



REDBACK RB204 TYRE CHANGER

INSTRUCTION & MAINTENANCE MANUAL



**Read this entire manual carefully and completely
before installation or operation of the tyre 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.

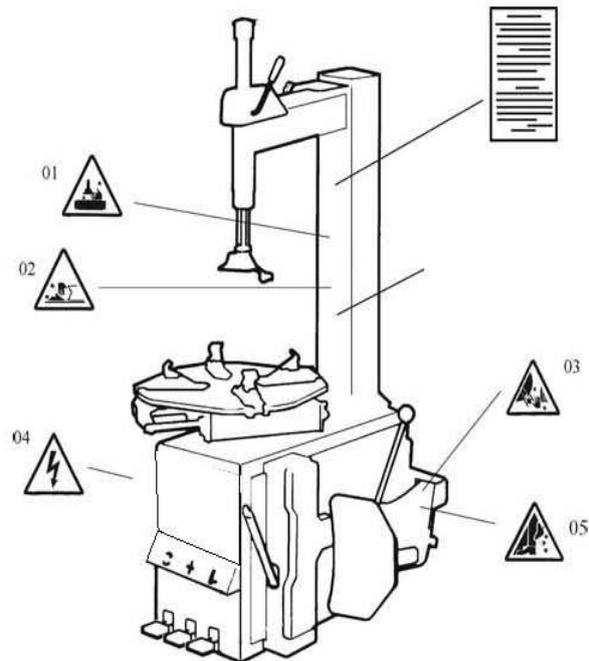
1. Introduction:

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; warranties exclude 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	0.75/0.55/1.1 kw
Max. Rotating Torque (Turntable)	1078 Nm
Overall Dimension	960*760*930mm
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.

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.

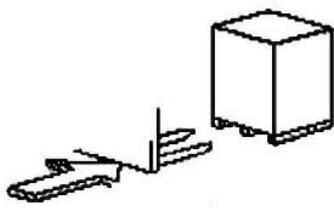


Fig 1

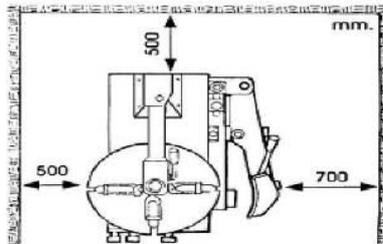


Fig 2

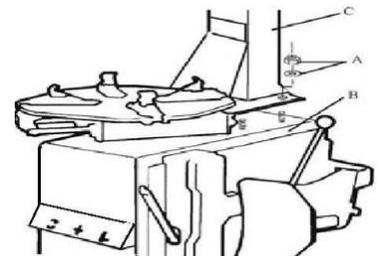


Fig 3

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.

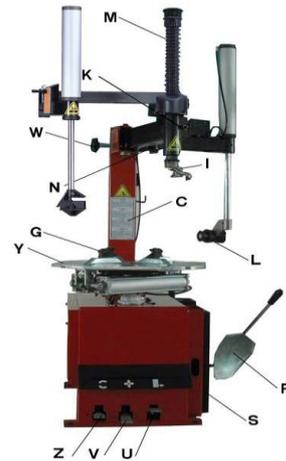


Fig 4

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.

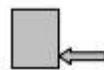
Connect the compressed air connector which is on the machine right side with compressed air system. The electric grid that the machine connects to must have fuses protection device and good outer cover grounding protection. Install the leakage automatic air switch on the main power supply, leakage current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

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.

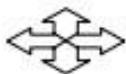
9. Adjusting operation:



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 (R) close toward inside; release Bead Breaker Pedal (U), Bead Breaker shovel (R) 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, the four jaws stop moving.

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

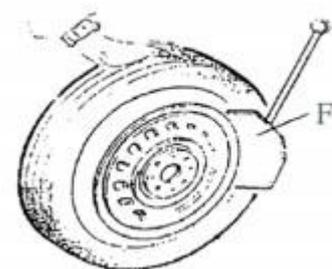


Fig 5

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 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.

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

Caution: Check to make sure the wheel firmly secured by the four jaws 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 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.

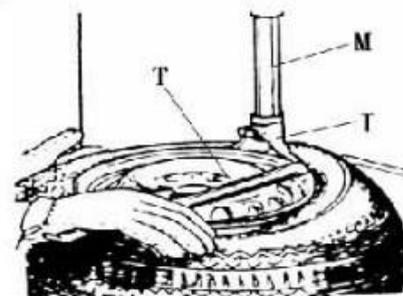


Fig 6

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.



Fig 7

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 tyre 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)

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 tyre 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;

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.

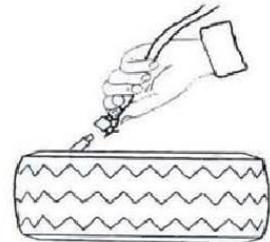


Fig 8

Note:

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.

Note: 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.

- 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 jaws.
- 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, otherwise adjust the screw (D) that controlled oil enter with minus screwdriver. (Fig 9)

- 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.

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

Note: 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.

Note: 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).

Note: 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; (Fig 13)
3. Clean the mufflers with compressed air, please replace it referring to the spare parts list if it is damaged. (Fig 13)

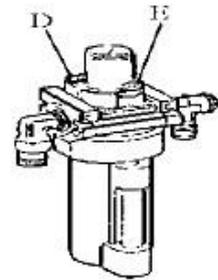


Fig 9

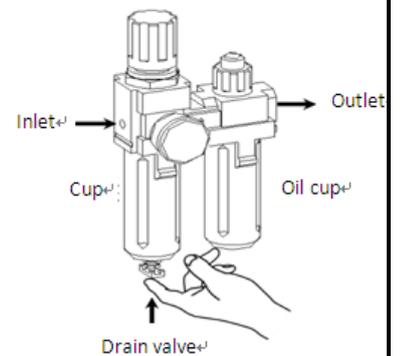


Fig 9-1

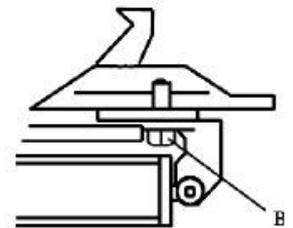


Fig 10

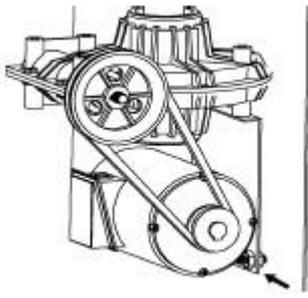


Fig 11

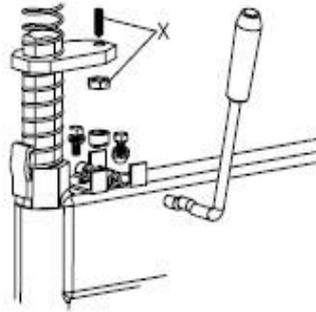


Fig 12

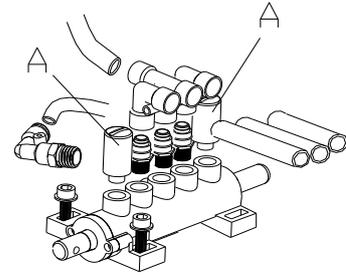


Fig 13

13.009 Help Arm

009 help arm is auxiliary device of tyre changer for helping operator to demount / mount tyre much easier.

Warning: Before install this help arm to the tyre changer, please make sure which is matched with the tyre changer. This help arm device must be used together with our tire changers, we are not sure it can work with other supplier tyre changers.

Warning: Before any operation of this machine, the operator is requested to read the manual carefully. Do not attempt any operations that are not stated in it. Manufacturer will not be responsible for any injury or damage caused by improper operation. Please keep the manual handy for consulting.

13.1 Technical data

Work Pressure	8~10 bar
Weight	20kg
Package dimension	820*300*260mm
Noise Level	LpA<75dB

13.2 Transport:

Moving the machine with help arm device by using the proper forklift shown as Fig 14

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.

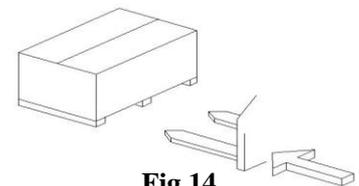


Fig 14

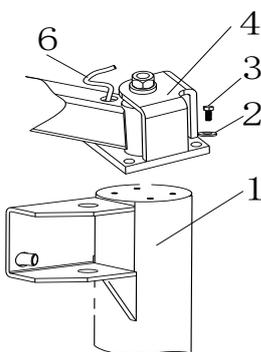


Fig 15

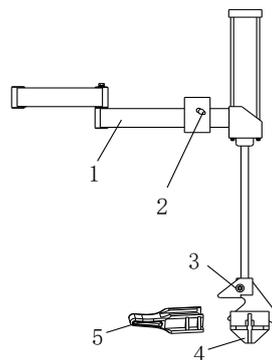


Fig 16



Fig 17

13.3 Installation

NOTE: the help arm device should be assembly by the professional person. Before install this device, please make sure to disconnect the tyre changer from the electricity power supply and pneumatic power supply.

The help arm is auxiliary device of tyre changer, please make sure the working space has been reserved as manual required.

Please install the help arm on the tyre changer(Fig 15):

Disconnect the electricity & pneumatic power supply;

Move the left cover on the tyre changer machine body;

Install the fixing plate (4) of the help arm on the top of tyre changer column (1) with 4 bolts (3)

Take 6mm air hose (6) through the hole of tyre changer right side, and connect with the T-union of air source supply.

13.4 Components

All the functional parts of the this auxiliary device shown as Fig 16

- | | |
|-------------------------------|--------------------------------|
| 1, rotating arm | 2, rise-fall switch handle |
| 3, tire pressing head (upper) | 4, tire pressing head (bottom) |
| 5, tire lifting roller head | |

The specifications for switch handle of help arm 009: (shown as in Fig 16)

The rise-fall switch handle (2, Fig 16) is to control the tyre pressing devices for adjusting the height of tyre dismounted or mounted.

13.5 Safety warning

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 picture 17 shows) at any necessary positions.

13.6 009 Help Arm operation:

Demount and mounting a wide flat tyre is never that easy, with the proper operation of Auxiliary arm system to demount and mounting tyre from wheel rim makes the job simpler. Auxiliary arm system can be used with normal tyres as well. First of all, follow the instruction manual to fix the tyre in position. During the demounting & mounting process, the advice provides the following miscellaneous function:

13.6.1 Fixing the tire

Lower the tyre pressing devices (3, 4 Fig 18) next to the rim center, press the rim down to firmly fix the tyre in place, this method can fix the tyre more stable.

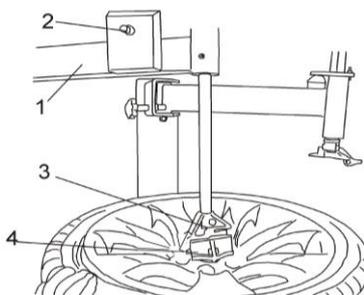


Fig.18

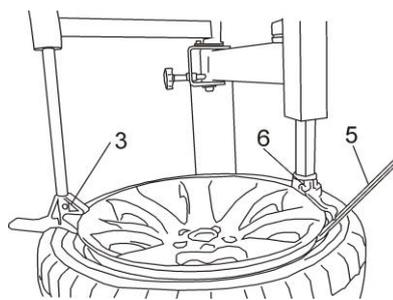


Fig.19

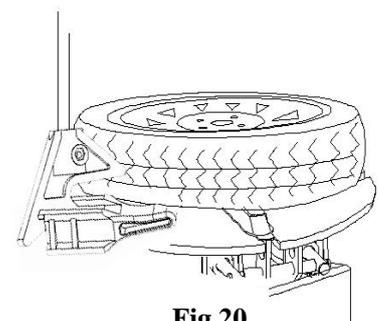


Fig.20

13.6.2 Demounting the tire

1) Breaking upper tyre bead

Remove tyre pressing device (down) (4 Fig 18), rotate arm (up) (1, Fig 18) to set tyre pressing device (up) above the tyre, lower tyre pressing device (up) by rise-fall switch handle (2, Fig 18) to fit the arc between tyre and pressing device (up), press down the tyre bead (do not to press the rim). Rotate the turntable; pressing device (up) will follow in synchrony. This will loosen the upper tyre bead, repeat this process if necessary to achieve the best result.

(Fig.18)

Attention: Lubricate the tire pressing device and the bead to prevent scratching the tyre.



Fig 21

2) Demounting upper tire.

Move the pressing device (up) close the mounting/demounting head, press the pressing device on the tyre bead by rise-fall switch handle, lubricate the rim edge, insert bead lifting tool (5, Fig 19) to detach tyre and rim. Raise pressing device (up) to the opposite, press down the rise-fall switch handle to enable pressing head (up) to depress tyre about 4-6cm from the rim which make enough space for the opposite site. Use lift lever to lift the bead out then hang the bead on the mounting/demounting head, lubricate the tire. Rotate the turntable, dismount the upper tyre bead. Fig.19

3) Detach tyre

Use the end of pressing head (up) with tyre pressing device to lift up the tyre from rim; Use bead lifting tool flip up the bottom tyre edge and hang it on the mounting/demounting head. Remove pressing head (up), depress the power supply pedal to rotate the turntable and completely detach the tyre out from tyre rim. Fig.20

13.6.3 Mounting the tire

While mounting the tyre, move the auxiliary tire pressing head (up) near the mounting/demounting head (distance 3-4cm), lower "tire pressing head (up)" to press down the tyre 3-5cm below mounting/demounting head, rotate turntable, tire pressing head (up) will follow in synchrony as to rotate and press the tyre down in tyre rim, no intervention is needed during this process. (Fig 21)

Attention:

- 1) To prevent collision of help arm and mounting/demounting head, do not excessive rotate turntable while using help arm;
- 2) Make sure the tire pressing head (up) never press on the tyre rim, the friction between them will damage the tyre rim! Keep your hands away from the tire pressing head (up)!

14. 098 Helping arm application:

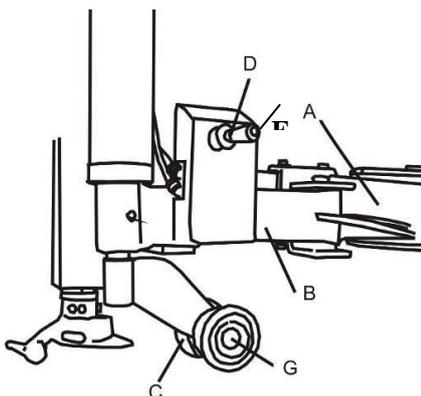


Fig 22

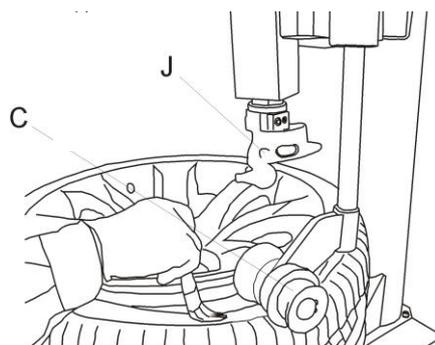


Fig 23

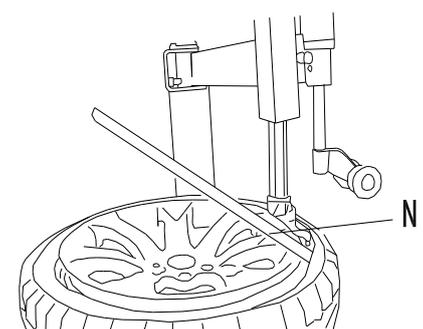


Fig 24

Helping arm at right side is auxiliary device of tyre changer for helping operator to demount and mount tyre.

14.1 098 help arm Components

Each components of helping arm device are introduced as follows:

- A- Swing arm B- Small helping arm
 C- Roller C D- Raise-fall roller handle
 F- Locking switch for helping arm G- Roller G

The function of helping arm's control handle is as follows:

Roller lifting handle (D, Fig22) is for lifting and lowering roller C、G so as to adjust tyre demounting / mounting vertical height. Operate handle (D, Fig 22) up, then roller C、G goes up; Operate handle (D, Fig22)down, then roller C、G goes down.

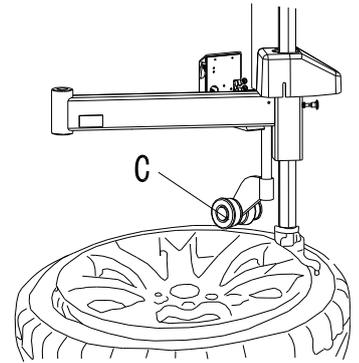


Fig 25

14.2 098 Operation

It is difficult to demount and mount big low profile tyre. If operation is proper, it is very easy to use helping arm device to demount and mount tyre from rim. The helping arm device may also be used when demounting and mounting normal tyre with resistance.

a. Clamp rim

Firstly, press both side tyre loose as per operation instruction in user's manual. Force of demounting and mounting is big when helping arm device is used. And rim may be damaged easily. It is recommended that to clamp rim from outside (jaw protector may be installed on jaws) . Tread relevant pedal to make jaws open to clamp edge of rim, move helping arm's rotary arm to far-end. Put on tyre, tread relevant pedal to make jaws close and to approach rim

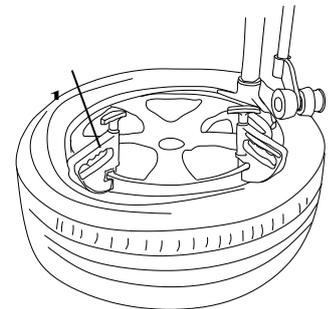


Fig 26

b. Demount tyre

1. Press tyre with right pressing roller C,G to a position 3cm lower than rim edge, lubricate tyre bead, rotate turntable, lift roller C,G. (Fig 23)
2. Move demounting/mounting head close to edge of rim, keep a 2-3mm gap between demounting/mounting head and rim plane, operate locking handle (K, Fig 4) to lock vertical arm, adjust screw bolt in column to position swing arm, make sure 2-3mm gap between demounting/mounting head and rim edge side
3. Nearby demounting/mounting head, insert lift lever N into tyre, use lift lever to lift bead upon knob of demounting / mounting head. Fig24 Manually rotate roller C to inner side, pull handle D down, make roller C to press rim , keep 3-5mm gap between demounting/mounting head and rim, make sure demounting/mounting head not damage rim, rotate turntable, demount tyre upper bead (Fig 25)
4. Push handle D up, lift roller C,G, press switch F, loosen right pressing arm, Lift tyre up, insert lifting level into bottom tyre bead nearby demounting/mounting head, lift bead upon knob of demounting / mounting head and rotate turntable to demount down tyre bead.

c. Mount tyre

1. Lubricate tyre and rim edge with lubricant to avoid damage of tyre. Adjust height of demounting/mounting head and make tyre bottom bead upon rear of demounting/mounting head and below front of demounting/mounting head. Rotate turntable to mount bottom bead.
2. Make tyre top bead upon rear of demounting/mounting head and below front of demounting/mounting head, move right pressing arm and make sure it is locked, pull handle D down to make roller C,G to press top bead to position below demounting/mounting head. Lock pressing block 1 on rim edge, rotate turntable, finish tyre mounting. Fig 26

15. 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 Hexagonal 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 difficulty.	Jammed silencer	Clean it or replace it.
	The washer on the Bead Breaker cylinder is broken.	Replace it.

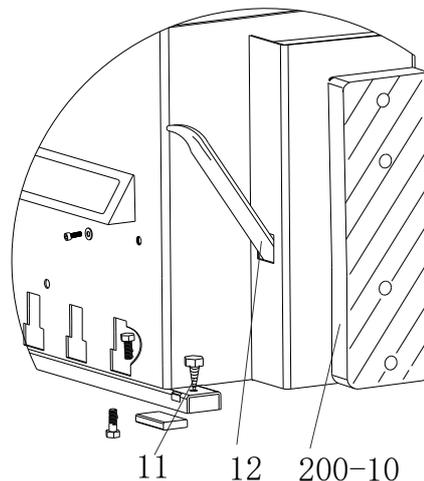
16. Guide for ordering spare parts

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 exploded drawing 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	B-027-060401-0	Grounding screw M6x40
12	C-200-580000-0	Lifting level
200-13	C-200-360000-0	Bead breaker arm spring

The recorded information:

12	C-200-580000-0	Lifting level
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3. Gather the detailed information of parts

Code .	Order code	Name	Qty	Purchase time of machine
12	C-200-580000-0	Lifting level	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.

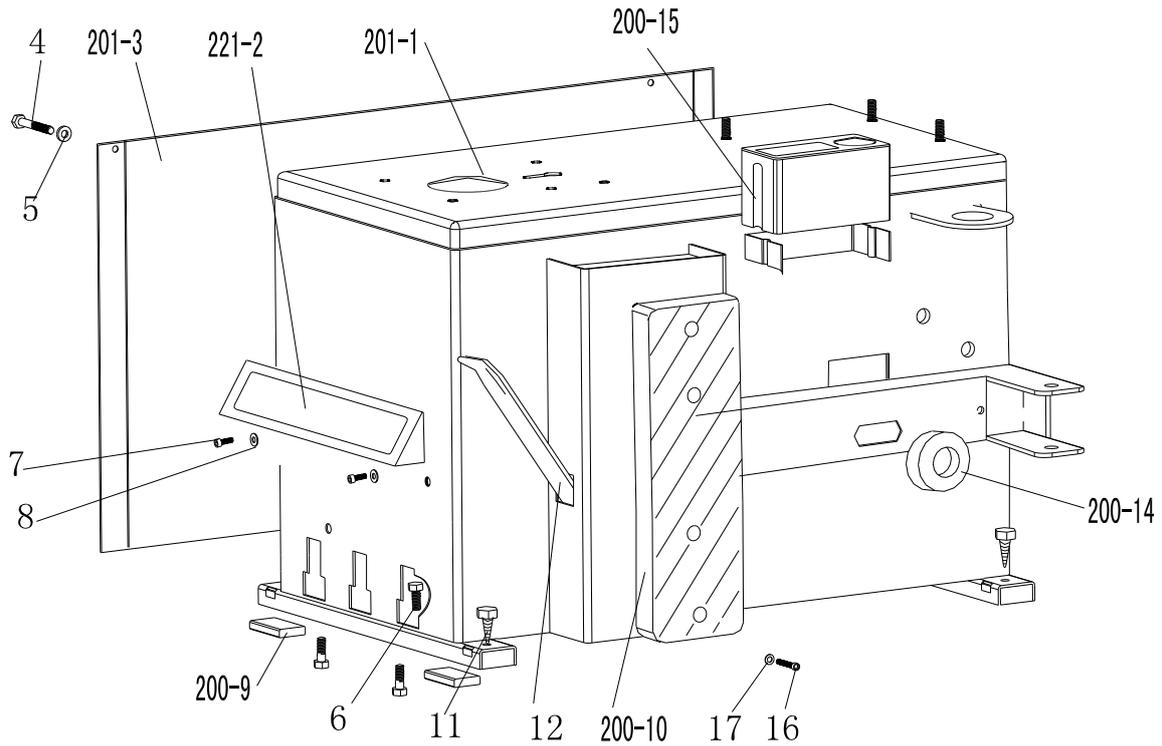
◆Manufacturer do not liable for the modification and improvement of the products which have been sale

17. Wearing spare parts list

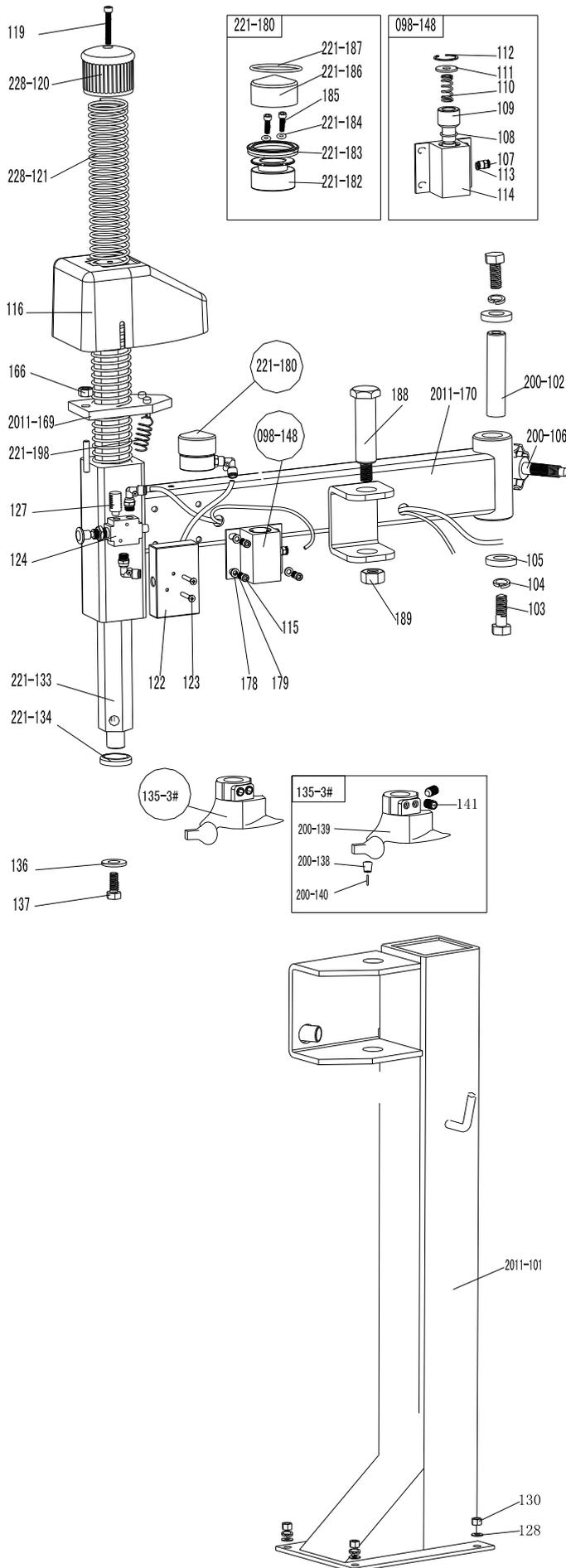
Code	Order code	Name	Code	Order code	Name
200-10	C-200-500000-0	Bead breaker buffer	311	S-005-168115-0	V seal 185×168×10.8
108	S-000-030355-0	O seal 30×3.55	200-321	S-000-175500-0	O seal Ø173.4×5.3
221-187	S-000-052200-0	O seal Ø52*2	331	S-000-019262-0	O- seal Ø 19.6*2.62
226	S-005-020075-0	V seal 20*28*7.5	200-426	S-060-016000-1	Reverse switch
227	S-000-063265-0	O seal 63*2.65	521	S-000-030355-0	O seal Ø 30*3.55
200-228	C-200-540000-0	Clamping cylinder pistonØ70	200-532	S-000-059262-0	O seal 59.9*2.62
232	S-000-019262-0	O seal Ø19.6×2.62	604	S-042-000686-0	Tyre changer belt A-28
306	S-000-016265-0	O- seal Ø 16*2.65	702	C-200-900000-0	Air hose
307	S-000-020265-0	O- seal 20*2.65	801	S-033-200002-1	Relief pressure filter
200-308	S-000-180500-0	O- seal 180×5	804	S-033-200002-2	oil fog maker

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

18. Exploded drawing:

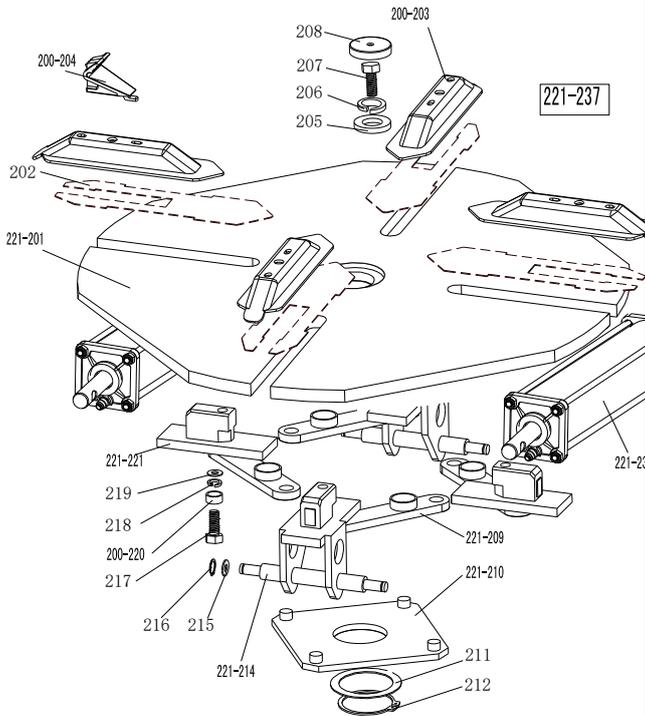


201-1	CX-201-010000-0	Machine body
221-2	CX-221-080000-0	Pedal front cover
201-3	CX-201-020000-0	Left cover
4	B-010-060101-0	Hex socket head bolt M6×10
5	B-040-061412-1	Flat washer Ø6*14*1.2
6	B-014-080251-0	Outer hex bolt M8x25
7	B-010-080201-0	Outer hex bolt M8×20
200-9	C-000-001020-0	Rubber foot buffer
200-10	C-200-500000-0	Bead breaker buffer
11	B-027-060401-0	Grounding screw M6x40
12	C-200-580000-0	Lifting lever
200-13	C-200-360000-0	Bead breaker arm spring
200-14	C-200-510000-0	Bead breaker arm rubber
200-15	C-200-470000-0	Oil-water box
16	B-010-080201-0	Hex socket head bolt M8x20
17	B-040-081715-1	Flat washer Ø 8*17*1.5

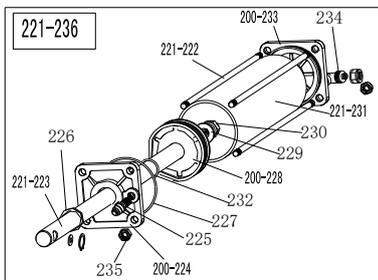


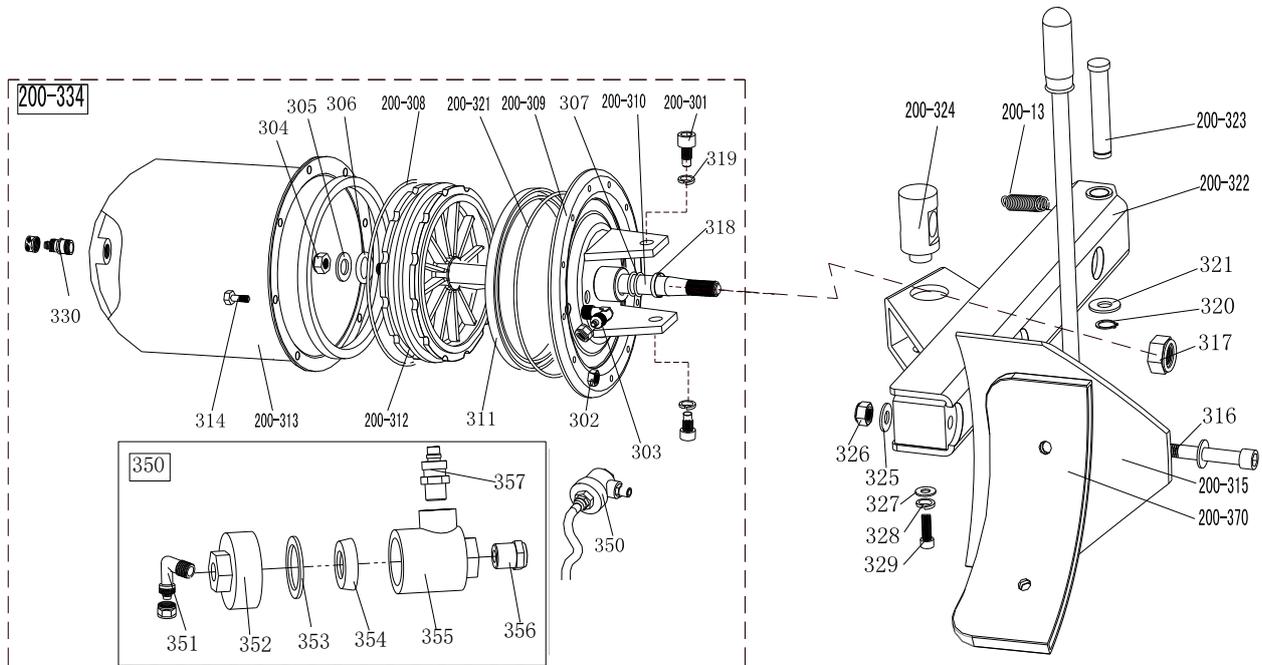
2011-101	CX-211-250000-0	Square column
200-102	CX-200-190000-0	Swing arm pin
103	B-014-140351-0	Outer hex bolt M14x35
104	B-050-140000-0	Spring washer Ø14
105	CX-200-140000-0	Big washer
200-106	C-200-350000-0	Column adjust handle
107	S-010-050004-0	Quick straight union M5- Ø 4
108	S-000-030355-0	O-seal 30X3.55
109	CX-098-080400-0	098 Swing arm spring plate
110	C-007-180700-0	098 Swing arm spring
111	B-040-083030-1	Flat washer 8*30
112	B-055-300002-0	Snap ring Ø30(hole)
113	S-000-006300-0	O-seal Ø 6*3
114	CX-098-080000-0	098 Pneumatic lock barrel
115	B-010-060201-0	Hex socket head bolt M6X20
116	C-298-480000-0	Locking plate cap
119	B-010-100301-0	Hex socket head bolt M10x30
228-120	C-228-490000-0	Vertical arm cap
228-121	C-200-390000-0	Vertical arm spring
122	C-098-090000-0	Locking switch box
123	B-017-040301-0	Cross head screw M4*30
124	S-030-010414-2	Hand valve
127	S-023-010801-0	Muffler 1/8"
221-133	CX-221-160000-0	Vertical arm
221-134	C-228-520000-0	Vertical arm washer
135-8#	CW-113-259200-0	Complete mount/demount head 8#
136	C-2592-150000-0	Mount/demount head flat washer
137	B-014-100251-0	Outer hex bolt M10x25
200-139	C-203-150100-3	Mount/demount head 8#
141	B-007-120121-0	Hex socket head bolt M12X12
142	B-007-100121-0	Hex socket head bolt M10X12
2592-123	C-2592-150500-0	Mount/demount head flat protector
200-140	C-200-150400-0	Hex round pin
2592-125	C-2592-150300-0	Mount/demount head protection pad
098-148		098 Pneumatic lock
166	B-001-100001-0	Self-locking nut M10
2011-169	CX-298-220000-0	Hex locking board 2011
2011-170	CX-211-180000-0	Swing arm 2011
178	B-040-061210-1	Flat washer Ø6
179	B-050-060000-0	Spring washer Ø6
221-180		Complete locking cylinder
221-182	C-221-090100-0	Locking cylinder piston
221-183	S-005-050065-0	V-seal 60*50*6.5
221-184	S-000-006300-0	O- seal Ø 6*3
185	B-010-060551-0	Hex socket head bolt M6x55
221-186	CX-221-090200-0	locking cylinder cover Ø 60

221-187	S-000-052200-0	O-Seal Ø52*2
188	CX-098-030000-0	Pressing arm pin (right)
189	B-001-160001-1	Self-locking nut M16*1.5
221-198	C-221-400000-0	Hex locking board spring



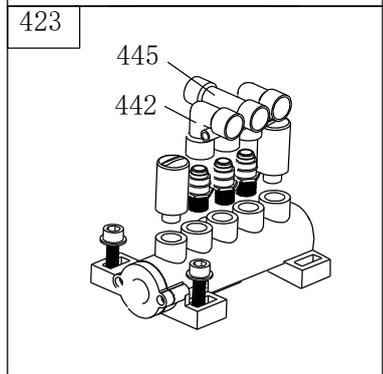
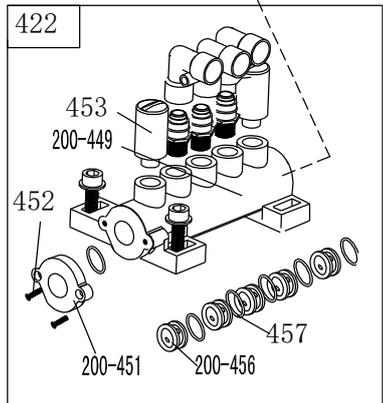
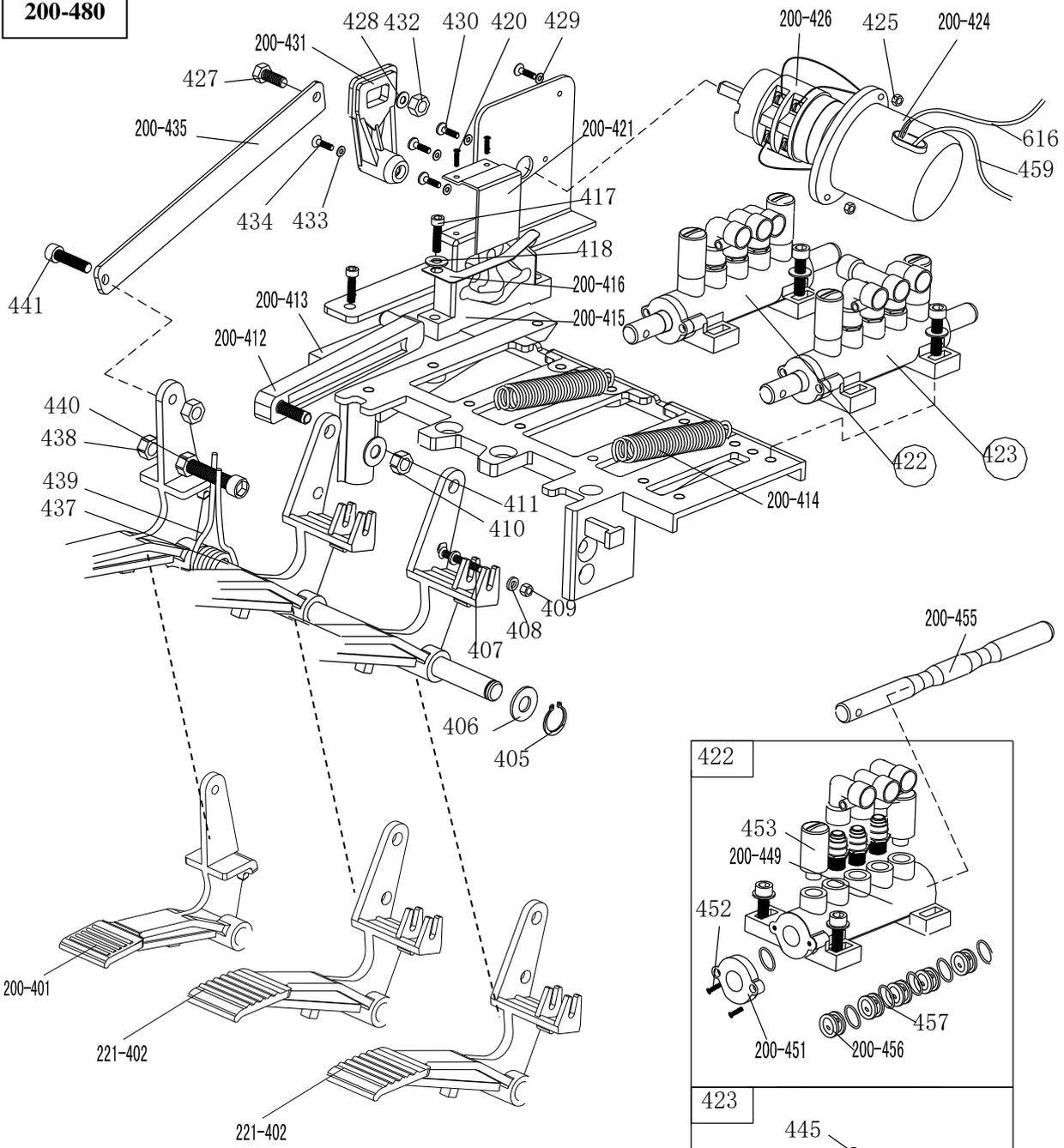
221-201	CX-221-130000-0	Turntable assembly 615
202	CX-221-120300-0	Jaw sliding plate(optional)
200-203	CX-200-120000-0	Jaw cap assembly
200-204	C-200-570000-0	Jaw 200
205	CX-200-140000-0	Big washer
206	B-050-160000-0	Spring washer Ø16
207	B-014-160401-0	Outer hex bolt M16×40
208	C-200-440000-0	Turntable cap
221-209	CX-221-310000-0	Connection rod assembly 615
221-210	CX-221-280000-0	Square turntable 615
221-211	CX-200-290000-0	Square turntable washer
221-212	B-055-650001-0	Snap ring Ø65(shaft)
221A-214	CX-221-110000-A	Jaw slide guide with pin
221-215	B-040-122520-1	Flat washer Ø12X25X2
221-216	B-055-120001-0	Snap ring Ø12(shaft)
221-217	B-014-120801-0	Outer hex bolt M12×40
221-218	B-046-122050-1	Teeth locking washer Ø12x20.5x1
221-237	CW-104-021100-0	Complete square turntable 615
221-219	B-040-123030-1	Flat washer Ø12X30X3
200-220	CX-200-300000-0	Connection rod nut
221A-221	CX-221-110100-A	Jaw slide guide without pin
221-222	C-221-100400-0	Threaded connection rod 393
221-223	C-221-100200-0	Clamping cylinder piston rod 400
200-224	C-200-100100-0	Clamping cylinder cover without handle
225	S-011-010808-0	Straight union 1/8"-Ø8
226	S-005-020075-0	V- seal 20*28*7.5
227	S-000-063265-0	O-seal 63*2.65
200-228	C-200-540000-0	Clamping cylinder piston φ70
229	B-040-122520-1	Flat washer Ø12X25X2
230	B-004-120071-1	Nut M12X7X1.75
221-231	C-221-100500-0	Clamping cylinder barrel 360
232	S-000-019262-0	O-seal 19.6X2.62
200-233	C-200-100300-0	Clamping cylinder cover with handle
234	S-018-010808-0	Union 1/8-Ø8
235	B-001-080001-0	Self-locking nut M8
221-236	CW-105-021100-0	Complete clamping cylinder





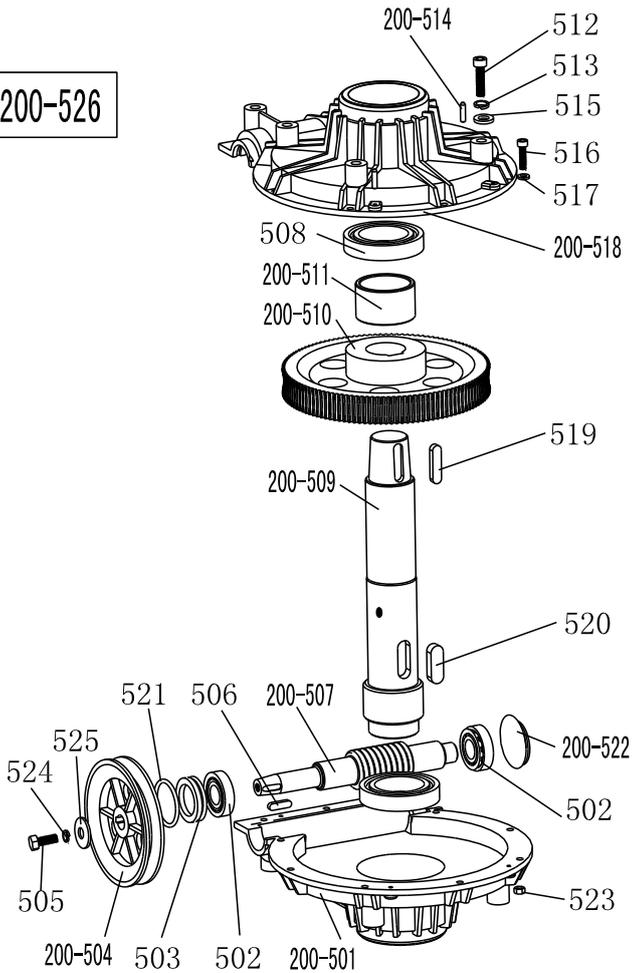
200-13	C-200-360000-0	Bead breaker arm spring	320	B-055-160001-0	Snap ring Ø16
200-301	B-010-140301-0	Hex socket head bolt M14×30	200-321	S-000-180500-0	O-seal 180x5
302	B-001-060001-0	Self-locking nut M6	200-322	CX-200-030000-0	Bead breaker arm 200
303	S-018-010408-0	Union (90°)1/4-Ø8	200-323	CX-200-040000-0	Bead breaker pin
304	B-004-160001-1	Nut M16*1.5	200-324	CX-200-050600-0	Bead breaker cylinder rotating pin
305	B-040-162820-1	Flat washer Ø16*28*2	325	B-040-122520-1	Flat washer Ø12*24*2
306	S-000-016265-0	O-seal Ø 16*2.65	326	B-001-120001-0	Self-locking M12
307	S-000-020265-0	O-seal Ø 20*2.65	327	B-040-083030-1	Flat washer Ø8*30*3
200-308	S-000-175500-0	O-seal Ø170.8x5.33	328	B-050-080000-0	Spring washer Ø8
200-309	CX-200-050500-0	Bead breaker cylinder cover assembly	329	B-014-080201-0	Outer hex bolt M8×20
200-310	C-200-050100-0	Bead breaker cylinder piston rod	330	S-011-010808-0	Straight union 1/8-Ø8
311	S-005-168115-0	V-seal 185X168X10.8	331	S-000-019262-0	O-seal Ø 19.6*2.62
200-312	C-200-050200-0	Bead breaker cylinder piston	350	CW-112-209800-0	Bead breaker cylinder exhaust valve
200-313	CX-200-050300-0	Bead breaker cylinder barrel	351	S-012-010808-0	Union (90°)1/8-Ø8
314	B-010-060161-0	Hex socket head bolt M6×16	352	C-098-600200-0	Bead breaker cylinder exhaust valve cover
200-315	CX-200-070000-0	Bead breaker shovel assembly	353	C-098-600400-0	Seal washer
316	B-010-120901-0	Hex socket head bolt M12×90	354	C-098-600300-0	Bidirectional seal
317	B-004-160001-1	Self-locking nut M16*1.5	355	C-098-600100-0	Bead breaker cylinder exhaust valve barrel
318	U-006-000001-1	Guide belt	356	S-023-010401-6	Muffler
200-370	C-200-070600-0	Bead breaker shovel protection cover(optional)	357	S-010-010408-0	Straight union 1/4- Ø8
319	B-050-140000-0	Spring washer Ø14	200-334	CW-108-020000-0	Complete bead breaker cylinder

200-480

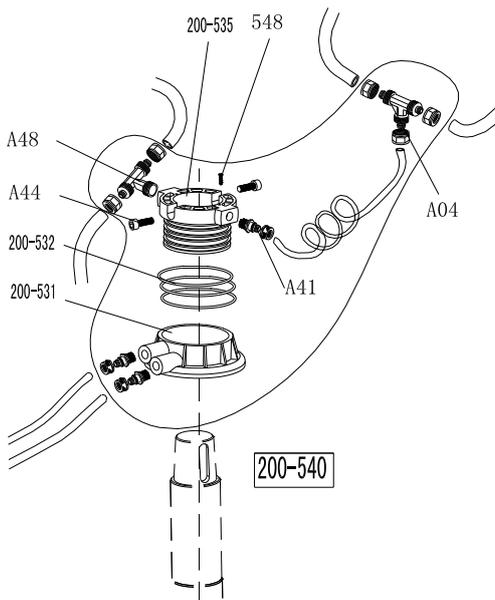


200-401	C-200-060400-0	Reverse switch pedal	428	B-040-061210-1	Flat washer Ø6X12X1
221-402	C-221-060300-0	5-way valve pedal(right)	429	B-040-040000-1	Flat washer Ø4
405	B-055-120001-0	Snap ring Ø12	430	B-024-040161-0	Cross-round head screw M4*16
406	B-040-122520-1	Flat washer Ø12*24*2	200-431	C-200-530000-0	Reverse switch handle
407	B-017-040301-0	Cross head screw M4X30	432	B-001-060001-0	Self-locking nut M6
408	B-040-040000-1	Flat washer Ø 4	433	B-040-030000-1	Flat washer Ø3
409	B-001-040001-0	Self-locking nut M4	434	B-024-030161-0	Cross head screw M3X16
410	B-001-080001-0	Self-locking nut M8	200-435	CX-200-060600-0	Pedal connection rod
411	B-040-081715-1	Flat washer Ø8*17*1.5	437	CX-200-060700-0	Pedal front shaft
200-412	C-200-061300-0	Cam connection rod	438	B-004-080001-0	Nut M8
200-413	C-200-060100-0	Pedal support board	439	C-200-370000-0	Pedal twist spring
200-414	C-200-380000-0	Pedal Spring	440	B-010-080501-0	Hex socket head bolt M8×50
200-415	C-200-061500-0	Cam	441	B-010-080201-0	Hex socket head bolt M8×20
200-416	C-200-810000-0	Cam washer	442	S-012-010808-0	Quick nion 1/8- Ø 8
417	B-010-060201-0	Hex socket head bolt M6×20	445	S-016-010808-2	T-union1/8-2* Ø 8
420	B-019-290121-0	Cross head self tapping screw ST2.9*12	200-449	C-200-060901-0	5-way valve (left)
200-421	CX-200-060500-0	Cam cover	200-451	C-200-061100-0	5-way valve cover
422	CW-110-020000-0	5-way valve (L-union,without rod)	452	B-024-290121-0	Cross head screw ST2.9*14
423	CW-110-020001-0	5-way valve (T-union,without rod)	453	S-023-010801-0	Muffler 1/8"
200-424	C-200-061400-0	Reverse switch cover	200-455	CX-200-061200-0	5-way valve rod
425	B-004-040001-1	Nut M4	200-456	C-200-061000-0	5-way valve rod spacer
200-426	S-060-016000-1	Reverse switch	457	S-000-012400-0	O-seal 12*20*4
427	B-010-060201-0	Hex socket head bolt M6×20	200-480	CW-109-020000-0	Complete 3-pedals assembly 200

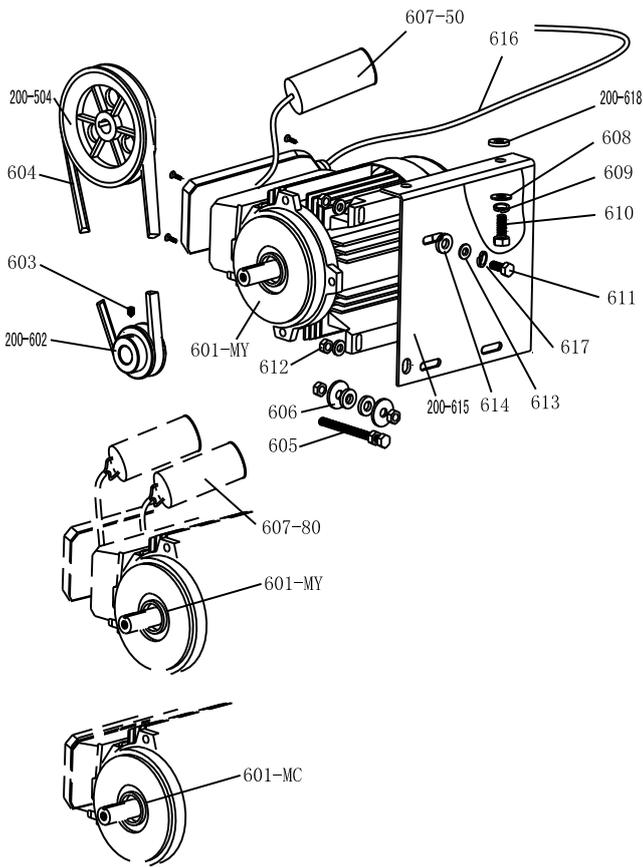
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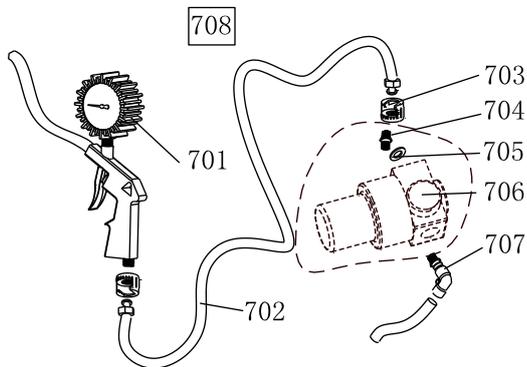
200-501	C-300-320302-0	Gear box lower cover
502	S-040-030204-0	Bearing 30204
503	S-005-020080-1	Gear box seal φ20*35*8
200-504	C-200-320500-0	Gear Belt pulley
505	B-014-080251-0	Outer hex bolt M8×25
506	B-065-006020-0	Key washer 6×20
200-507	C-200-320400-0	Worm rod
508	S-040-006010-0	Bearing 6010
200-509	C-200-320200-0	Worm gear shaft
200-510	C-200-320100-0	Worm gear
200-511	CZ-200-320600-0	Worm gear shaft spacer
512	B-014-100551-0	Outer hex bolt M10×55
513	B-050-100000-0	Spring washer Ø10
200-514	B-060-006020-0	Pin 6X20
515	B-040-102020-1	Flat washer Ø10*20*2
516	B-010-060201-0	Hex socket head bolt M6×20
517	B-040-061412-1	Flat washer Ø 6*14*1.2
200-518	C-300-320301-0	Gear box upper cover
519	B-065-010040-0	Key washer 10×40
520	B-065-014040-0	Key washer 14×40
521	S-000-030355-0	O-seal Ø 30*3.55
200-522	C-200-320700-0	Oil resistant seal
523	B-001-060001-0	Self-locking nut M6
524	B-050-080000-0	Spring washer Ø 8
525	B-040-083030-1	Flat washer Ø 8*30*3
200-526	CW-107-020001-0	Complete gear box



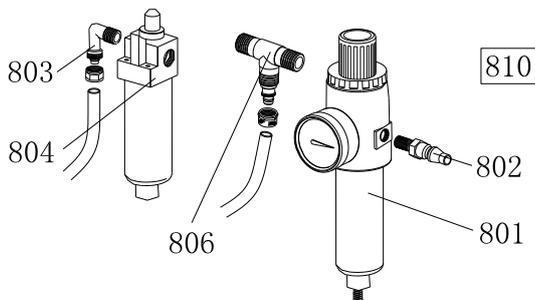
A04	S-015-000008-3	T-union 3* Ø 8
A44	B-010-060161-0	Hex socket head bolt M6×16
A48	S-017-010808-2	Quick T-union 1/8-2*Ø 8
200-531	CX-200-430100-0	Rotating valve casing
200-532	S-000-059262-0	O-seal 59.9X2.62
200-535	CX-200-430200-0	Rotating valve mandrel
537	S-035-055080-0	Hose 5.5* Ø 8
A41	S-011-010808-0	Straight union 1/8-Ø8
548	B-007-040061-0	Hex socket head bolt M4X6
200-540	CW-106-020000-0	Complete Rotating valve



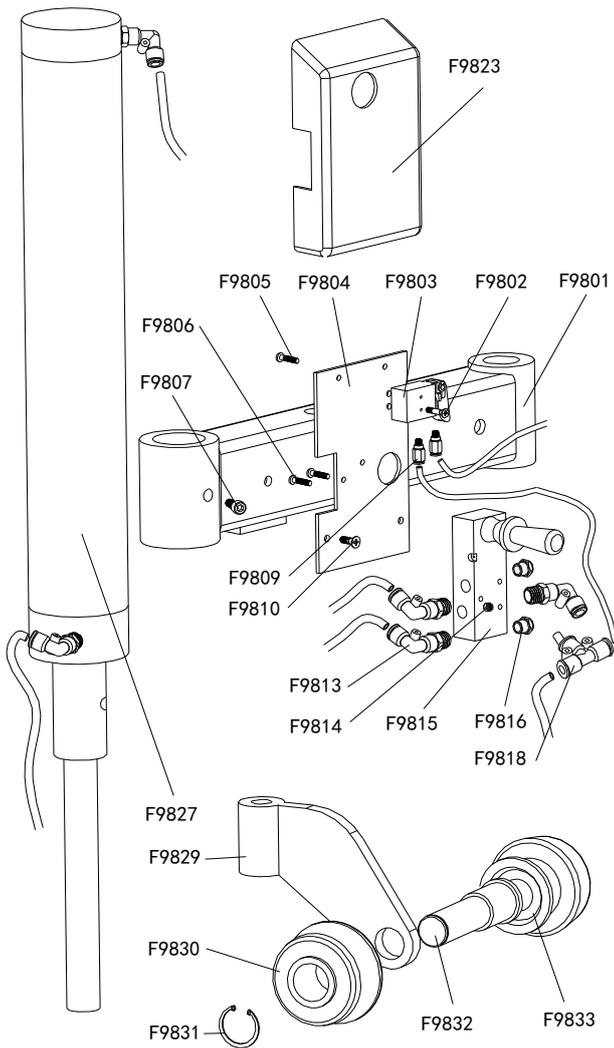
200-504	C-200-320500-0	Gear Belt pulley
601-MC		Motor 220V/50HZ
601-MY		Motor 220v
200-602	CX-200-330000-0	Motor Belt pulley
603	B-007-080121-0	Hex socket head bolt M8x12
604	S-042-000686-0	Tyre changer belt A-28
605	B-014-080651-0	Outer hex bolt M8X65
606	B-040-083030-1	Flat washer Ø8X30X3
607-80	S-063-008000-0	Capacitor 80µf,110V
607-50	S-063-005000-0	Capacitor 50µf,220V
608	B-040-102020-1	Flat washer Ø10X20X2
609	B-050-100000-0	Spring washer Ø10
610	B-014-100251-0	Outer hex bolt M10X25
611	B-014-080351-0	Outer hex bolt M8X35
612	B-004-080001-0	Nut M8
613	B-040-082220-1	Flat washer φ8X22X2
614	C-200-560000-0	Motor rubber washer
200-615	CX-200-340000-1	Motor support
616	CZ-000-205150-0	Motor cable 5x1.0
617	B-050-080000-0	Spring washer φ8
200-618	C-200-560000-0	Motor rubber buffer



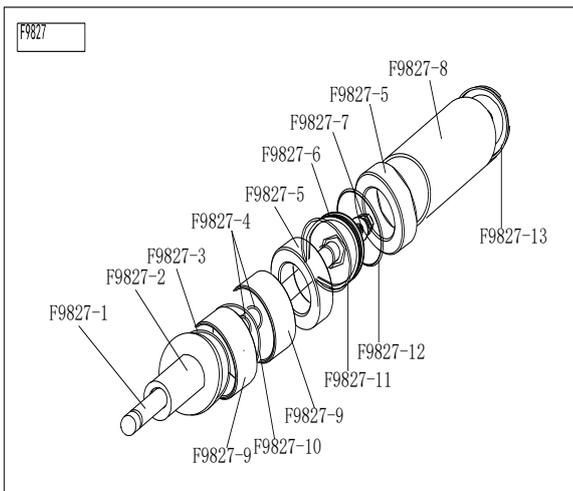
701	S-038-000100-0	Inflating gun indicator
702	C-200-900000-0	Rubber connection hose
703	S-025-104008-0	Notch nut
704	S-025-104008-0	Straight union 1/4-1/4
705	B-040-132420-1	Flat washer Ø13
706	S-030-010400-2	Pressure adjust valve(optional)
707	S-012-010408-0	Quick union 1/4-Ø8
708		Complete inflating gun



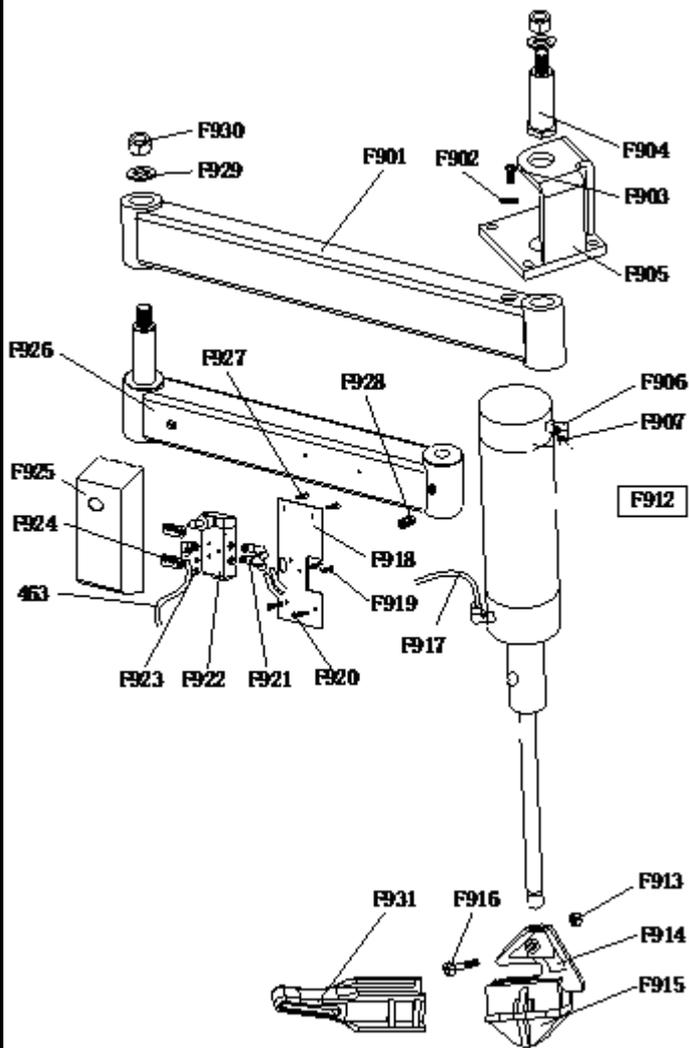
801	S-033-200002-1	Relief pressure filter
802	S-025-000050-0	Quick nozzle
803	S-018-010408-0	Union (90°)
804	S-033-200002-2	Oil fog maker
806	S-015-010408-2	T-union 2X1/4-φ8
810	CW-114-020003-0	Complete oil fog maker



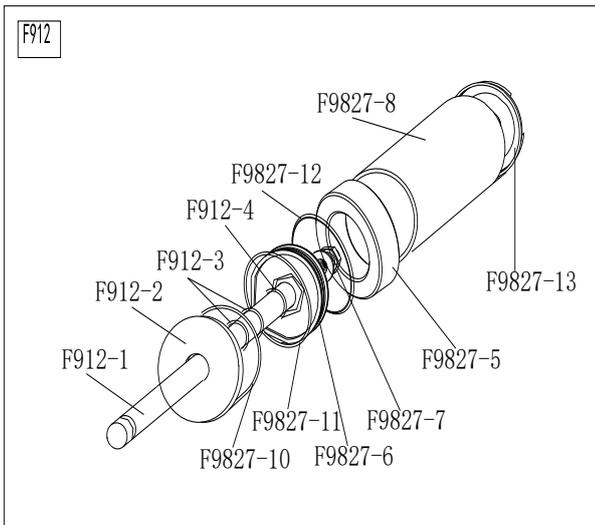
F9801	CX-098-020000-0	098 Pressing arm(right)
F9802	B-024-050101-1	Cross head Screw M5X10
F9803	S-030-010414-0	Pneumatic valve
F9804	CX-005-200000-0	Raise-fall switch base plate
F9805	B-017-040161-0	Cross flat head screw M4*16
F9806	B-017-040301-0	Cross flat head screw M4*30
F9807	B-007-100121-0	Hex socket head bolt M10*12
F9809	S-010-050004-0	Quick straight union M5-Ø4
F9810	B-010-050161-0	Hex socket head bolt M5*16
F9813	S-012-010406-0	Quick union 1/4-Ø6
F9814	B-004-040001-1	Nut (silver) M4
F9815	S-030-010818-0	Raise-fall control valve
F9816	S-023-010801-6	Muffler (brass)
F9817	S-012-010406-0	L-union 1/4-φ6
F9818	S-013-104206-0	T-union 2XØ6-Ø4
F9820	S-017-010806-2	T-union 1/8-2*Ø6
F9823	C-007-181000-0	Control valve protect cover (right)
F9827	CA-005-209800-2	Complete 098 cylinder
F9828	S-012-010406-0	Quick Union 1/4-Ø6
F9829	CX-098-040000-0	Pressing roller bracket suport
F9830	C-098-060100-0	Tyre pressing roller 1
F9831	B-055-300002-0	Snap ring Ø30(hole)
F9832	CX-098-050000-0	Tyre pressing roller shaft
F9833	C-098-060200-0	Tyre pressing roller 2



F9827	CW-105-209800-2	Complete right help arm cylinder
F9827-1	C-098-070400-2	Help arm cylinder piston rod
F9827-2	C-098-070100-0	Help arm cylinder front cover
F9827-3	B-055-400002-0	Snap ring φ40
F9827-4	S-000-030265-0	O-seal φ30*2.65
F9827-5	C-098-070600-0	Right arm cylinder washer U098 Φ31*50*15
F9827-6	C-098-075400-0	Help arm cylinder piston φ70
F9827-7	B-001-120001-0	Self-locking nut M12
F9827-8	CX-009-070300-0	Help arm cylinder barrel
F9827-9	C-098-070500-0	Guide cover φ30*33*15
F9827-10	S-000-063265-0	O-seal φ63*2.65
F9827-11	S-000-063355-0	O-sealφ63*3.55
F9827-12	U-006-000001-0	Guide belt 4*2
F9827-13	CX-098-070200-0	Cylinder back cover

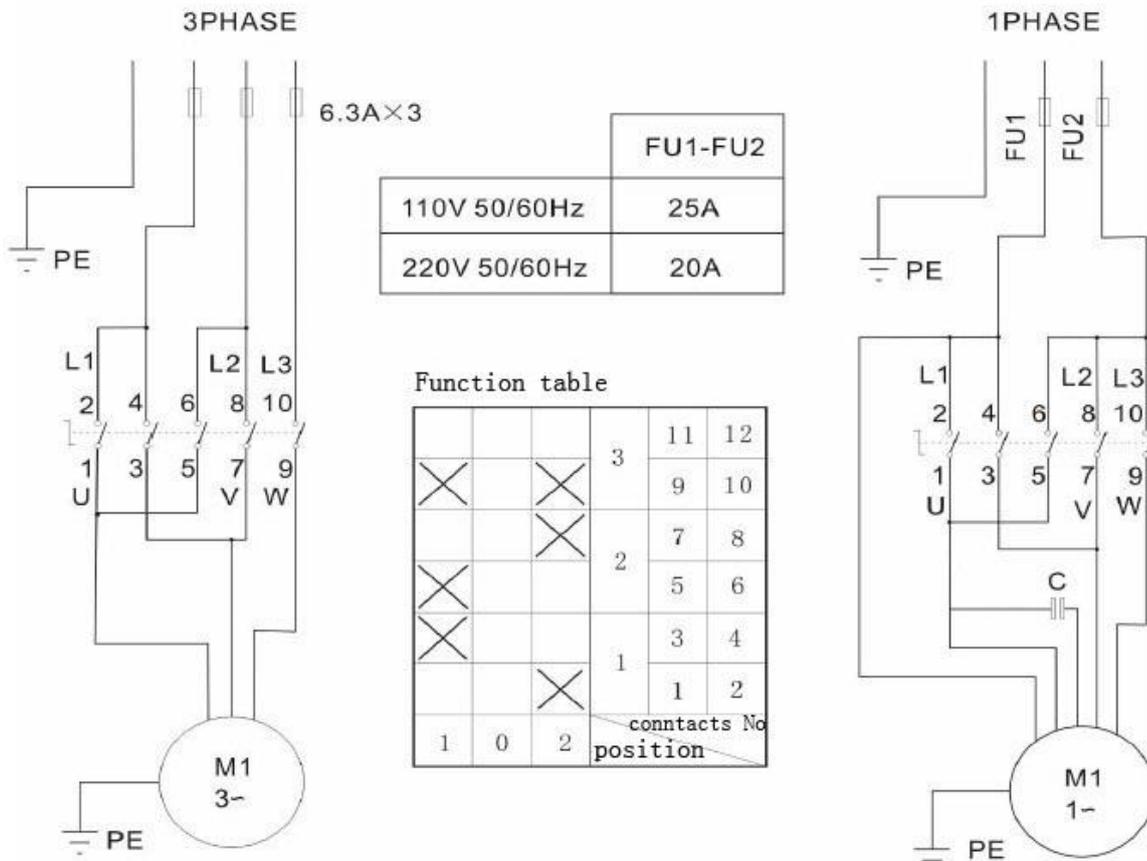


F901	CZ-009-020000-0	009 Pressing arm
F902	B-050-100000-0	Spring washer φ10
F903	B-010-100301-0	Hex socket head bolt M10*30
F904	CZ-009-050000-0	009 Pressing arm pin
F905	CX-009-010000-0	009 Pressing plate
F906	S-012-010806-0	Quick union 1/8-φ6
F907		Air hose(PU)6*4
F912	CW-105-020900-0	Complete 009 help arm cylinder
F913	B-001-060001-0	Self-locking nut M6
F914	C-008-090100-0	Tire pressing head (upper)
F915	C-008-090200-0	Tire pressing head(bottom)
F916	B-010-060301-0	Hex socket head bolt M6*30
F917		Air hose(PU)6*4
F918	CX-005-200000-0	Rise-fall switch base board
F919	B-017-040301-0	Cross head screw M4*30
F920	B-024-050161-1	Cross round head screw 5*16
F921	S-012-010406-0	Quick Union 1/4-Ø6
F922	S-030-010818-0	Raise-fall control valve
F923	B-004-040001-1	Nut(silver) M4
F924	S-023-010801-0	Muffler 1/8
F925	C-007-181000-0	Control valve protect cover(left)
F926	CX-009-030000-0	009 Auxiliary pressing arm
F927	B-017-040161-0	Cross head screw M4*16
F928	B-007-120161-0	Hex socket head bolt M10*12
F929	CX-200-140000-0	Big washer
F930	B-001-160001-0	Self-locking nut M16
F931	C-009-110000-0	Tire lifting roller head



F912	CW-105-020900-0	Complete 009 help arm cylinder
F912-1	C-009-070400-2	009 help arm cylinder piston rod
F912-2	C-009-070100-2	009 help arm cylinder front cover
F912-3	S-000-025265-0	O-sealφ25*2.6
F912-4	S-000-011180-0	O-sealφ11*1.8
F9827-8	CX-009-070300-0	009 help arm cylinder barrel
F9827-10	S-000-063265-0	O-sealφ63*2.65
F9827-6	C-098-075400-0	Help arm cylinder piston φ70
F9827-7	B-001-120001-0	Self-locking nut M12
F9827-13	CX-098-070200-0	009 help arm cylinder back cover
F9827-12	U-006-000001-0	Guide belt 4*2
F9827-11	S-000-063355-0	O-Sealφ63*3.55
F9827-5	C-098-070600-0	Right arm cylinder washer U098 φ31*50*15

19. Circuit diagram:



20. Pneumatic drawing:

