “teeth” together on the new belt, and insert the stiff cable into the center of the seam to lock it together.



11. Slide the roller brackets away from the body of the resaw to tighten the belt.
12. Turn the front adjustment bolts the exact number of rotations that you turned them when you loosened them.
    Note—The new belt may be tighter than the old one because it has not been broken-in. If this is the case, deduct one or two turns from your original number of turns.

SECTION 9：OPTIONTAL

Mist coolant system

Use For Band saw blade lubricant

“**Mist coolant system** ” Concentrate is a synthetic fluid, compounded especially for spray mist applications as mentioned above. It is fortified with high-tech rust inhibitors for complete protection of parts and machines. Special biocide additives are used to prevent bacteria and odor due to tramp oil contaminants.

DIRECTIONS; Dilute from 50:1 to 20:1 with tap water, depending on application, machining severity, metal type, and desired finish. A good starting point is 4 oz. concentrate into one gallon of tap water, this equals 30:1 mixture.

At recommended dilutions this product meets criteria as a non-hazardous industrial chemical. Keep out of reach of children. Do not ingest or contact eyes. Under normal use and dilution, it is not irritating to skin. Product is non-flammable, biodegradable, and can generally be disposed of thru sewer in compliance with acceptable local, state and federal regulations. Proper disposal is the responsibility of the user. Seal container when not in use.

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind, express or implied, and we assume no responsibility for any loss, damage, or expense, direct or consequential, arising out of their use.

SECTION 10：REFERENCE INFO

The following pages contain aftermarket accessories information, the machine data sheet, parts diagrams, parts lists, wiring diagrams, troubleshooting information and Warranty/Return information for your Model HP-400P.

If you have any comments regarding this manual, please e-mail to bsm168@ms62.hinet.net.

We recommend you keep a copy of our current catalog for complete information. If you need additional technical information relating to this machine, or if you need general assistance or replacement parts, please contact the Service Department at the location listed below.

TAIWAN

Blue Steel Machinery Company
86-10, Shen Ching Road, Ching Shui, Taiwan 436
Tel：+886-4-2620-1608
Fax：+886-4-2620-0289
E-mail：bsm168@ms62.hinet.net
Website：www.highpointtools.com

Troubleshooting

Motor will not start.	1. Low voltage. 2. Open circuit in motor or loose connections.	1. Check power line for proper voltage. 2. Inspect all lead connections on motor for loose or open connections.
Motor will not start; fuses or circuit breakers blow.	1. Short circuit in line cord or plug. 2. Short circuit in motor or loose connections. 3. Circuit Overloaded	1. Repair or replace cord or plug for damaged insulation and shorted wires. 2. Repair or replace all connections on motor for loose or connections shorted terminals or worn insulation. 3. Reduce load on circuit.
Motor fails to develop full power (power output of motor decreases rapidly with decrease in voltage at motor terminals).	1. Power line overloaded with lights, appliances, and other motors. 2. Undersized wires or circuits too long. 3. General overloading of power company facilities.	1. Reduce load on power line. 2. Increase wire sizes or reduce length of wire. 3. Request a power check from the power company.
Motor overheats.	1. Motor overloaded. 2. Air circulation through the motor restricted.	1. Reduce load on motor. 2. Clean out motor to provide normal air circulation.
Motor stalls (resulting in blown fuses or tripped circuit)	1. Short circuit in motor or loose connections. 2. Low voltage. 3. Incorrect fuses or circuit breakers in power line. 4. Motor overloaded.	1. Repair or replace connections on motor for loose or shorted terminals or worn insulation. 2 Correct the low voltage conditions. 3. Install correct fuses or circuit breakers. 4. Reduce load on motor.
Machine slows when operating.	Applying too much pressure to workpiece.	Feed workpiece slower.
Blade does not run evenly on wheels.	1. Blade support bearings set incorrectly. 2. Wheels are not coplanar.	1. Adjust blade support bearings. 2. Call Our Service Department (562)630-1803 .
Blade does not cut evenly.	1. Blade is not properly tensioned. 2. Wheels are not coplanar. 3. Tooth set is uneven. 4. Teeth are sharper on one side than the other.	1. Adjust blade tension. 2. Call Our Service Department (562)630-1803 . 3. Replace blade. 4. Replace blade.
Blade slows when cutting. Blade makes a squealing noise, especially on start-up.	1. V-belt loose. 2. V-belt worn out.	1. Tighten V-belt. 2. Replace V-belt.
Ticking sound when the saw is running.	Weld contacting guide blocks or support bearing.	Use the Model G2516 Stone to smooth the blade weld.
Hydraulic pump is noisy or hydraulic system operates inefficiently.	1. Pump is restricted. 2. Filter is clogged. 3. Tank screen is clogged. 4. Damaged hydraulic pump or motor.	1. Inspect and clean breather cap and filler screen. 2. Perform minor service. 3. Perform major service. 4. Replace pump or motor.

WARRANTY AND RETURNS

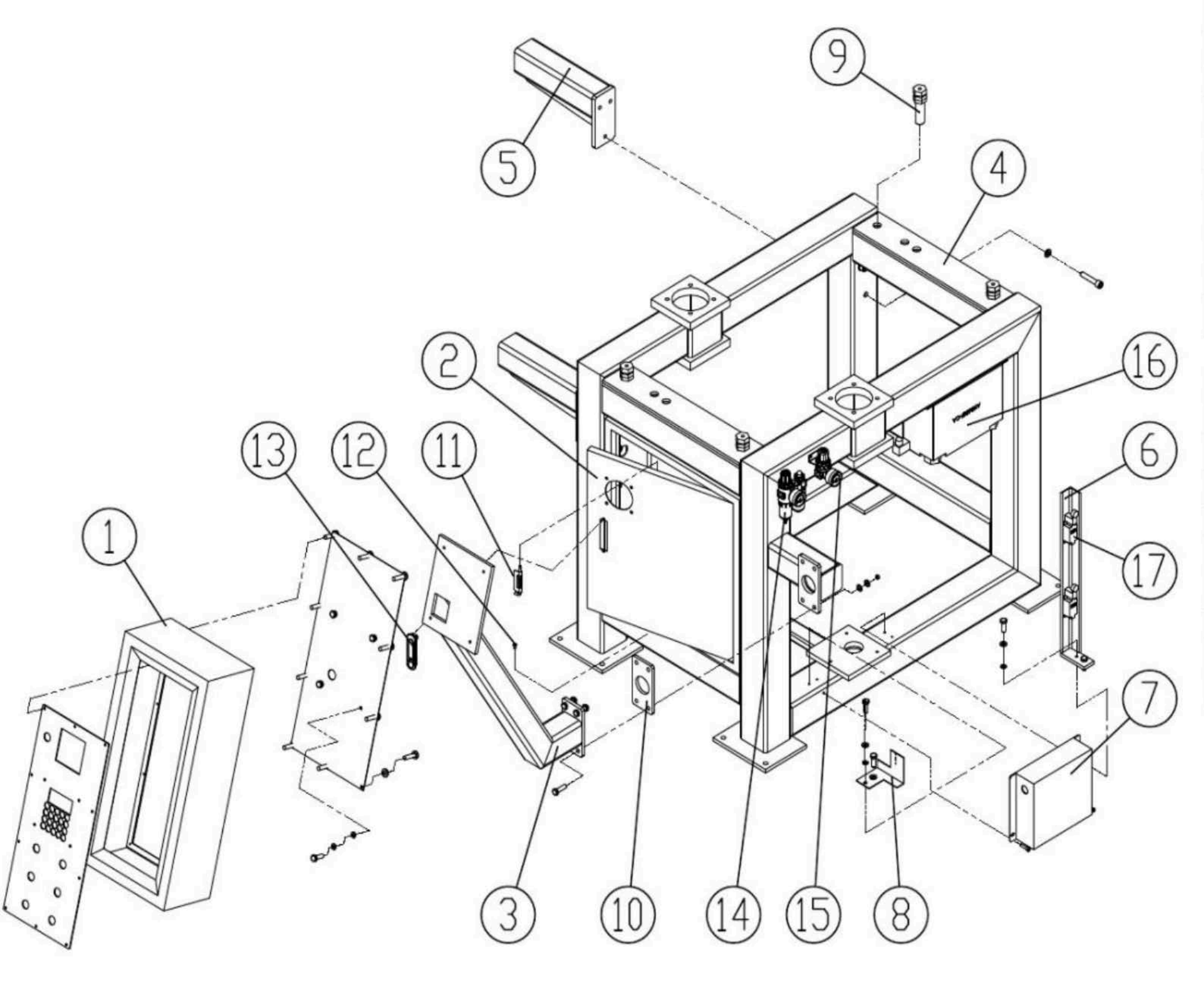
BLUE STEEL MACHINERY CO. warrants every product it sells for a period of 1 year to the original purchaser from the date of purchase. This warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence, accidents, repairs or alterations or lack of maintenance. This is BLUE STEEL's sole written warranty and any and all warranties that may be implied by law, including any merchantability or fitness, for any particular purpose, are hereby limited to the duration of this written warranty. We do not warrant or represent that the merchandise complies with the provisions of any law or acts unless the manufacturer so warrants.

We shall in no event be liable for death, injuries to persons or property or for incidental, and contingent, special, or consequential damages arising from the use of our products.
To take advantage of this warranty, contact us by mail or phone and give us all the details.
We will not accept any item back without this number. Proof of purchase must accompany the merchandise.
The manufacturers reserve the right to change specifications at any time because they constantly strive to achieve better quality equipment. We make every effort to ensure that our products meet high quality and durability standards and we hope you never need to use this warranty.

Thank you again for your business and continued support. We hope to serve you again soon.

MACHINE BODY

Index	Part's Number/Descriptions	Quantity
1	X-1128	1
2	X-1132	1
3	345T-1122	1
4	400-1001	1
5	400-1022	2
6	400-2007	1
7	400-2008	1
8	400-2012	1
9	400-6002	4
10	Rubber Packing	1
11	62#1 Spring Hinge	1
12	62-3 Base	1
13	A-210-2Key	1
14	MACP300-10A Pressure Regulator	1
15	SR200-08 Pressure Regulator	1
16	AH0608T-CA Air Cooler	1
17	ME-8104 Limit Switch	2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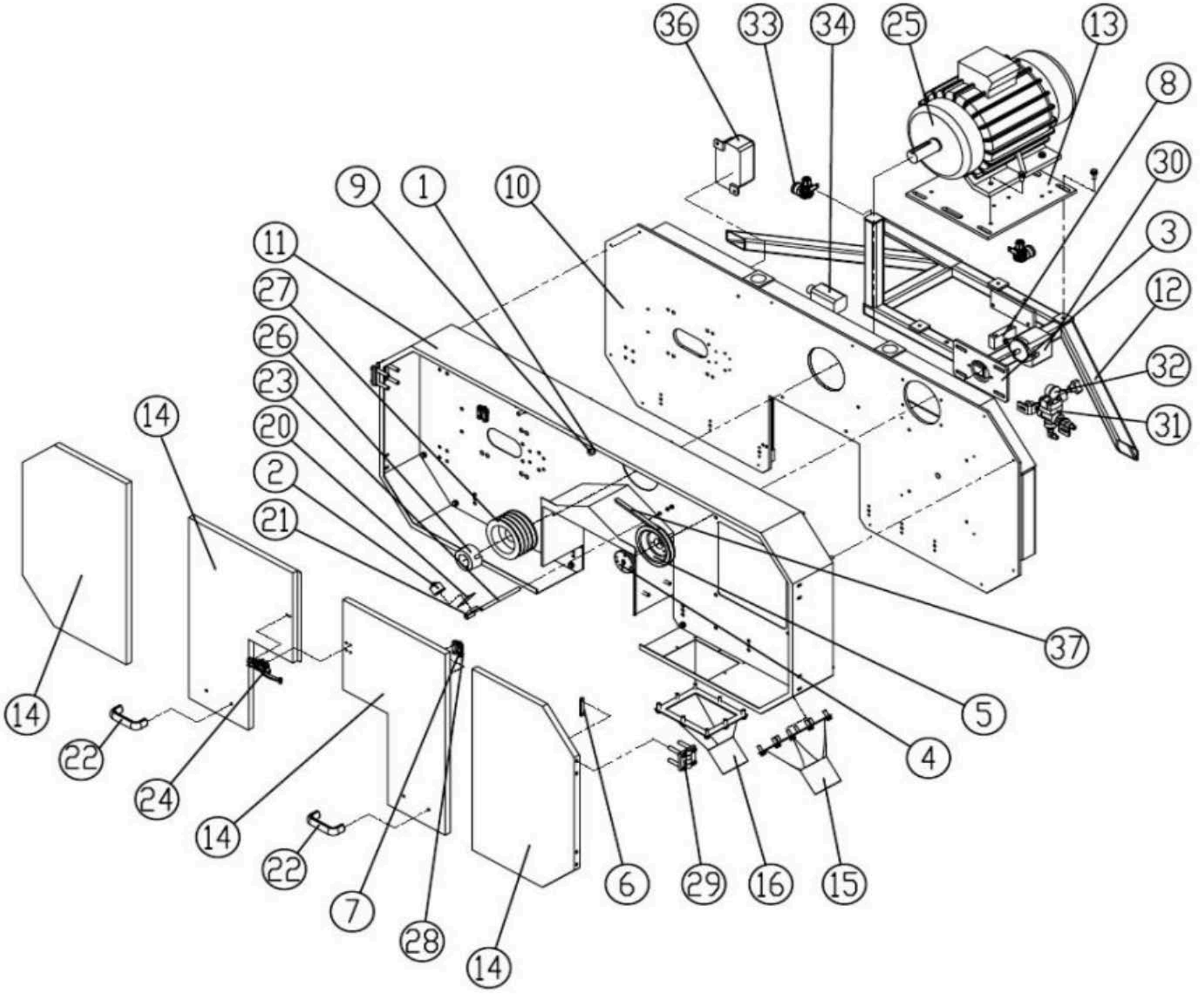
SAW WHEEL FRAME

Index	Part's Number/Descriptions	Quantity
1	11-2033	10
2	66-1036	2
3	150-1026	1
4	150-1048	1
5	150-1070	1
6	345T-1089	8
7	345T-1090	8
8	345T-1095	1
9	345T-1120	10
10	400-1020	1
11	400-1021	1
12	400-1025	1
13	400-1026	1
14	400-1027	1
15	400-1057	1
16	400-1058	1
20	400-4007	2
21	400-4009	2
22	AGS-140 Bakelite Handle	2
23	M12-180L Threaded Rod	2
24	GH-431 Door Handle	1
25	30HP-4P-180M Motor	1
26	BS-2517 ⌀48 Sleeve	1
27	SPB150-04 Pulley	1
28	DH-50 Door Button	4
29	DH-75 Door Button	4
30	HGP-3AF17L Hydraulic Pump	1
31	RV-04T Pressure Regulator	1
32	OG.3.3A.A.12M Gauge	1
33	SR200-08 Pressure Regulator	2
34	50*30ST Compact Hydraulic Cylinder	1
36	B11 Water Tank	1
37	BX53 Belt	1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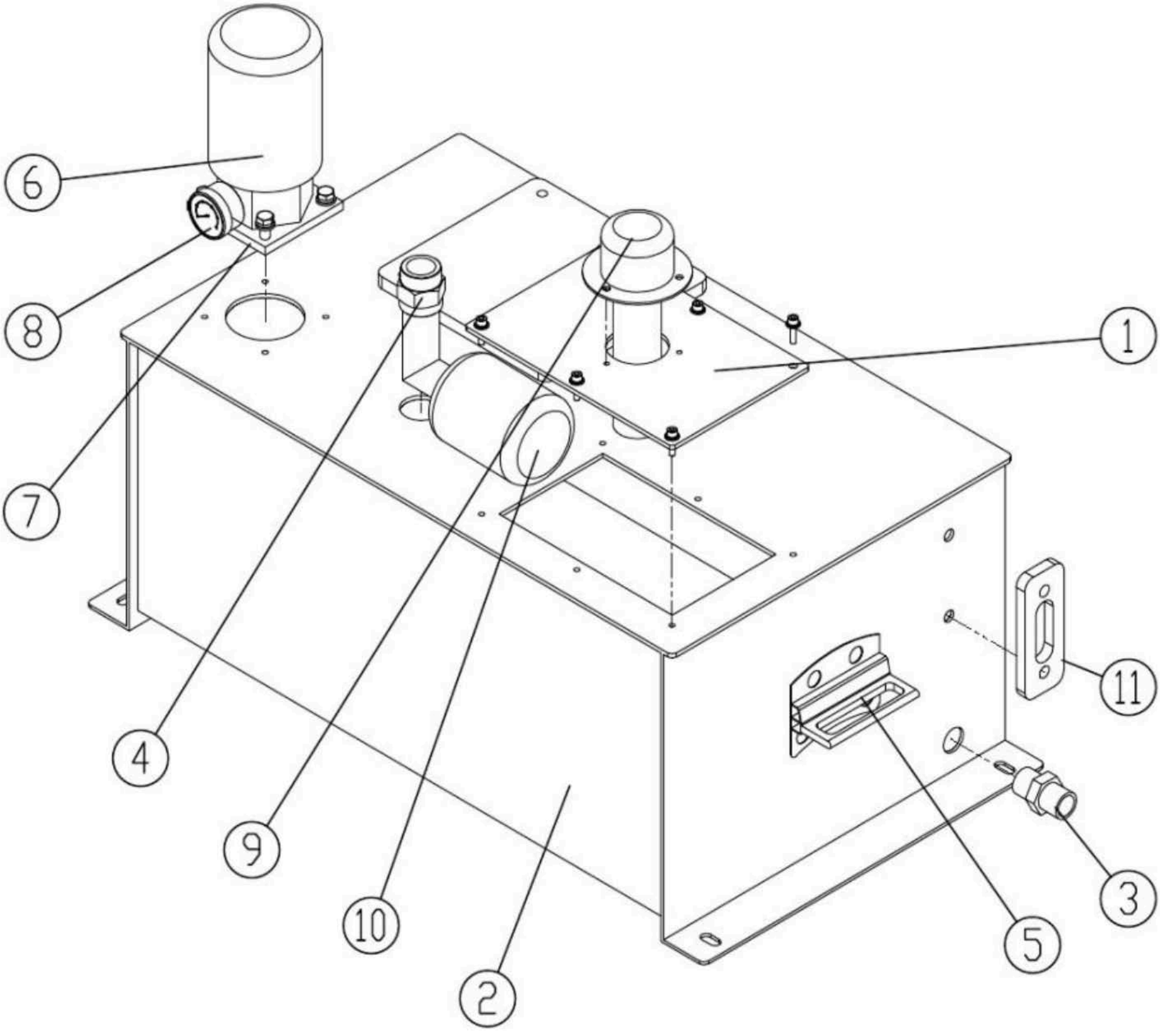
OIL TANK

Index	Part's Number/Descriptions	Quantity
1	400-1037	1
2	400-1085	1
3	3/8 Double Female Connector	1
4	3/4 Double Female Connector	1
5	A-6 Handle	2
6	3/4FPE-3010N Filter Cartridge	1
7	3/4-90° Filter	1
8	Pressure Gauge	1
9	Lubrication Can	1
10	SFF-06 Oil Filter	1
11	LS-3RL-79 Fluid Level	1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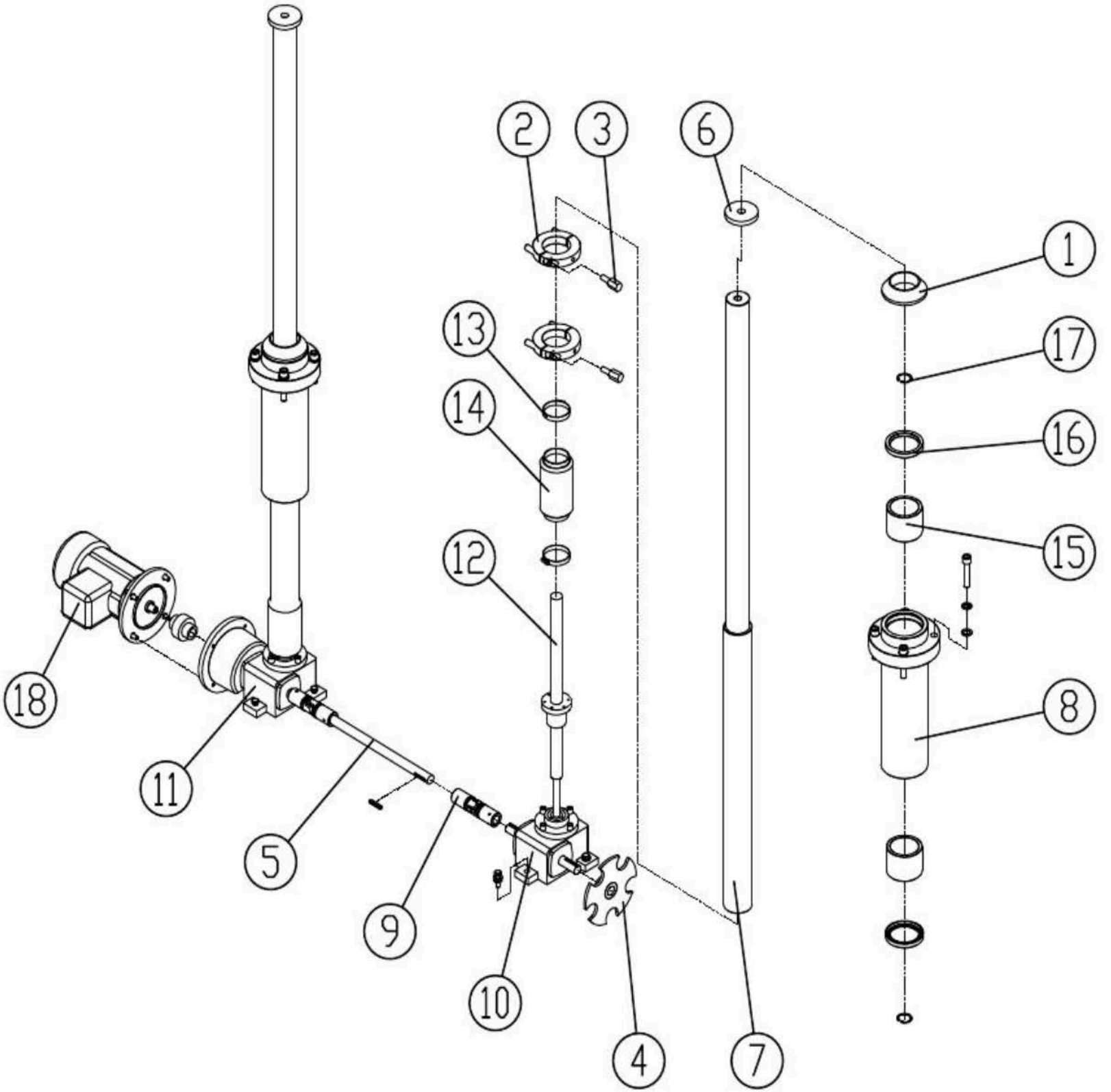
ELEVATION SYSTEM

Index	Part's Number/Descriptions	Quantity
1	400-2002	2
2	400-2005	2
3	400-2005	2
4	400-2009	1
5	400-2010	1
6	400-2013	2
7	400-2016	2
8	400-2021	2
9	TK-18 (Inner ⌀19) Universal Coupling	2
10	40VTW Hollow Worm Reducer	1
11	40VTWM Hollow Worm Reducer	1
12	55P0 (110800) Ball Screw	2
13	32-64mm Ring	4
14	PL-50 Anti-Dust Sleeve	2
15	MB6060 Oiless Bearings	4
16	TC-608010 Oil Seal	4
17	R80 C-Ring	4
18	Fukuta 1/4HP Motor	1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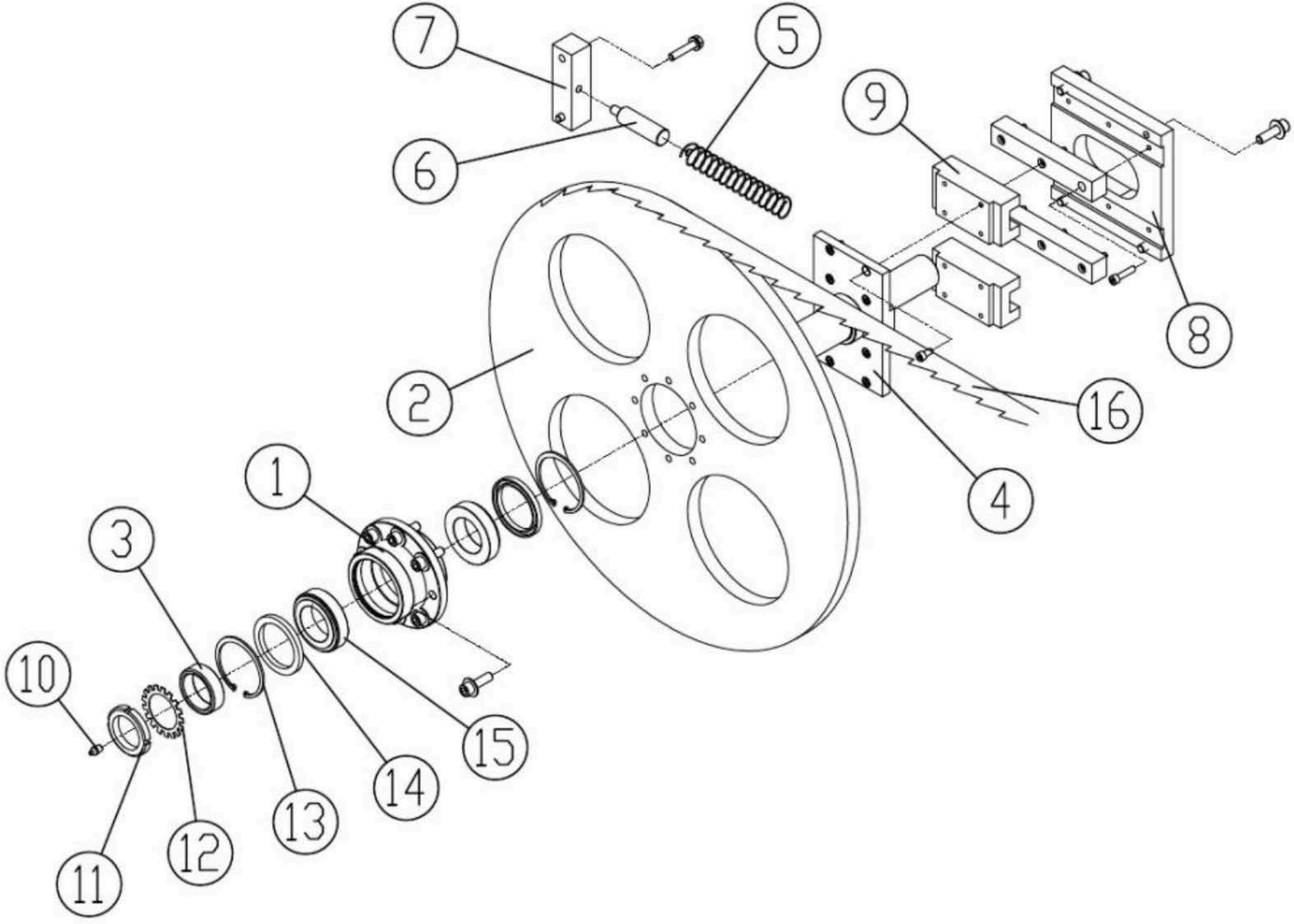
BLADE WHEEL - LEFT

Index	Part's Number/Descriptions	Quantity
1	66-4012	1
2	66-4013	1
3	400-4004	1
4	400-4010	1
5	400-4011	1
6	400-4012	1
7	400-4013	1
8	400-4014	1
9	BRH35BL Linear Guideway	2
10	1/8PT Nozzle	1
11	AN11 Nut	1
12	AW11 Toothed Washer	1
13	R-90 C-Ring	2
14	TC70*90*8 Oil Seal	2
15	32011 Tapered Roller Bearing	2
16	1" x 180L Saw Blade	1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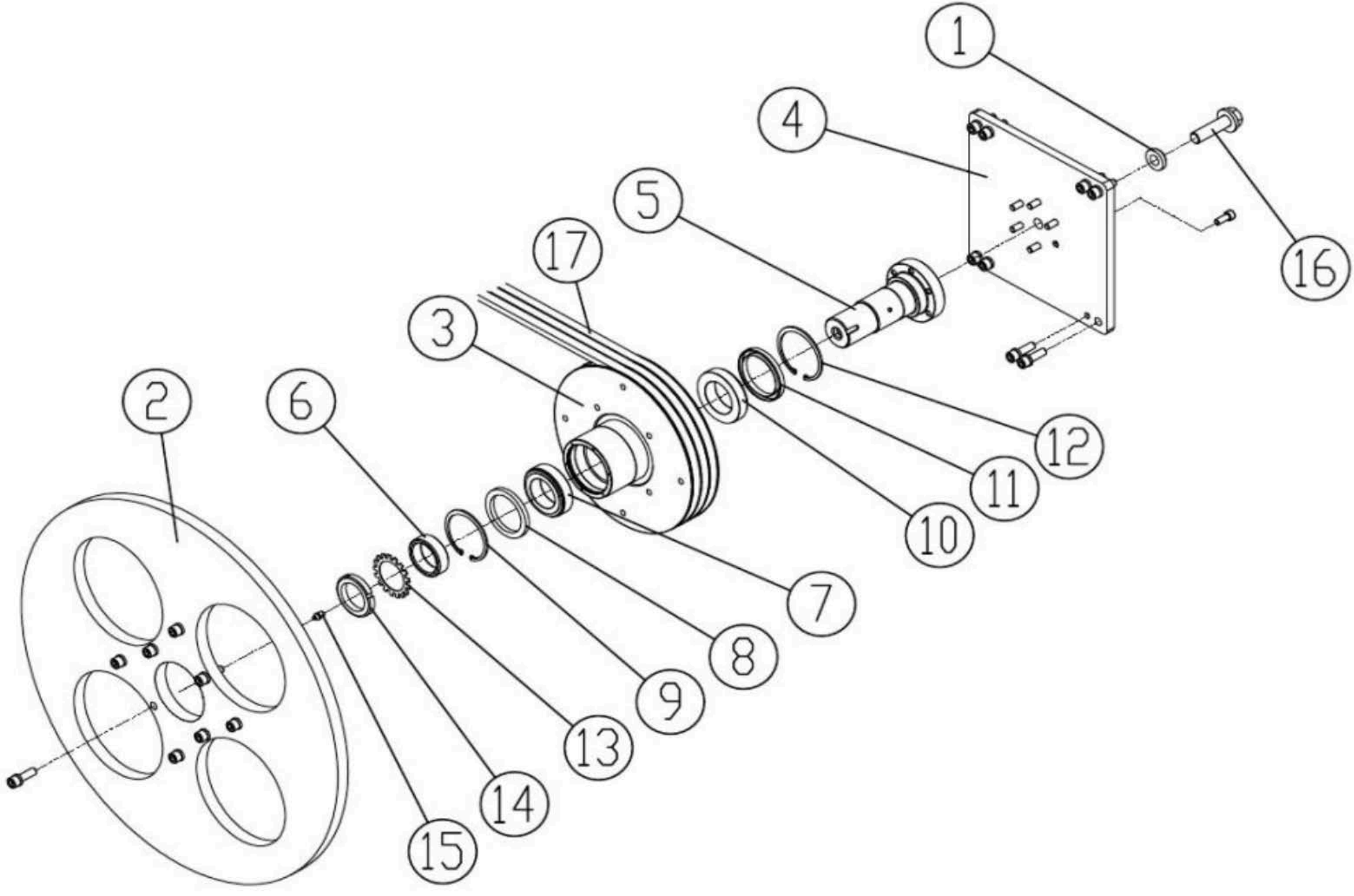
BLADE WHEEL - RIGHT

Index	Part's Number/Descriptions	Quantity
1	66-4017	1
2	66-4020	1
3	150-1071	1
4	150-1072	1
5	150-1073	1
6	400-4004	1
7	32011 Tapered Roller Bearing	1
8	TC70*90*8 Oil Seal	1
9	R-90 C-Ring	1
10	32012 Tapered Roller Bearing	1
11	TC75*95*10 Oil Seal	1
12	R-95 C-Ring	1
13	AW11 Toothed Washer	1
14	AN11 Nut	1
15	1/8PT Nozzle	1
16	3/4"-10T*85L Hex. Bolt	1
17	5VX740 Belt	3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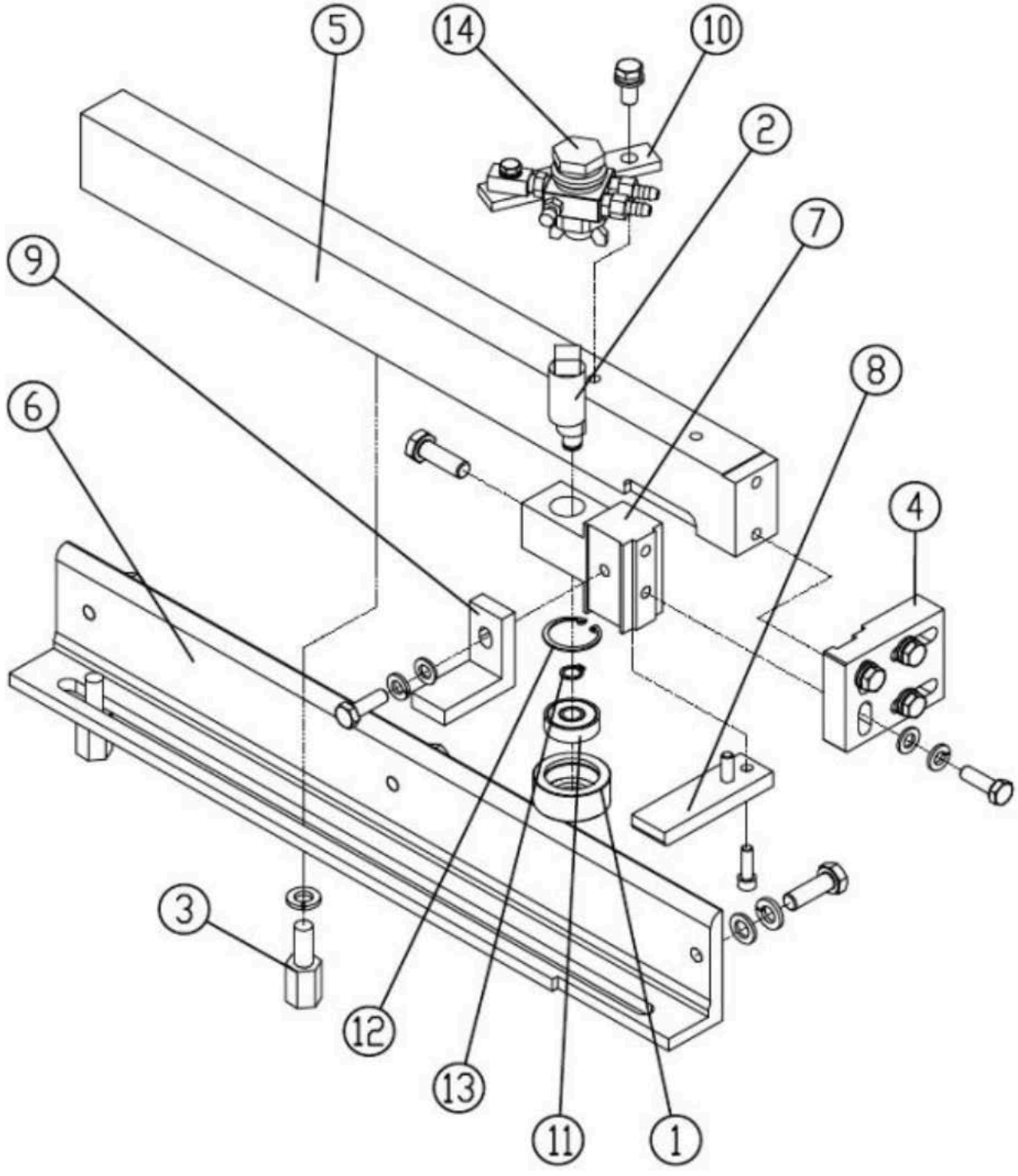
SAW WHEEL BRACKET - LEFT

Index	Part's Number/Descriptions	Quantity
1	66-3012	1
2	66-3013	1
3	400-2006	2
4	400-3001	1
5	400-3002	1
6	400-3003	1
7	400-3005	1
8	400-3009 (for 1"W Blade)	1
9	400-3010 (for 1"W Blade)	1
10	400-3073	1
11	6200ZZ Bearing	1
12	#30 C-Ring	1
13	#10 C-Ring	1
14	TMS-5 Air Spray	1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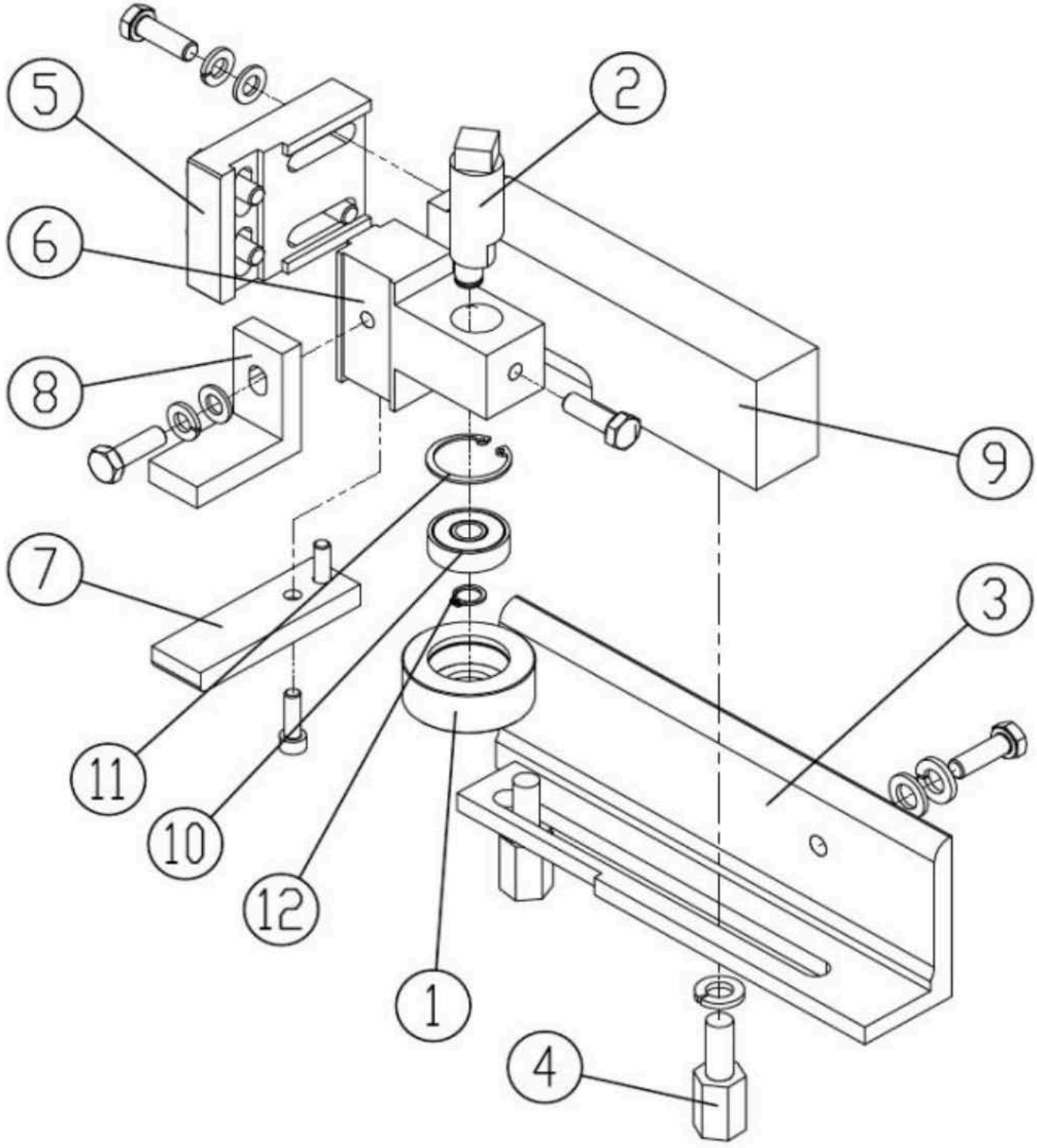
SAW WHEEL BRACKET - RIGHT

Index	Part's Number/Descriptions	Quantity
1	66-3012	1
2	66-3013	1
3	150-1051	1
4	400-2006	2
5	400-3001	1
6	400-3008	1
7	400-3009 (for 1"W Blade)	1
8	400-3010 (for 1"W Blade)	1
9	400-3054	1
10	6200ZZ Bearing	1
11	#30 C-Ring	1
12	#10 C-Ring	1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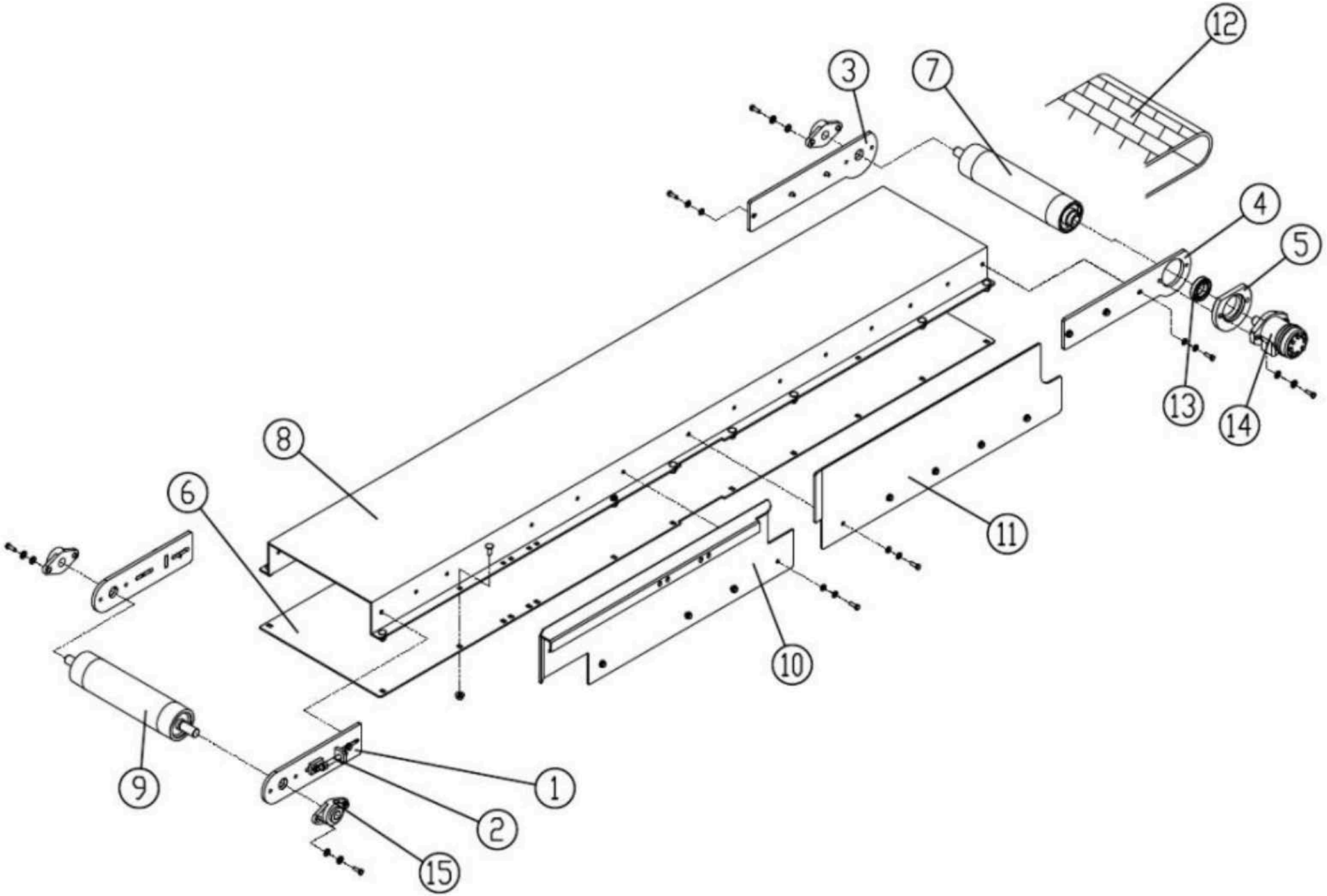
CONVEYOR TABLE

Index	Part's Number/Descriptions	Quantity
1	66-5004	2
2	66-5005	2
3	66-5007	1
4	66-5008	1
5	66-5029	1
6	400-6001	1
7	400-6005	1
8	400-6006	1
9	400-6007	1
10	600-7045	1
11	400-6009	1
12	BG09 385*5470 Conveyor	1
13	UCFL205 Flange Bearing	3
14	6008LLB Ball Bearing	1
15	FATN JH250 Hydraulic Motor	1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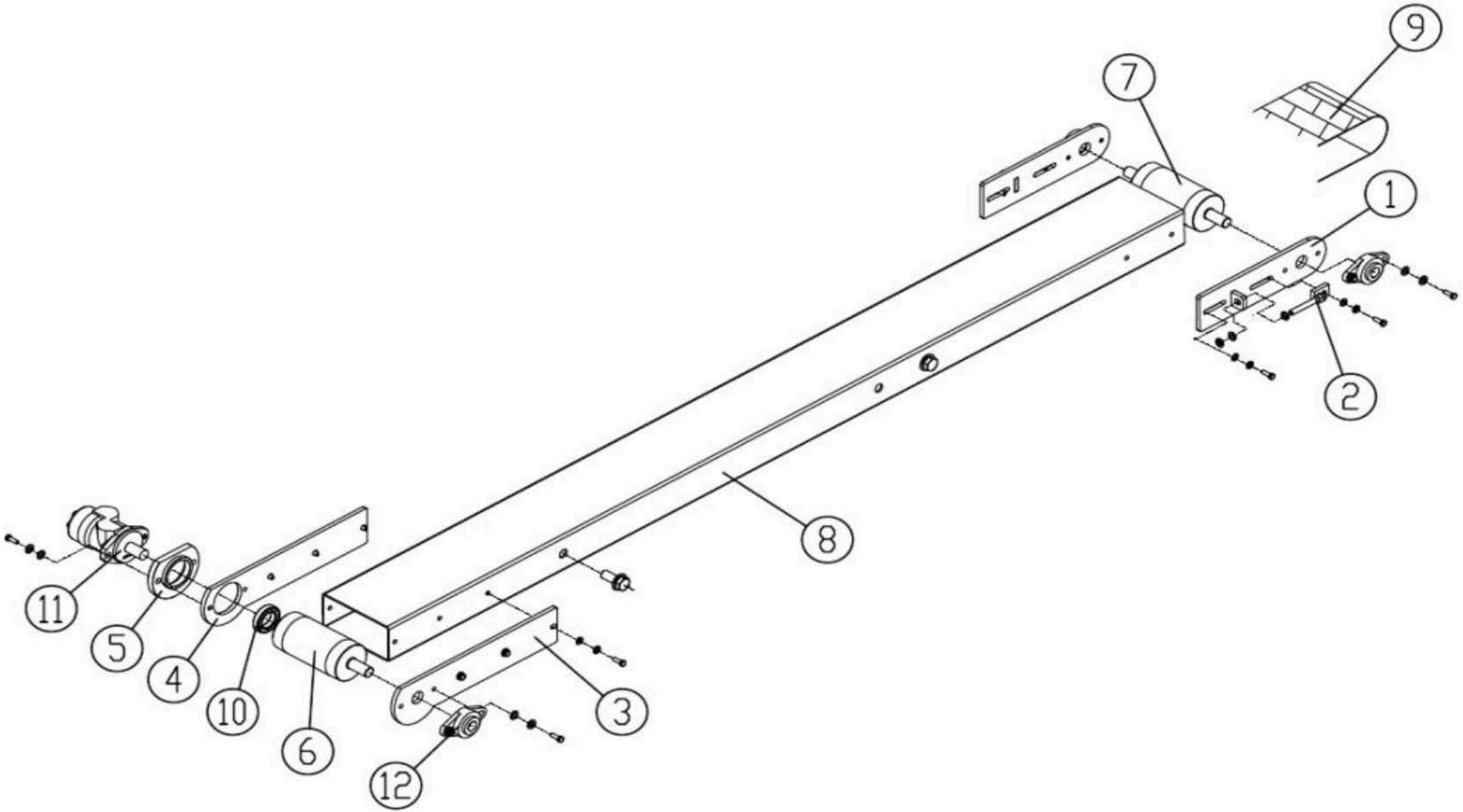
RETURN TABLE

Index	Part's Number/Descriptions	Quantity
1	66-5004	2
2	66-5005	2
3	66-5007	1
4	66-5008	1
5	66-5029	1
6	300-1009	1
7	300-1010	1
8	345T-1084	1
9	BG02 185*5470 Convyor Belt	1
10	6008LLB Ball Bearing	1
11	FATN JH160 Hydraulic Motor	1
12	UCFL205 Flange Ball Bearing	3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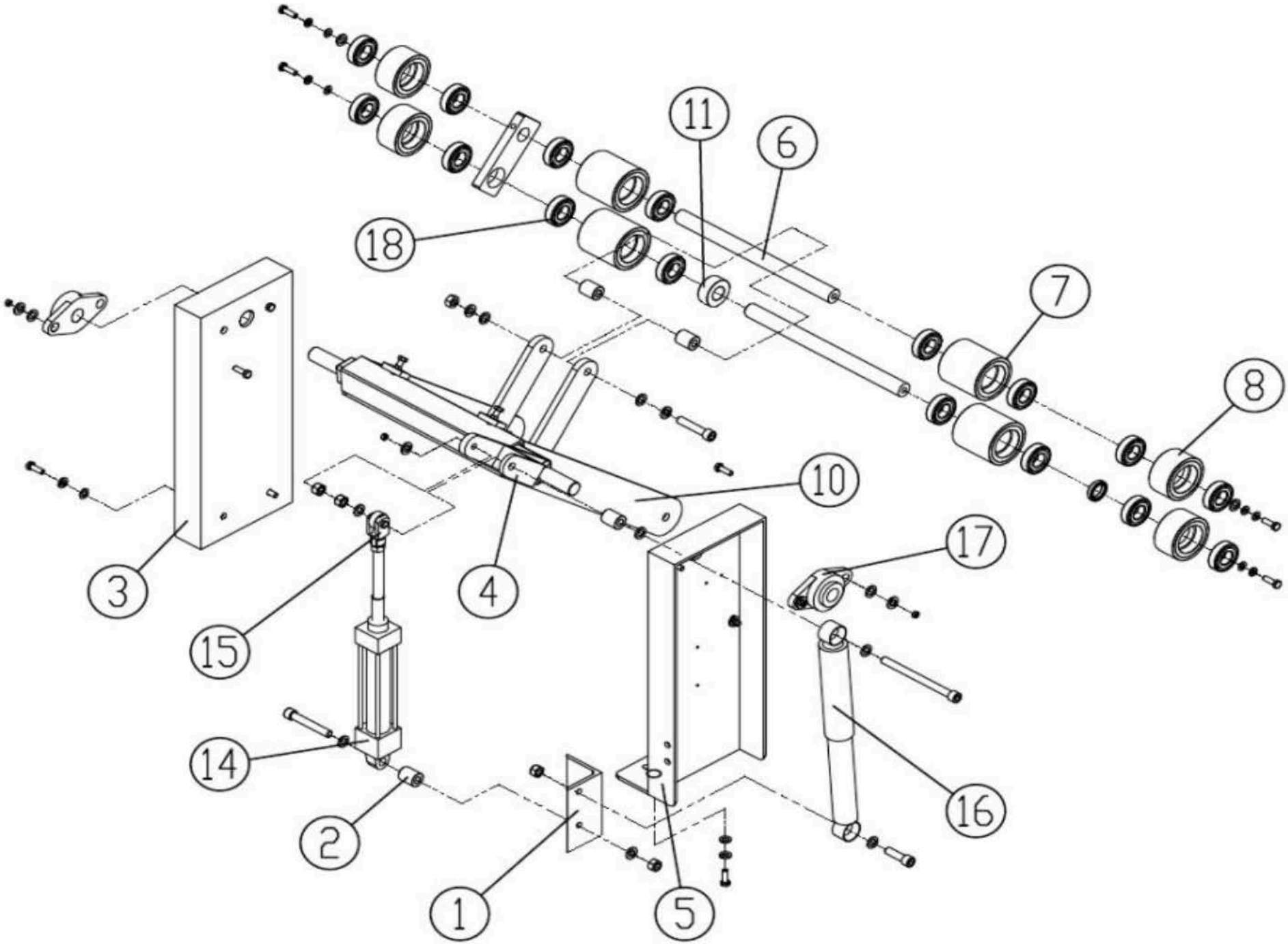
FRONT PRESSURE ROLLER

Index	Part's Number/Descriptions	Quantity
1	345T-1103	1
2	400-7004	2
3	400-7005	1
4	400-7006	1
5	400-7008	1
6	400-7032	2
7	400-7033	2
8	400-7034	2
10	700-7080	1
11	400-7082	1
14	SC40*150-CA Pneumatic Cylinder	1
15	PHS-12 Bearing Fitting	1
16	JFT-92-0213 Shock Absorbers	1
17	UCFL205 Flange Ball Bearing	2
18	6205LLU Ball Bearing	8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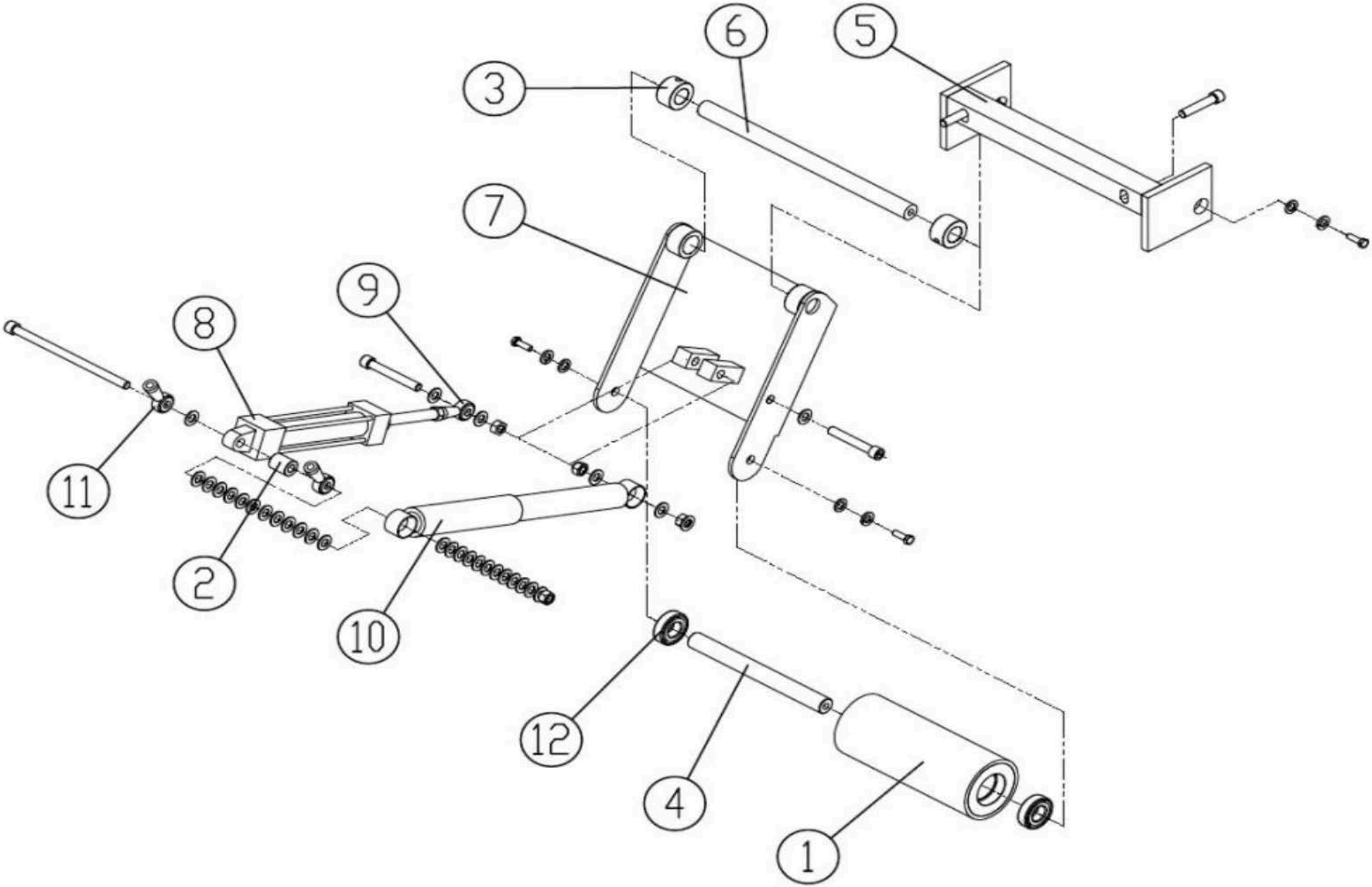
REAR PRESSURE ROLLER

Index	Part's Number/Descriptions	Quantity
1	345T-1101	1
2	400-7004	1
3	400-7014	2
4	400-7047	1
5	400-7067	1
6	400-7076	1
7	400-7098	1
8	SC40*150*CA Pneumatic Cylinder	1
9	PHS-12 Bearing Fitting	1
10	JFT-92-0213 Shock Absorbers	1
11	POS-12 Bearing Fitting	2
12	6205LLU Ball Bearing	2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