TYRE CHANGER

INSTRUCTION & MAINTENANCE MANUAL

We follow the way that wheel moving!

Read this entire manual carefully and completely
before installation or operation of the tire changer

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Tyre Changer

Warning

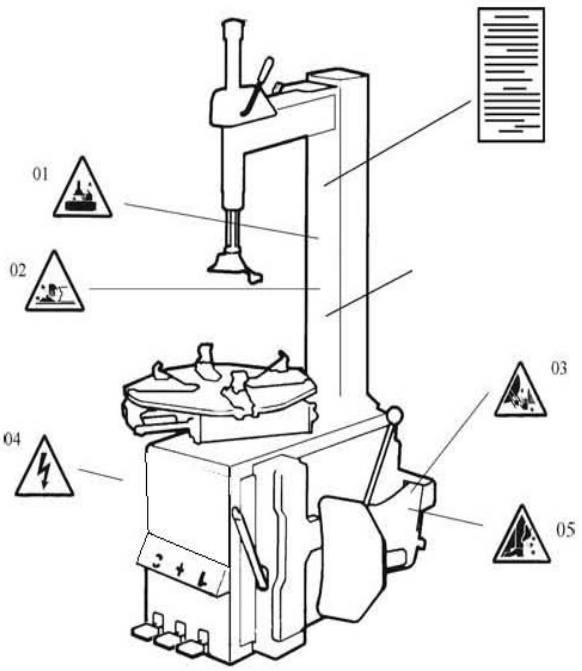
This instruction manual is important for the machine, please read carefully before installation and use; also it is important for safe use and machine maintenance of machine. Please keep this manual properly in order to further maintenance of the machine.

1. Introduction:

Application Range: The semi-automatic tyre changer is especially designed for demounting / mounting tyres from wheel rims.

Caution：Please use the machine only for purpose for which it is designed, don't use it for other purposes.
Manufacturer shall not be liable for any damage or injury caused by failure to comply with these regulations.

Safety regulation: Use of this machine is especially reserved to trained and qualified professional persons, those who already read the introduction manual carefully, or someone have the experience for operating similar machinery. Any changes and beyond the scope of use on this machine without manufacturer's permission or do not according to the manual, may cause the malfunction and damage to machine, manufacturer can cancel warranty coverage for above. If some parts are damaged due to some reason, please replace them according to the spare parts list. (Attention: warranty is one year after manufactures' delivery date; warranty excludes the easy-broken parts).



2. Warning label and sticking position:

01 Don't put hands under the Mounting/demounting head during operation;
02 Don't put hands between the jaws during operation;
03 Don't put hands inside the tyre bead when demounting the tyre;
04 Make sure and to check the system is equipped with a good grounding circuit;
05 Don't put feet between the Bead Breaker shovel and the body during operation;

Security warning labels

Caution:

When the security warning labels are defaced or off, please recovery them in time!
Do not allow to operate when the security warning labels are missed or imperfect.
Do not allow to set any objects to obscure the security warning labels.

Clients can self-set the warning labels (as right picture show) at any necessary positions.

3. Technical data

External locking rim dimensions	10~21 "
Internal locking rim dimensions	12~24 "
Max. Wheel diameter	1040mm(41 ")
Max. Wheel width	355mm(14 ")
Working Pressure	8-10bar
Power supply	110V (1ph)/ 220V (1ph)/ 380V (3ph)
Optional Motor power	0.75/1.1 kw
Max. Rotating Torque (Turntable)	1078 Nm
Overall Dimension	90*76*80cm
Noise Level	75 dB

Remark:
Rim dimensions defined at above table are based on the iron wheel rims. Aluminum rims are thicker than the iron wheel rims, so here above rim dimensions are just for the reference.
Here above machine versions can be equipped with Rapid Tire Inflation Device (client optional device), IT-suffix version, accessory details can be found at the IT-suffix version exploded drawing.

4. Transport:

When transporting, the machine should be with original package and placed according to the mark on the package. For the already packaged machine should be handled with a corresponding tonnage forklift for loading and unloading. The location to insert the fork feet shown as **Fig.1**.

5. Unpacking & Inspection:

Pull out the nail which is nailed on the plate with tip jaw; unpack the carton and plastic cover. Check and make sure all parts shown on the spare parts list are included. If any parts are missing or broken, please do not use the machine and contact the manufacturer or dealer ASAP.

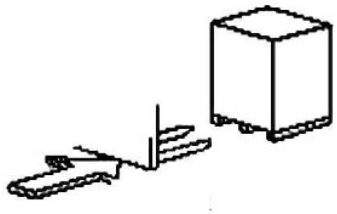


Fig.1

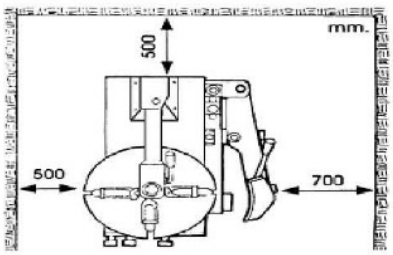


Fig.2

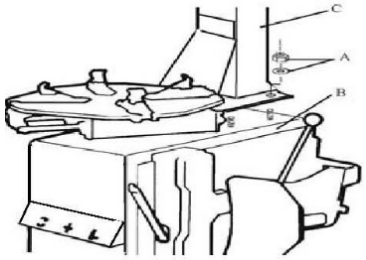


Fig.3

6. Workplace requirements:

Choose workplace in compliance with safety regulations. Connect power supply and air source according to manual and workplace must have good air condition; in order to make the machine run well, its workplace requires at least clear space from each wall shown as **Fig.2**. If installing it outdoor, it must be protected by roof against rain and sunshine.

Warning: the machine with motor must not be operated in explosive atmosphere.

7. Position and installation:

1. Unscrew the nuts at the bottom, position the machine and calibrate it with the horizontal rule. Mount the machine with all the screws and to ensure the machine is stable. Make sure the system is equipped with a good grounding circuit for prevent electric leakage. And have operation range of ground for skid prevention.
2. Unscrew the nut A on the cabinet body B as shown in **Fig.3**.
Lift the column C; mount it on the machine body B by using the nut A through the bolt located on the machine body B. If the column becomes loose after a period of using, tight them immediately. Otherwise the result of damage to the tyre may happen.

8. Electricity and Pneumatic connections:

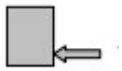
Caution: Before installation and connection, check to be sure that the electricity power supply corresponds to the machine technical data. All the installation of electric and pneumatic devices must be operated by a professional electrician.

Connect the compressed air connector which is on the machine right side with compressed air system. The electric grid that the machine connects to must have fuses protection device and good outer cover grounding protection. Install the leakage automatic air switch on the maim power supply, leakage current is set at 30mA

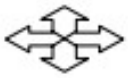
Caution: No power plug for this machine, the user should self-connect one power plug no less than 16A as well as in line with the machine voltage. Or directly connect with the power supply according to the above requirements.

9. Adjusting operation:

Turntable Rotation Pedal (Z)



Bead Breaker Pedal (U)



Jaws open and close Pedal (V)

1) Tread the Turntable Rotation Pedal (Z), Turntable (Y) clockwise rotation; Lift up the Turntable Rotation Pedal (Z), Turntable (Y) counterclockwise rotation.
2) Tread Bead Breaker Pedal (U), Bead Breaker shovel (F) close toward inside; release Bead Breaker Pedal (U), Bead Breaker shovel (F) return to original position.
3) Tread Jaws open and close Pedal (V), four jaws (G) on the turntable open; tread again, four jaws (G) close. When the pedal is in the middle position, four jaws stop moving.

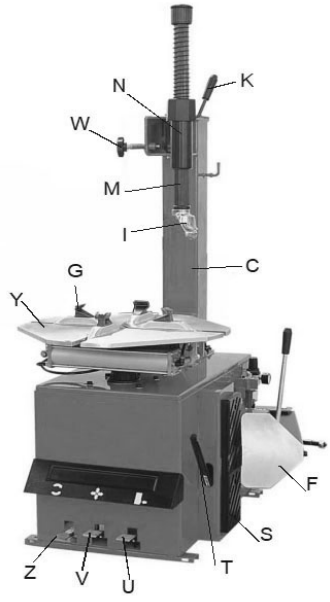


Fig.4

Tyre changer operation is consisted of three parts:
1）Breaking the tyre bead
2）Demounting the tyre
3）Mounting the tyre

Caution: Before any operations, don't wear loose clothing and wear protective hat, gloves, and skid-proof shoes. Ensure to exhaust the air in the tyre completely, and remove all the wheel weights from the rim.

9.1. Breaking the tyre bead：

Ensure to exhaust the air in the tyre completely, place the tyre against the rubber buffer (S). Bring the paddle (F) against the bead about 10mm from the edge of the rim shown as **Fig 5**. Tread Bead breaker Pedal (U) to push paddle into tyre. Repeat the above operations on different positions around the tyre and both sides of tyre until tyre bead is released completely.

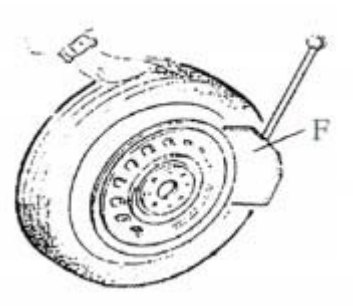


Fig.5

9.2. Demounting the tyre :

Ensure to remove all the weights on the wheel rim and to exhaust the air in the tyre completely before this operation. Apply lubricating grease (or similar lubricant) around the tyre bead. Without the lubricant may lead to badly wear and tear on tyre.

Clamp the wheel methods shown as below regarded to the ruled dimension:

a- to clamp the wheel from outside:

Tread the Jaws open and close Pedal (V) halfway down to middle, positioning for the four clamps (G) by reference scale on the Turntable (Y); put the tyre on turntable, hold the rim, and tread the Jaws open and close Pedal (V) until the wheel is secured by the jaws.

b- to clamp the wheel from inside:

Positioning for the four clamps (G) and let them all closed. Put the tyre on the turntable and tread the Jaws open and close Pedal (V) to open the clamps thereby lock the wheel in place.

Caution: Check to make sure the wheel firmly secured by the four clamps before next step.

Lower the Vertical Arm (M) until the Mounting/demounting head (I) rests next to the edge of the rim, flip the Locking Handle (K) to lock the Vertical Arm and Swing Arm in position, and also adjust the Rocker Arm make Mounting/demounting head can raise 2mm-3mm automatically from the edge of the wheel rim. Insert the Lifting Lever (T) between the tyre bead and the front section of the mounting/demounting head (I), and move the tyre above the mounting/demounting head as shown as **Fig.6**.

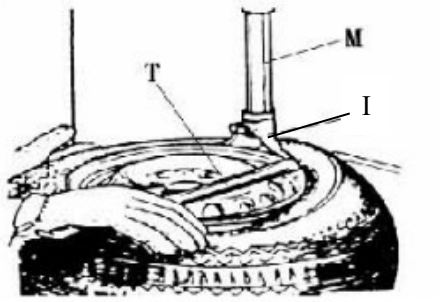


Fig.6

Caution: Chains, bracelets, loose clothes and anything else close to the rotating parts will bring danger to the operator.

With the Lifting Lever held in position, tread the Turntable Rotation Pedal (Z), rotate the Turntable (Y) in a clockwise direction until the tyre is completely separated from the wheel rim.

For the other side tyre demounting, keep using the lifting lever to lift the tyre, make the other side tyre separated from the wheel rim.

9.3. Mounting the tyre :

Caution: Check to make sure that the tyre and the wheel rim are of same size before mounting the tyre.
To avoid any damage on type, lubricate the tyre bead and the wheel rim with the lubrication recommended by manufacturer. Put on the tyre and check the situation.

Caution: When clamp the wheel rim, don't put your hands on the wheel rim to avoid injury during this operation.

Lock the Hexagonal Vertical Mounting Arm, put the tyre on the rim, let the Rocker Arm back to place as demounting the tyre. And let one side of tyre down bead above the rear section of the Mounting/demounting head, the other side under the front section of the Mounting/demounting head. Suppress the trye with hands or help arm, and then spin the turntable for mounting the tyre down bead.

Repeat the above operation for mounting the tyre up bead. **(Fig.7)**

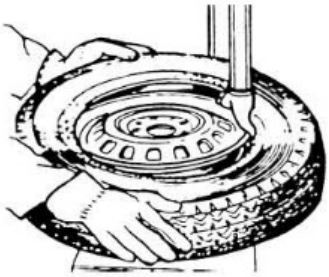


Fig.7

10. Inflating the tire:

Importance: It is very dangerous during inflating operation, take carefully and comply with instruction. When inflating, it will turn to be extremely dangerous if problems happen to tyre or rim. The possible burst force tire goes upward and outward, the big power may cause injury or death of the operator or the people around.

Tyre may burst caused by following:

1) The wheel rim and the tyre are not of the same size;
2) The tyre or the wheel rim is damaged;
3) The pressure of tyre inflation is over the max. pressure recommended by manufacturer;
4) The operator fail to comply with the safety regulation;

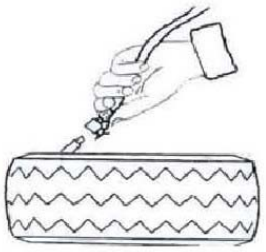


Fig.8

Please operate as follows:

1) Remove the valve cap from the valve stem;
2) Check to make sure the air nozzle is pressed down completely over the threads of the valve stem.
3) Check to make sure that the tyre and the wheel rim are of the same size;
4) Lubricate both the tyre bead and the wheel rim, additional lubrication is required if needed;
5) Inflate the tyre with break, while inflating, check the pressure listed on the pressure gauge, also check whether the bead is fixed or not. Repeat operation above until the bead is secured; you need take special steps when inflating convex rim or double convex rim;
6) Continue inflating and check the air pressure frequently until to reach the required pressure.

Notice:

Never exceed the max. inflation pressure given by the tyre manufacturer.

Keep hands and your body away from inflating tyres.

Only specially trained persons are allowed to perform the operations, do not allow other to operate or be near the tyre changer.

11. Moving machine:

Please use forklift to move the machine. Disconnect the tyre changer from the electricity power supply and pneumatic power supply, lift the base board and insert the feet of forklift. Then mount the tyre changer machine to a new position and fix it tightly.

Notice: the place chosen for fixing the tyre changer must meet the safety regulation.

12. Maintenance:

Caution: only the professional persons can do the maintenance. To prolong the machine's life, maintain the machine timely according to the manual. Otherwise, it will impact the reliability of the machine or even cause injury to operator and others nearby.

Caution: before performing any maintenance, disconnect the tyre changer from the electric power supply and pneumatic power supply, and tread the Jaws open and close Pedal or Turntable Rotation Pedal for 3~4 times to evacuate all compressed air from the machine. Damaged parts must be replaced by professional persons with the spare parts provided by manufacturer.

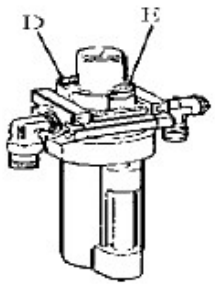


Fig.9

- Clean the machine once every day after work. Clean the dirt on the turntable with diesel oil once per week and lubricate the slides and clamps.
- Following maintenance must be done at least once per month:

Check oil level in Oil Fog Maker, please be filled with SAE30# oil if need. Unscrew with hex wrench (E). Based on connection of compressed air, first to tread Jaws open and close Pedal or Turntable Rotation Pedal 5-6 times, and then check whether oil in Oil Fog Maker drops down a drip of oil. For continuous operation, tread twice every time, drop down a drip of oil, and otherwise adjust the screw (D) that controlled oil enters with minus screwdriver. **(Fig.9)**

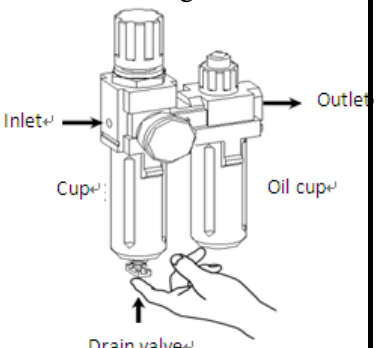


Fig 9-1

As shown in **Figure.9-1**, when you found there are some water in the cup, push up the drain valve to drain away water with your fingers; loosen your fingers after drained water, drain valve can be automatic closed under the action of the spring.

Notice: After the first 20 days of use, retighten the jaws with tightening screws (B) on the Turntable (Fig.10)

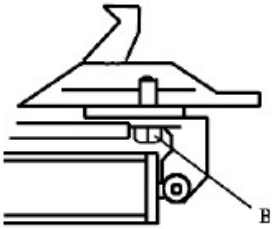


Fig.10

Notice: in the event of turntable lose power, check to see if the belt is tight as follow steps: Remove the left side cover by unscrewing the screws; adjust two screws located on the motor support, keep a suitable distance between motor support and motor base; tight the screws for the belt tension.(**Fig.11**)

Caution: Please disconnect the machine from electric power supply and pneumatic power supply.

Notice: If Hexagonal Vertical Arm not be locked or not meet the requirement that 2-3mm from the bottom of Mounting/demounting head to rim, please adjust Hexagonal Locking Plate, refer to Fig.12 and adjust the (X).

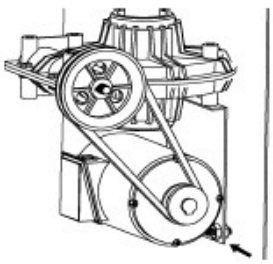


Fig.11

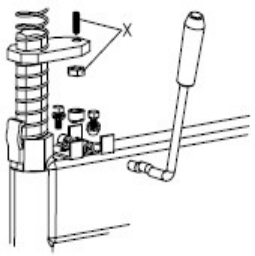


Fig.12

Notice: In order to achieve the reliability of jaws and Bead Breaker shovel, operate as follows to keep their valves clean:

1. Remove the left side cover of the machine body by unscrewing the two screws;
2. Loosen the valve Muffler (A) which belong to Jaws open and close Pedal and Bead Breaker Pedal; **(A of Fig.13)**
3. Clean the silencers with compressed air, please replace it referring to the spare parts list if it is damaged. **(Fig.13)**

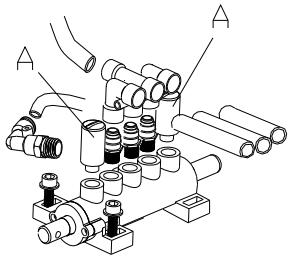


Fig.13

13. Trouble shooting table:

Problem	**Reason**	**Solution**
The turntable rotate just in one direction or can't rotate.	Reverse Switch broken	Replace the Reverse Switch
	Belt broken	Replace the belt
	The Motor's malfunction	Check the motor cable or terminal block wire; Replace the motor if it was broken.
Demount or fix the wheel, the turntable can't lock (spin with wheel); The jaws delay to open/close; The turntable locks the rim incorrectly.	Leakage of Air network	Check all the parts on the air network.
	The clamping cylinder can't work.	Replace the cylinder piston.
	Worn jaws	Replace the jaws.
	Broken washers of the chuck cylinder	Replace it.
The mounting/demounting head always touch the rim during operation.	The locking plate incorrectly adjust or unqualified.	Replace or adjust it.
	Screws on the chuck loose; the Vertical Arm can't be locked by Locking Plate	Tighten the screws; replace the Locking Plate.
The Bead Breaker Pedal and Jaw open and close Pedal can't turn back to the original position.	pedal spring broken	Replace it.
The Bead Breaker shovel operates difficultly.	Jammed muffler	Clean it or replace it.
	The washer on the Bead Breaker cylinder is broken.	Replace it.

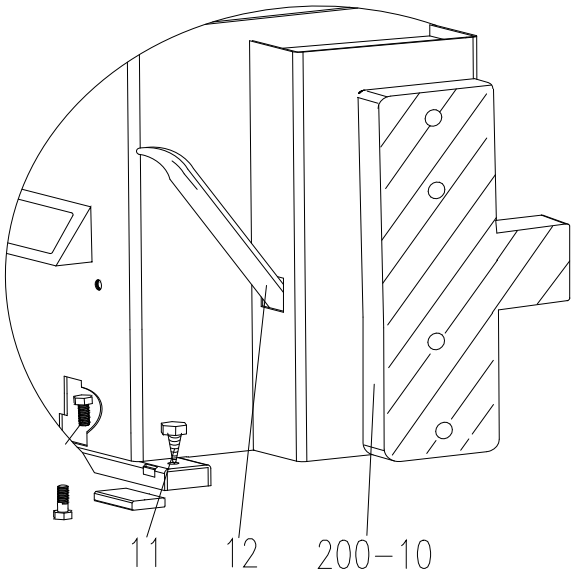
14. Guide for ordering spare parts

1. Firstly, the damaged or ordered sample should be gained and confirmed the quantity of spare parts
2. Confirm the replaced parts specification, avoid wrong order.

The confirmed method showed as following:

According to the use range and place position of parts, find out the codes of parts in the exploded drawing (section 17) from the manual.

For example, if lifting level is needed to be ordered, resulting from the fact that lifting level always placed in the sleeve, and its explc awing position is showed as below:



We can see the code “12” from the picture, then find out all the information of code “12” and record them.

11	FJ04006004049	screw ST6.3*38
12	JZ09001023041	Lifting lever
200-10	JZ09001023178	Bead breaker buffer

The recorded information:

12	JZ09001023041	Lifting lever

3. Gather the detailed information of parts

Code .	Order code	Name	Qty	Purchase time of machine
12	JZ09001023041	Lifting lever	2	2009.6.25

4. Please contact the spare parts department and confirm the order.

5. After confirming the order with any problem, the spare parts department will deliver the goods for you according to the order.

Special statement

◆Manufacturer reserves the rights to change the parts specification without beforehand notice for the users.

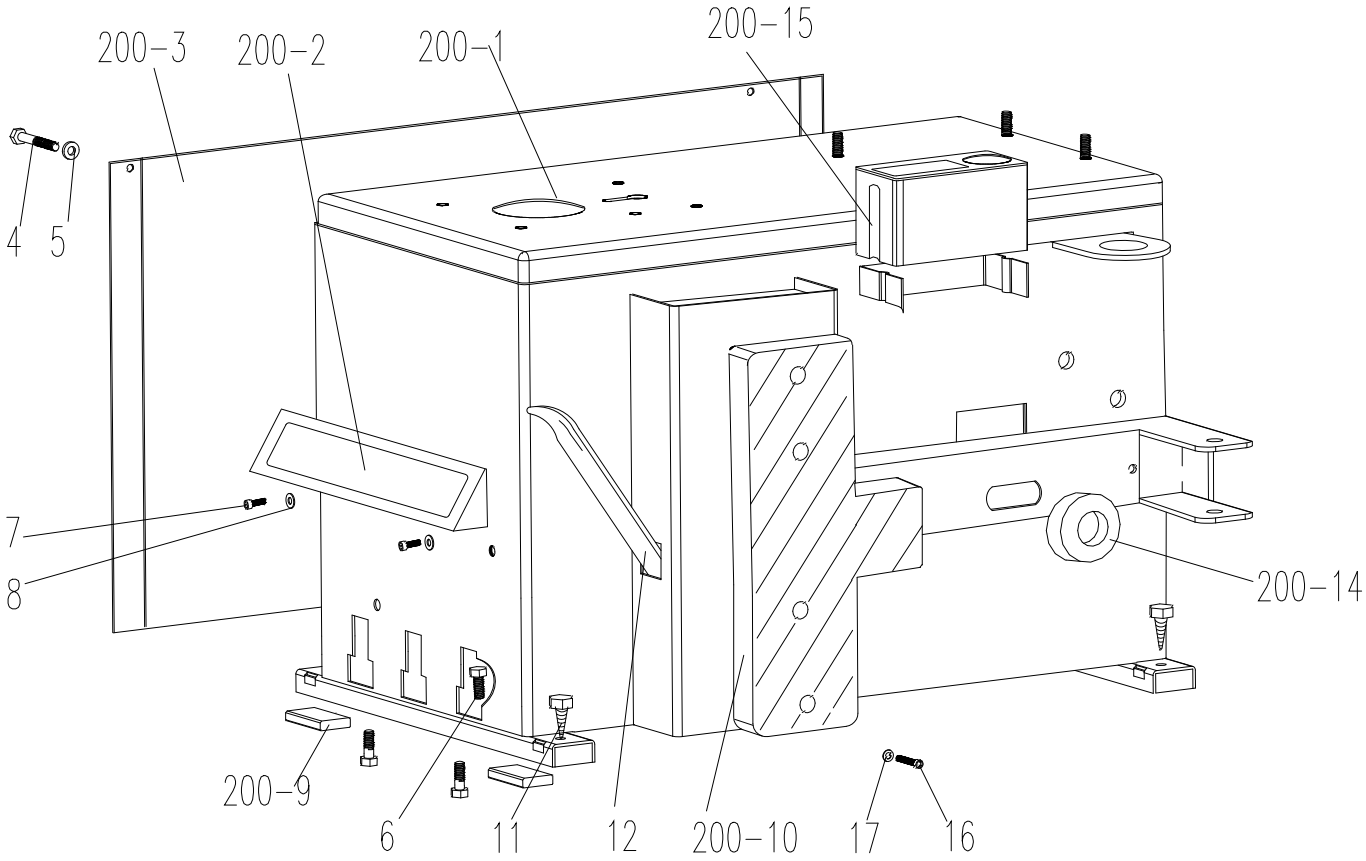
◆Manufacturer do not liable for the modification and improvement of the products which have been sale

15. Wearing spare parts list

Part location	Location NO.	Order NO.	Part name
Bead breaker buffer (**Fig.16-1**)	200-10	JZ09001023178	Bead breaker buffer
Clamping cylinder piston (**Fig.16-3**)	200-228	JZ09001022841	Complete clamping cylinder piston 70 Φ70
Guide belt (**Fig.16-4**)	318	JZ02007061149	Guide belt U007 30*2.5
Reverse switch (**Fig.16-7**)	200-426	DD03009001577	Reverse switch LW8-25N2/5.5
V-belt (**Fig.16-10**)	604	FJ02003003545	V-belt A-686
Helical hose (**Fig.16-11**)	702	JZ09001022984	Helical hose 8*5*2500
Clamping cylinder sealing ring (**Fig.16-3**)	226	FJ08003005391	V -seal ring Φ20*Φ28*7.5
	227	FJ08001005312	O -seal ring Φ63*2.65
	232	FJ08001005151	O -seal ring Φ19.6*2.62
Complete bead breaker cylinder sealing ring (**Fig.16-4**)	311	FJ08003005386	V-seal Φ185*168*10.8
	306	FJ08001005120	O-seal Φ 16*2.65
	307	FJ08001005160	O-seal Φ 20*2.65
	200-308	FJ08001005146	O-seal Φ180*4
	200-321	FJ08001005135	O-seal Φ170.8*5.33
	331	FJ08001005151	O-seal Φ19.6*2.62
Distribution valve sealing ring (**Fig.16-9**)	200-532	FJ08001005300	O-seal Φ59.99*2.62

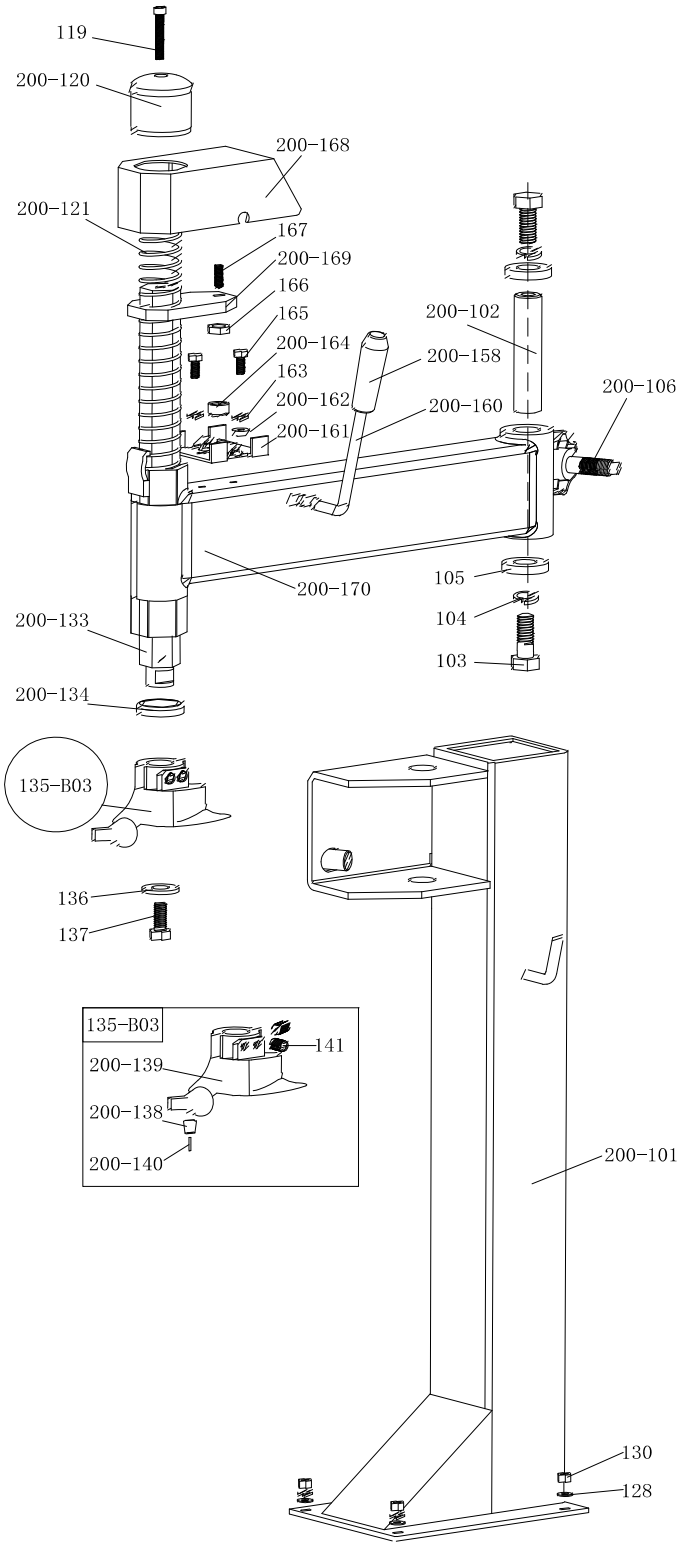
Remark： The parts in the list are easy broken parts, if other parts needed to be ordered, please check the manual.

16. Exploded drawing:



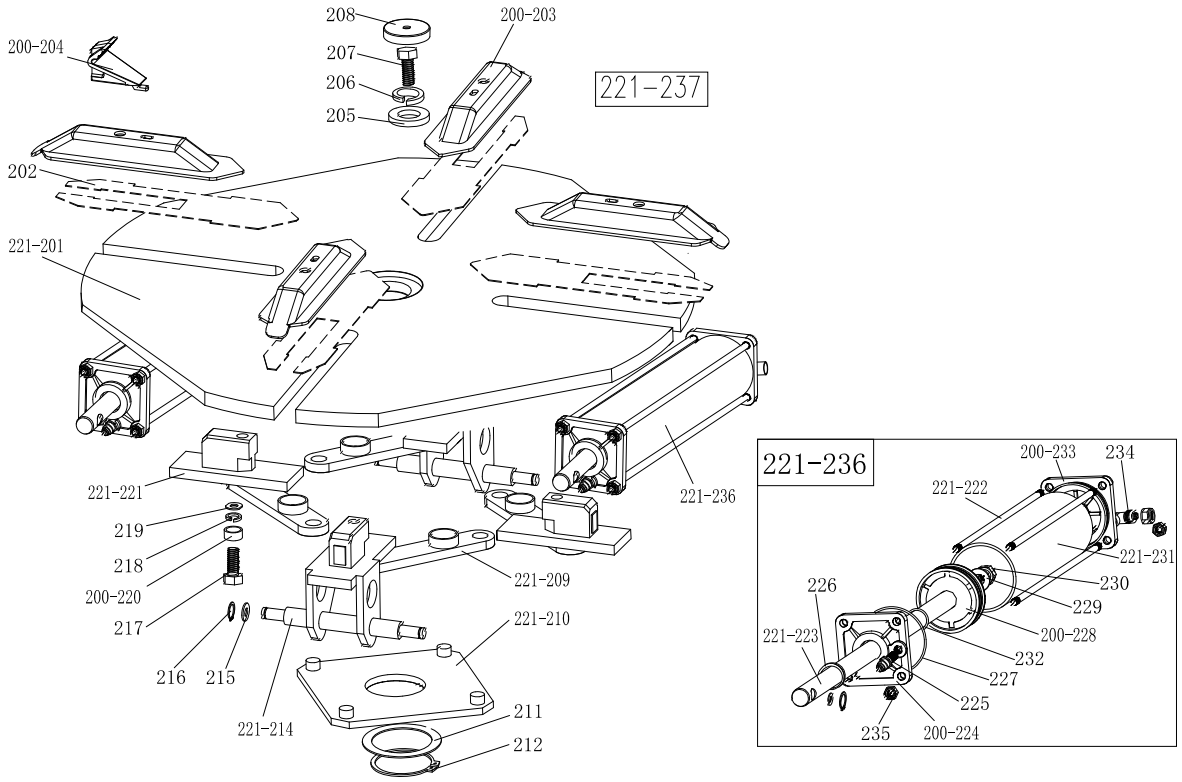
(Fig.16-1)

200-1	JZ08001021107	machine body U200	200-9	JZ09001023159	Rubber foot buffer
200-2	JZ08001021045	Pedal front cover U200	200-10	JZ09001023178	Bead breaker buffer with pot point U200
200-3	JZ08001021145	Left cover U200	11	FJ04006004049	screw ST6.3*38
4	FJ04009004646	hex socket head cap screw M5*10	12	JZ09001023041	Lifting lever
5	FJ04002003886	Flat washer 5*15	200-14	JZ09001022719	Bead breaker arm rubber U200
6	FJ04009004879	Outer hex bolt M8*25	200-15	JZ07001020929	Oil-water box U200
7	FJ04009004706	Outer hex bolt M8*20	16	FJ04009004706	hex socket head cap screw M8*20
8	FJ04002003904	Flat washer 8*17*1.5	17	FJ04002003904	Flat washer 8*17*1.5



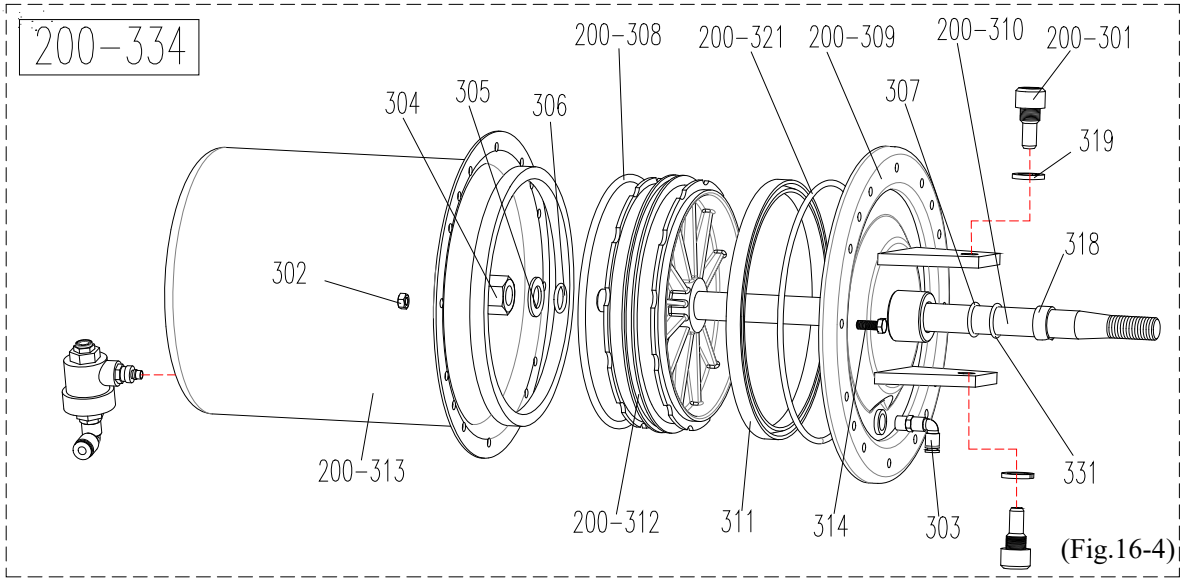
200-101	JZ08001021057	Square column
200-102	JZ09001023188	Swing arm pin
103	FJ04009004813	Outer hex bolt M14*30
104	FJ04002003777	Flat washer 14
105	JZ03001015476	Big washer
200-106	JZ07001020882	Column adjust handle
119	FJ04009004586	hex socket head cap screw M10*40
200-120	JZ07001020885	Vertical arm cap 200
200-121	JZ09001022973	Vertical arm spring U200 Φ2.8*545
128	FJ04002003800	Flat washer 10*20*2
130	FJ04008004444	Nut M10
200-133	JZ03001015654	Vertical arm U200
200-134	JZ09001022967	Vertical arm washer S36
B03	JZ06001020303	Complete Mount/demount head B03#(without protectors)
136	JZ03001015342	Mount/demount head flat washer
137	FJ04009004770	Outer hex bolt M10*25
200-138	JZ09001015340	Mount/demount head pulley
200-139	JZ09001022714	mount/demount head B03
200-140	JZ09001022993	Hex round pin
141	FJ04006004129	screw M12*12
200-158	JZ07001020907	Locking handle cover
200-160	JZ03001015733	Locking Handle
200-161	JZ03001015740	Locking plate
200-162	JZ09001023096	Locking block cover
163	FJ04002003792	Flat washer 8
200-164	JZ09001023004	Eccentric shaft nut
165	FJ04009004874	Outer hex bolt M8*16
166	FJ04008004495	Nut M12*1.75*T6
167	FJ04006004176	screw M12*30
200-168	JZ07001020909	Locking plate cap
200-169	JZ03001015645	Hex locking board 200
200-170	JZ08001021123	Swing arm

(Fig.16-2)



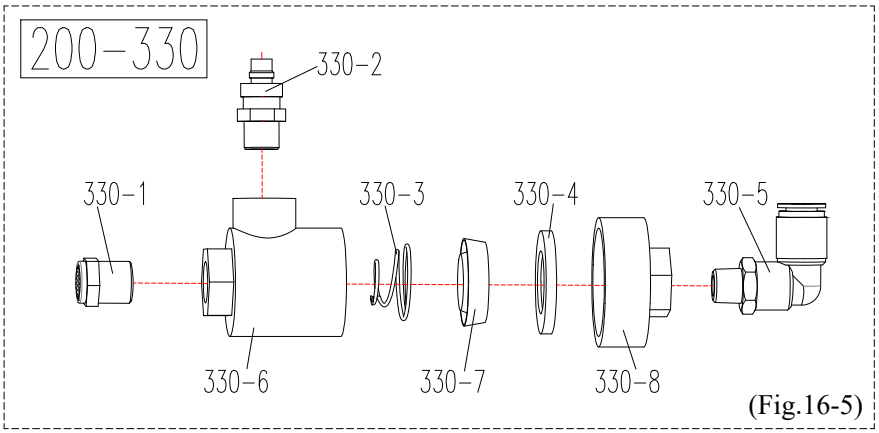
(Fig.16-3)

221-201	JZ03001015479	Turntable assembly 630	221-221	JZ03001015766	Jaw slide guide without pin 615
200-203	JZ03001015584	Jaw cap assembly U200	221-222	JZ09001022937	Threaded connection rod M8*390
200-204	JZ09001022893	Jaw 200	221-223	JZ09001022843	Clamping cylinder piston rod Φ20*400
205	JZ03001015476	Big washer	200-224	JZ09001022837	Clamping cylinder cover without handle Φ70
206	FJ04002003779	Flat washer 16	225	EQ11006003389	Quick coupler G1/8-Φ8
207	FJ04009004828	Outer hex bolt M16*40	226	FJ08003005391	V -seal ring Φ20*Φ28*7.5
208	JZ07001020860	Turntable cap U200	227	FJ08001005312	O -seal ring Φ63*2.65
221-209	JZ03001015611	Connection rod assembly 615	200-228	JZ09001022841	Complete clamping cylinder piston Φ70
221-210	JZ03001015454	Square Turntable 615	229	FJ04002003813	Flat washer 12*24*2
211	JZ03001015457	Square Turntable Washer	230	FJ04008004495	Nut M12*1.75*T6
212	FJ04001003757	Snap Ring 65	221-231	JZ09001022852	Clamping cylinder barrel Φ70*360
221-214	JZ03001015834	Jaw slide guide with pin 615A	232	FJ08001005151	O -seal ring Φ19.6*2.62
215	FJ04002003813	Flat washer 12*24*2	200-233	JZ09001022839	Clamping cylinder cover with handle Φ70
216	FJ04001003737	Snap Ring 12	234	EQ11005003366	Quick coupler G1/8-Φ8
217	FJ04009004809	Outer hex bolt M12*85	235	FJ04008004459	Nut M8
218	FJ04002003917	Teeth locking washer Φ12*20.5*1	221-236	JZ06001020236	Complete clamping cylinder U221
219	FJ04002003814	Flat washer 12*30*3	200-237	JZ06001020219	Complete turntable 630, square 24″*U221
200-220	JZ09001015609	Connection rod nut			



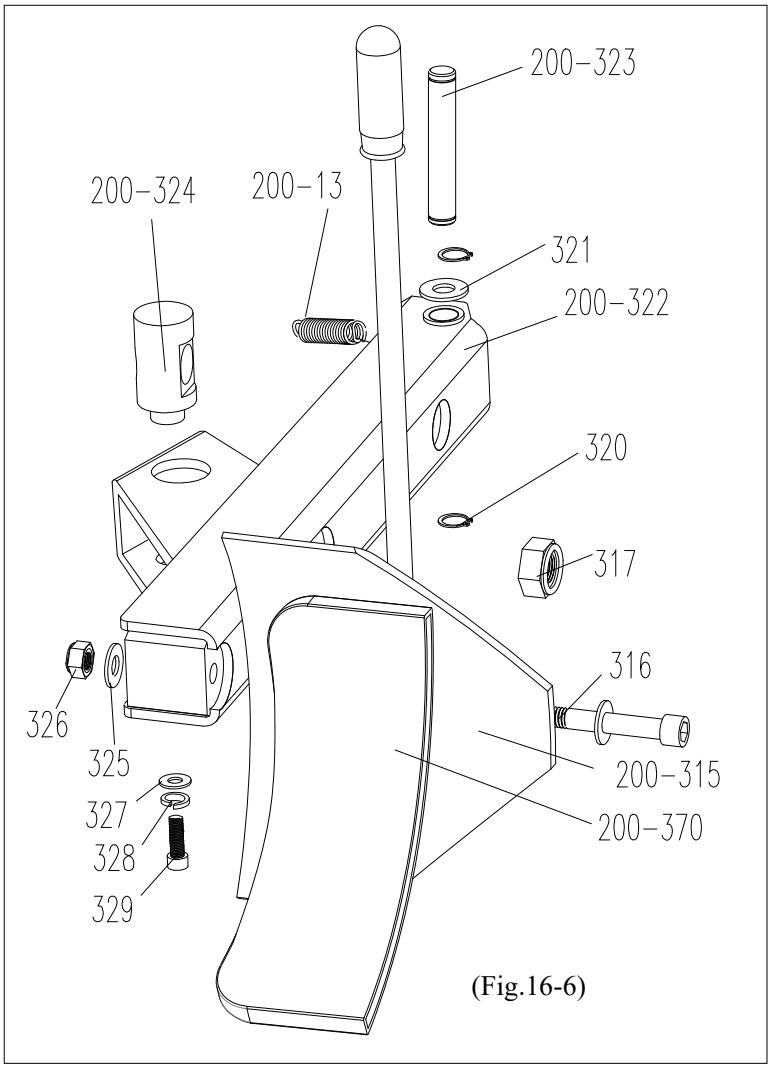
(Fig.16-4)

200-301	JZ09001011179	Hex socket head bolt M14*30	311	FJ08003005386	V-seal Φ185*168*10.8
302	FJ04008004458	Self-locking nut M6	200-312	JZ09001022744	Bead breaker cylinder piston
303	EQ11005003350	Union (90°)1/4-Φ8	200-313	JZ09001015384	Bead breaker cylinder barrel
304	FJ04008004517	Nut M16*1.5	314	FJ04009004676	Hex socket head bolt M6*16
305	FJ04002003833	Flat washer Φ16*28*2	331	FJ08001005151	O-seal 19.6*2.62
306	FJ08001005120	O-seal Φ16*2.65	200-334	JZ06001020265	Complete bead breaker cylinder
307	FJ08001005160	O-seal Φ20*2.65	318	JZ02007061149	Guide belt 30*2.5
200-308	FJ08001005146	O-seal Φ180*4	319	FJ04002003777	Spring washer Φ14
200-309	JZ03001015378	Bead breaker cylinder cover assembly	200-321	FJ08001005135	O-seal Φ170.8*5.33
200-310	JZ09001022746	Bead breaker cylinder piston rod			



(Fig.16-5)

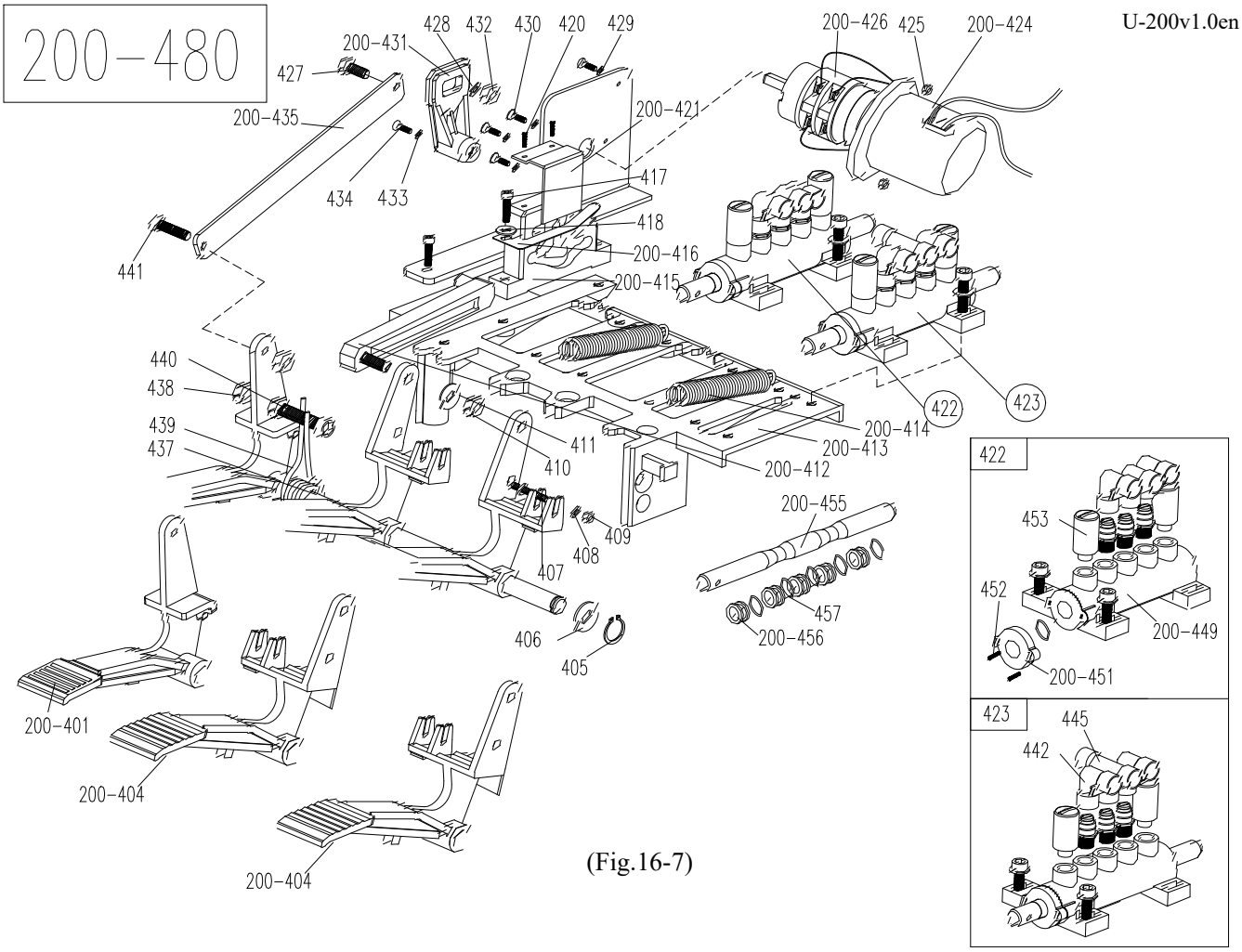
330	JZ06001061594	Quick release valve assembly
330-1	EQ04001002949	Silencer G1/4
330-2	EQ07005003072	Straight tube with outside 2*G1/4
330-3	JZ09001023166	Compressed spring
330-4	JZ09001022987	Sealing fin
330-5	EQ10004003264	Quick insert elbow G1/8-φ8
330-6	JZ07001020849	Quick dump valve
330-7	JZ09001023080	Sealing ring
330-8	JZ07001020848	Valve cover



(Fig.16-6)

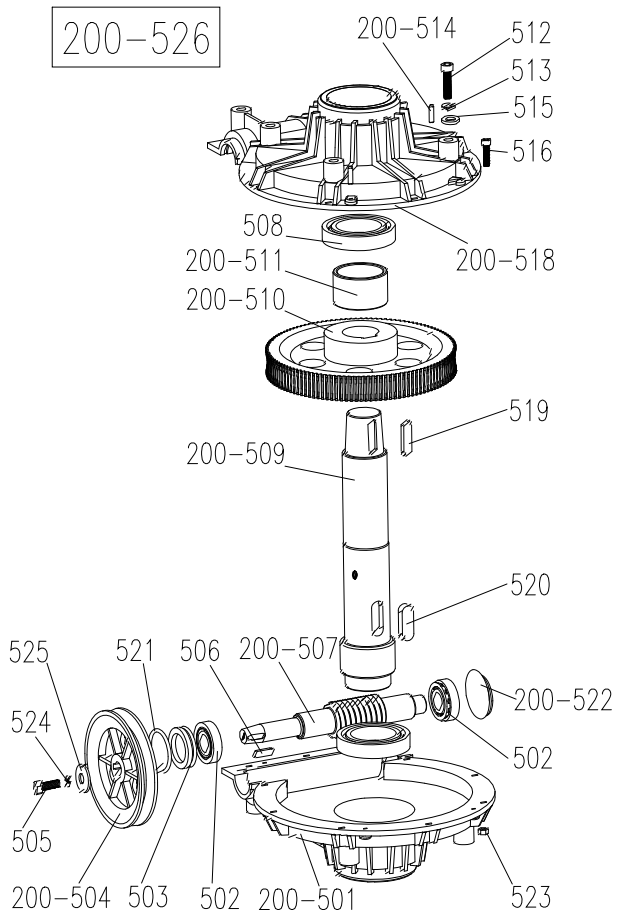
200-13	JZ09001022722	Bead breaker arm spring
200-315	JZ03001015790	Bead breaker shovel assembly
316	FJ04009004612	Hex socket head bolt M12*80
317	FJ04008004517	Nut M16*1.5
200-370	JZ07001020829	Bead breaker shovel protection cover(option)
320	FJ04001003741	Snap ring Φ16
321	FJ04002003833	Flat washer 16*28*2
200-322	JZ08001021156	Bead breaker arm 200
200-323	JZ03001015349	Bead breaker pin
200-324	JZ03001015382	Bead breaker cylinder rotating pin
325	FJ04002003813	Flat washer Φ12*2
326	FJ04008004445	Self-locking M12
327	FJ04002003915	Flat washer Φ8*30*3
328	FJ04002003792	Spring washer Φ8
329	FJ04009004874	Outer hex bolt M8*16

200-480



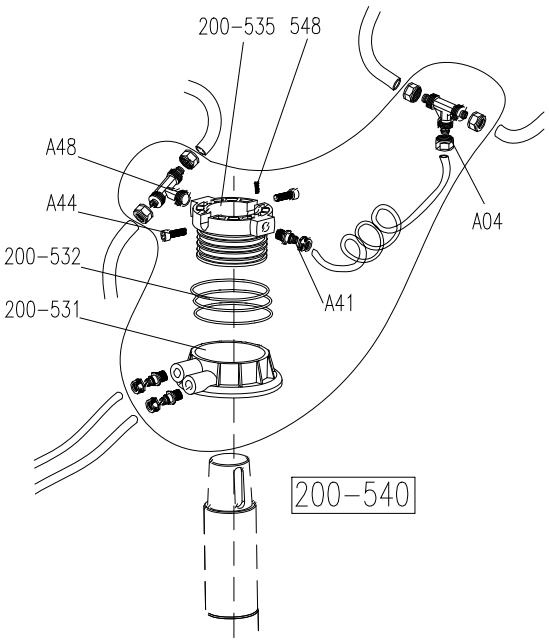
(Fig.16-7)

200-401	JZ09001022773	Reverse switch pedal 1#	428	FJ04002003890	Flat washer 6*12*1
221-402	JZ09001023136	5-way valve pedal(right) 3#	429	FJ04002003874	Flat washer 4*8*0.5
405	FJ04001003737	Snap Ring 12	430	FJ04006004323	screw M4*16
406	FJ04002003813	Flat washer 12*24*2	200-431	JZ07001020856	Reverse switch handle
407	FJ04006004200	screw M4*30	432	FJ04008004458	Nut M6
408	FJ04002003874	Flat washer 4*8*0.5	433	FJ04002003859	Flat washer 3*6*0.5
409	FJ04008004455	Nut M4	434	FJ04006004365	screw M3*16
410	FJ04008004459	Nut M8	200-435	JZ04006004306	Pedal Connection Rod
411	FJ04002003904	Flat washer 8*17*1.5	437	JZ03001015570	Pedal front shaft
200-412	JZ07001020913	Cam connection rod	438	FJ04008004515	Nut M8
200-413	JZ09001022882	Pedal suport board	439	JZ09001022873	Pedal twist spring
200-414	JZ09001022872	Pedal Spring U200	440	FJ04009004715	hex socket head cap screw M8*50
200-415	JZ07001020914	Cam U200	441	FJ04009004706	hex socket head cap screw M8*20
200-416	JZ09001023109	Cam washer 0.5	442	EQ10004003264	Union (90°) G1/8-Φ8
417	FJ04009004680	hex socket head cap screw M6*20	445	EQ10001003242	T-union G1/8-2*Φ8
420	FJ04006004228	screw ST2.9*12	200-449	JZ07001020920	5-way valve barrel
200-421	JZ03001015747	Cam cover U200	200-451	JZ07001020918	5-way valve cover
422	JZ06001020282	Complete 5-way valve for clamping cylinder	452	FJ04006004372	screw ST2.9*14
423	JZ06001020283	Complete 5-way valve for bead breaker cylinder	453	EQ04002002955	Muffler G1/8
200-424	JZ07001020853	Reverse Switch Cover	200-455	JZ09001015771	5-way valve rod
425	FJ04008004510	Nut M4	200-456	JZ07001020919	5-way valve rod spacer
200-426	DD03009001577	Reverse switch LW8-25N2/5.5	457	FJ08001005087	O - seal Φ12*20*4
427	FJ04009004680	hex socket head cap screw M6*20	200-480	JZ06001020268	Complete 3-pedals assembly 200



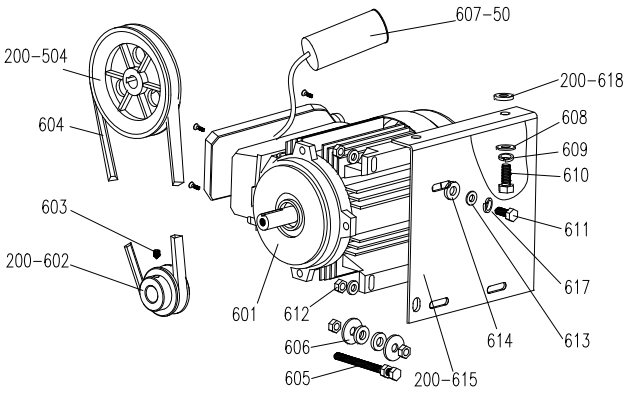
(Fig.16-8)

200-501	JZ09001022681	Gear box lower cover U300
502	FJ02010003613	Bearing 30204
503	FJ08007005413	Gear Seal Φ20*Φ35*8
200-504	JZ09001023119	Gear Belt pulley U200
505	FJ04009004879	Outer hex bolt M8*25
506	FJ06001004964	Key washer 6*20
200-507	JZ09001023118	Worm rod Φ42*218
508	FJ02010003623	Bearing 6010-2RS
200-509	JZ09001023126	Worm gear shaft Φ50*280
200-510	JZ09001023250	Worm gear U200
200-511	JZ02007011727	spacer U200
512	FJ04009004779	Outer hex bolt M10*55
513	FJ04002003773	Flat washer 10
200-514	FJ06002005000	Pin Φ6*20
515	FJ04002003800	Flat washer 10*20*2
516	FJ04009004680	hex socket head cap screw M6*20
517	FJ04002003892	Flat washer 6*14*1.2
200-518	JZ09001022679	Gear box upper cover U300
519	FJ06001004962	Key washer 10*40
520	FJ06001004963	Key washer 14*40
521	FJ08001005221	O-seal Φ30*3.55
200-522	JZ09001022990	oil resistant seal U200
523	FJ04008004458	Nut M6
524	FJ04002003792	Flat washer 8
525	FJ04002003915	Flat washer 8*30*3
200-526	JZ06001020255	Complete gear box



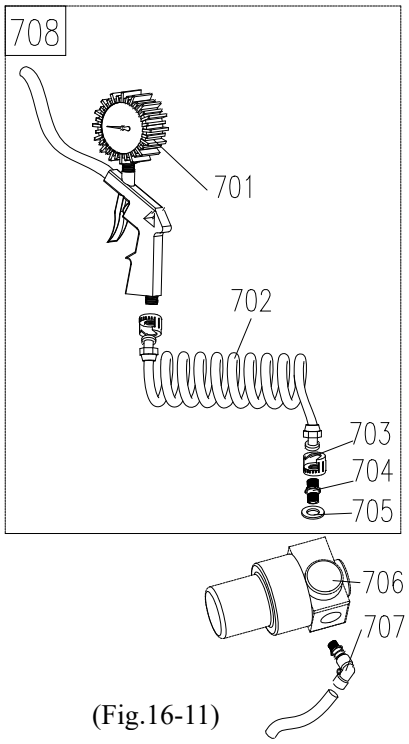
(Fig.16-9)

A04	EQ11002003333	T-union 3*Φ8
A44	FJ04009004676	hex socket head cap screw M6*16
A48	EQ11002003340	T-union G1/8-2*Φ8
200-531	JZ02007015872	Rotating valve casing 200 U200
200-532	FJ08001005300	O - seal Φ59.99*2.62
200-535	JZ02007015676	Rotating valve mandrel U200
537	JZ02007061597	Flexible air hose Φ8*Φ5*10m
A41	EQ11006003389	Straight union G1/8-Φ8
548	FJ04006004060	screw M4*6
200-540	JZ06001020249	Complete Rotating valve, plastic U200



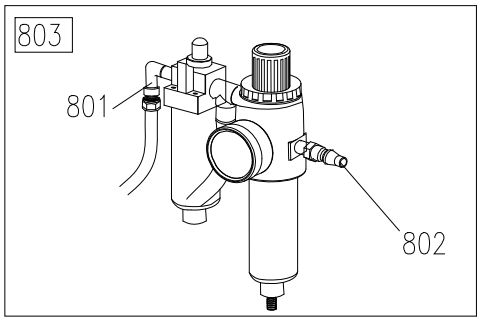
(Fig.16-10)

200-504	JZ09001023119	Gear Belt pulley U200
601	Decide order according to customer's requirement： ___V/___HZ/___KW/___PH For example：220-240V/50HZ/0.75KW/1PH	
200-602	JZ09001015421	Motor Belt pulley U200
603	FJ04006004178	screw M8*12
604	FJ02003003545	Balancer Belt A-686
605	FJ04009004889	Outer hex bolt M8*65
606	FJ04002003915	Flat washer 8*30*3
607-50	DD04009001883	Capacitance 50uF/450V(option)
608	FJ04002003800	Flat washer 10*20*2
609	FJ04002003773	Flat washer 10
610	FJ04009004770	Outer hex bolt M10*25
611	FJ04009004883	Outer hex bolt M8*35
612	FJ04008004515	Nut M8
613	FJ04002003910	Flat washer 8*22*2
614	JZ09001022782	Motor Rubber Buffer 10*30*4
200-615	JZ03001015423	Motor support 0.75KW/1.1KW
617	FJ04002003792	Flat washer 8
200-618	JZ09001022782	Motor Rubber Buffer 10*30*4



(Fig.16-11)

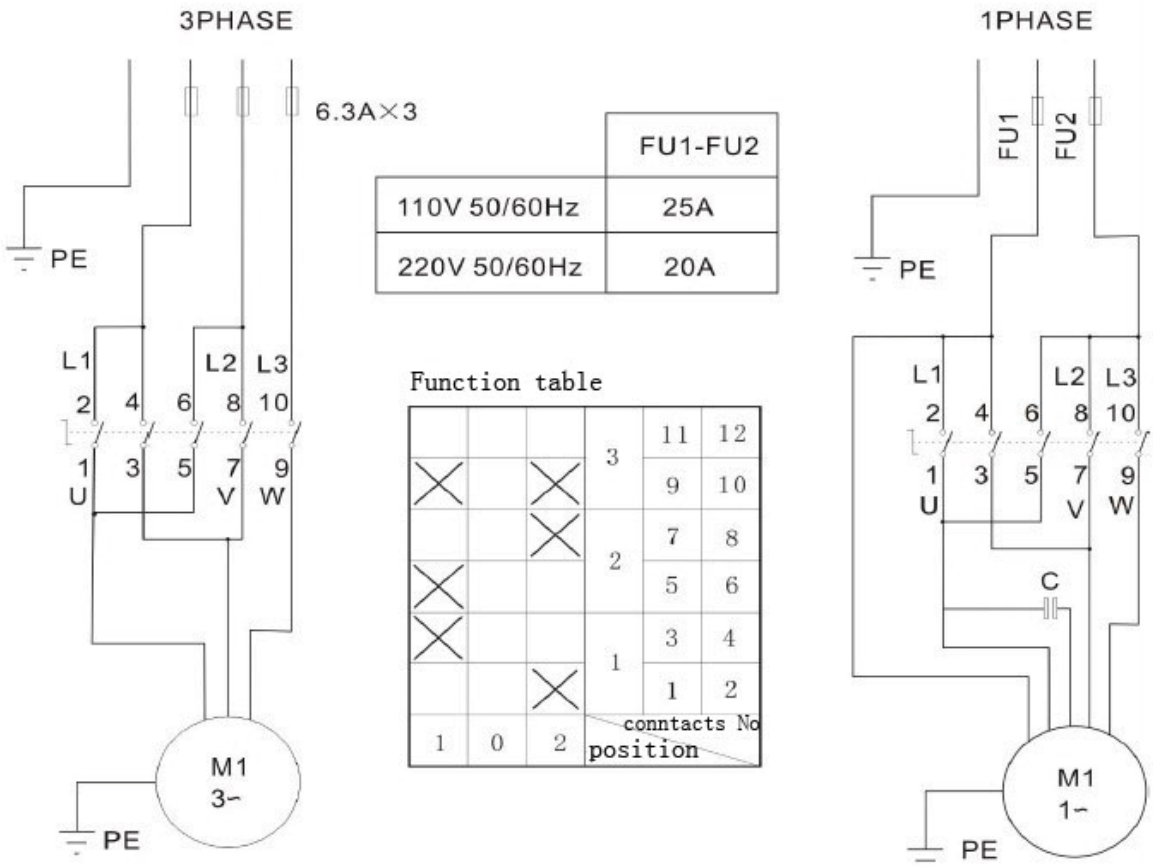
701	EQ05001002961	Digital inflating gun 0-10Bar/TG-7
702	JZ09001022984	Helical hose 8*5*2500
703	EQ14003003478	Notch nut G1/4
704	EQ07005003072	Straight union 2*G1/4 external thread
705	FJ04002003822	Flat washer 13*24*1
706	EQ03003002911	Pressure adjust valve
707	EQ10004003257	Quick coupler
708	JZ06001020203	Complete inflating gun, with pressure adjust valve



(Fig.16-12)

801	EQ11005003350	Quick elbow
802	Decide by Type of Quick nozzle	Quick nozzle
803	Decide by Type of Quick nozzle	Complete oil fog maker 2000

17. Circuit diagram:



	FU1-FU2
110V 50/60Hz	25A
220V 50/60Hz	20A

Function table

			3	11	12
X		X		9	10
		X	2	7	8
X				5	6
X			1	3	4
		X		1	2
1	0	2	conntacts No position		

18. Pneumatic drawing: