COSENG®
Advanced Techonology

Operation Manual

C211 C

Swing Arm Tire Changer

You will need the manual for the information of the machine, such as safety warnings and precautions, assembly, operating, maintenance and parts lists/assembly diagrams. Keep your invoice with this manual for future reference. Manufacturer shall not be liable for any injury to persons on damage to things caused by failure to comply with these regulations and can cancel warranty coverage.

Installation, Operation, Maintance

TIRE CHANGER
INSTRUCTION MANUAL
INDEX

1. TECHNICAL DATA

Model	DESCRIPTION		
	□A	□B	□C
Electric Requirements	See the manufacturer's serial plate		
Max. Wheel Diameter	39″ (990mm)	40″ (1016mm)	47″ (1193mm)
Max. Wheel Width	13″ (330mm)	14″ (355mm)	15″ (381mm)
Outside Clamping – Rim Sizes	10″ ~18″	10″ ~21″	10″ ~24″
Inside Clamping – Rim Sizes	12″ ~20″	12″ ~23″	12″ ~26″
Max. Bead Breaker Opening	13″ (330mm)	14″ (355mm)	15″ (381mm)
Max. Inflation Pressure	116PSI (8 bar)		
Bead Breaker Force	5500Lbs.(2500kgs)		
Max. Rotating Torque (Turntable)	795 ft·lbs (1078N·m)		
Noise Level	<70dB		
Overall Dimensions (L×W×H)	38.2″ ×30.1″ ×37″ (97cm×77cm×94cm)	38.2″ ×30.1″ ×37″ (97cm×77cm×100cm)	47.2″ ×29.9″ ×41.7″ (115cm×77cm×100cm)
Shipping Weight	217kg	222kg	245kg
Voltage	0.9…1.1 of nominal voltage		
Frequency	0.98…1.02 of nominal frequency		
Ambient temperature	5~40℃		
Humidity	30~95%		
Installation altitude NOT exceed	1000m		
Transport / storage temperature	-25~55℃		

2.GENERAL SAFETY WARNINGS AND PRECAUTIONS

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1) BEFORE BEGINNING ANY KIND OF WORK ON OR WITH THIS MACHINE, CAREFULLY READ AND UNDERSTAND THE CONTENTS OF THESE OPERATING INSTRUCTIONS.
2) WORK ON THE ELECTRIC SYSTEM, EVEN IF MINOR, MUST BE DONE EXCLUSIVELY BY PROFESSIONALLY QUALIFIED PERSONNEL.
3) KEEP WORK AREA CLEAN AND DRY. Cluttered, damp or wet work areas invite injuries.
4) KEEP CHILDEN AWAY FROM WORK AREA. Do not allow children to handle this machine.

5) STORE IDLE EQUIPMENT. When not in use, tools and equipments should be stored in a dry location to inhibit rust. If the machine has to be stored for a long time, disconnect it from all power sources.
6) DRESS SAFELY. Do not wear loose clothing or jewelry as they can become caught in moving parts. Wear a protective hair covering to prevent long hair from becoming caught in moving parts.
7) STAY ALERT. Watch what you are doing at all times. Use common sense. Do not use this tool when you are tired or distracted from the job at hand.
8) CHECK FOR DAMAGED PARTS. Before operation, carefully check that this tool will operate properly and perform its intended function. Check for damaged parts and any other conditions that may affect the operation of this machine. Replace or repair damaged or worn parts immediately.
9) REPLACEMENT PARTS AND ACCESSORIES. When servicing use only identical replacement parts. Only use accessories intended for use with this machine. Approved accessories are available from DISTRIBUTOR.
10) MAITAIN THE MACHINE WITH CARE. Keep the machine clean and dry for better and safer performance.
11) MAINTENANCE. Service and maintenance should be performed regularly by qualified technicians.
12) USE THE RIGHT PRODUCT FOR THE RIGHT JOB. There are certain applications for which this product was designed. Do not use this product for a purpose for which it was not intended.
13) THE HEIGHT OF THE SOCKET SHOULD BE POSITIONED AT A HEIGHT OF 0.6~1.7m.
14) THE PLUG/SOCKET SHOULD BE POSITIONED THAT IT CAN BE UNDER THE IMMEDIATE SUPERVISION.

3.SPECIFIC PRODUCT WARNINGS AND PRECAUTIONS

1) BEFORE PERFORMING ANY SERVICES OR MAINTENANCE, ALWAYS DISCONNECT THE MACHINE FROM ITS AIR SUPPLY SOURCE. PUMP THE BEAD BREAKER PEDAL SEVERAL TIMES TO EVACUATE ALL COMPRESSED AIR FROM THE MACHINE, AND DISCONNECT THE UNIT FROM ITS ELECTRICAL SUPPLY SOURCE.
2) USE CLEAN, DRY, REGULATED COMPRESSED AIR AT UP TO 8 BAR (116 PSI). Do not exceed the recommended maximum of 8bar.
3) If an automatic oilier is not used, add two drops of oil into the Quick Connector of the Pressure Regulator.
4) DO NOT INFLATE A TIRE ABOVE OR BELOW THE AIR PRESSURE RECOMMENDED BY THE TIRE MANUFACTURER.
5) ALWAYS DISPOSE OF OLD TIRES ACCORDING TO CORRELATED LAWS.
6) TO AVOID PERSONAL INJURY AND/DR MACHINE DAMAGE, ALWAYS MAKE SURE THE TIRE RIM IS FIRMLY SECURED ON THE TIRE CHANGER WITH THE JAWS.
7) NEVER PLACE YOUR HANDS BETWEEN THE VEHICLE WHEEL RIM AND THE JAWS DURING THE LOCKING/CLAMPING STAGE.
8) THE MACHINE MUST BE CONNECTED TO A POWER SUPPLY LINE CIRCUIT BRACKET SET FOR 30mA.

4.ASSEMBLY INSTRUCTION

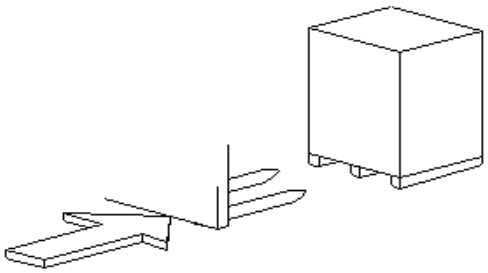


Fig.1

4-1 Transport

When transporting the machine it must be handle with a forklift truck with the forks Positioned as show as in the Fig.1.

4-2 Unpacking

When unpacking, check to make sure all parts shown on the spare parts List/Assembly. Diagrams are included. If any parts are missing or broken, please call the manufacturer or the dealer as soon as possible.

4-3 Production Description

Fig.2

1	BEAD BREAKER PEDAL	2	JAW CLAMP PEDAL
3	REVERSE PEDAL	4	TURNTABLE
5	JAW	6	MOUNTING HEAD
7	TOOLS SHAFT	8	SWINGING ARM
9	BLOCK SUPPORT	10	COLUMN
11	PRESSURE REGULATOR	12	PADDLE
13	BUFFER	14	BEAD LIFTING LEVER

4-4 Workplace Requirements

The machine's workplace(not include assistant arm) requires 1400(width)×1685(depth) with at least 500 mm of clear space from each wall. Place the tire changer on a firm, smooth and unbroken floor. Drill four holes in the floor corresponding to the holes pre-drilled in the base of the machine. Holes should be 80mm deep. Its diameter is 10mm. Then insert the expansion
Plugs and lighten with the 10mm spanner.

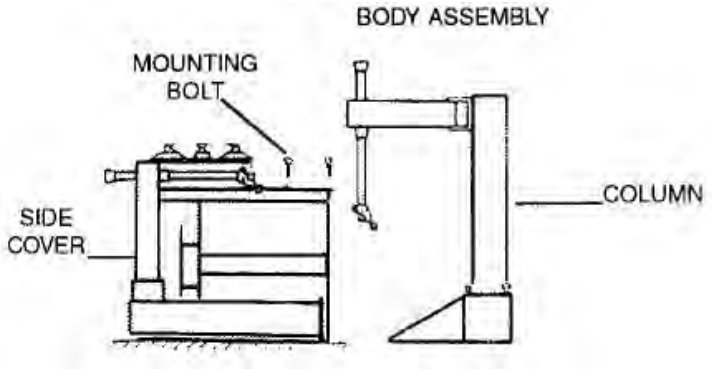


Fig.3

4-5 Assembly Procedure

1) Temporarily remove the four mounting bolts, washers, and Nuts located at the top / rear of the body assembly.
2) With assistance, set the column on the body assembly, and align the four mounting holes in which the bolts, washers, and nuts were moved.
3) Firmly wrench tightens the column with the four mounting bolt, washers, and nuts mentioned in step 1 above.

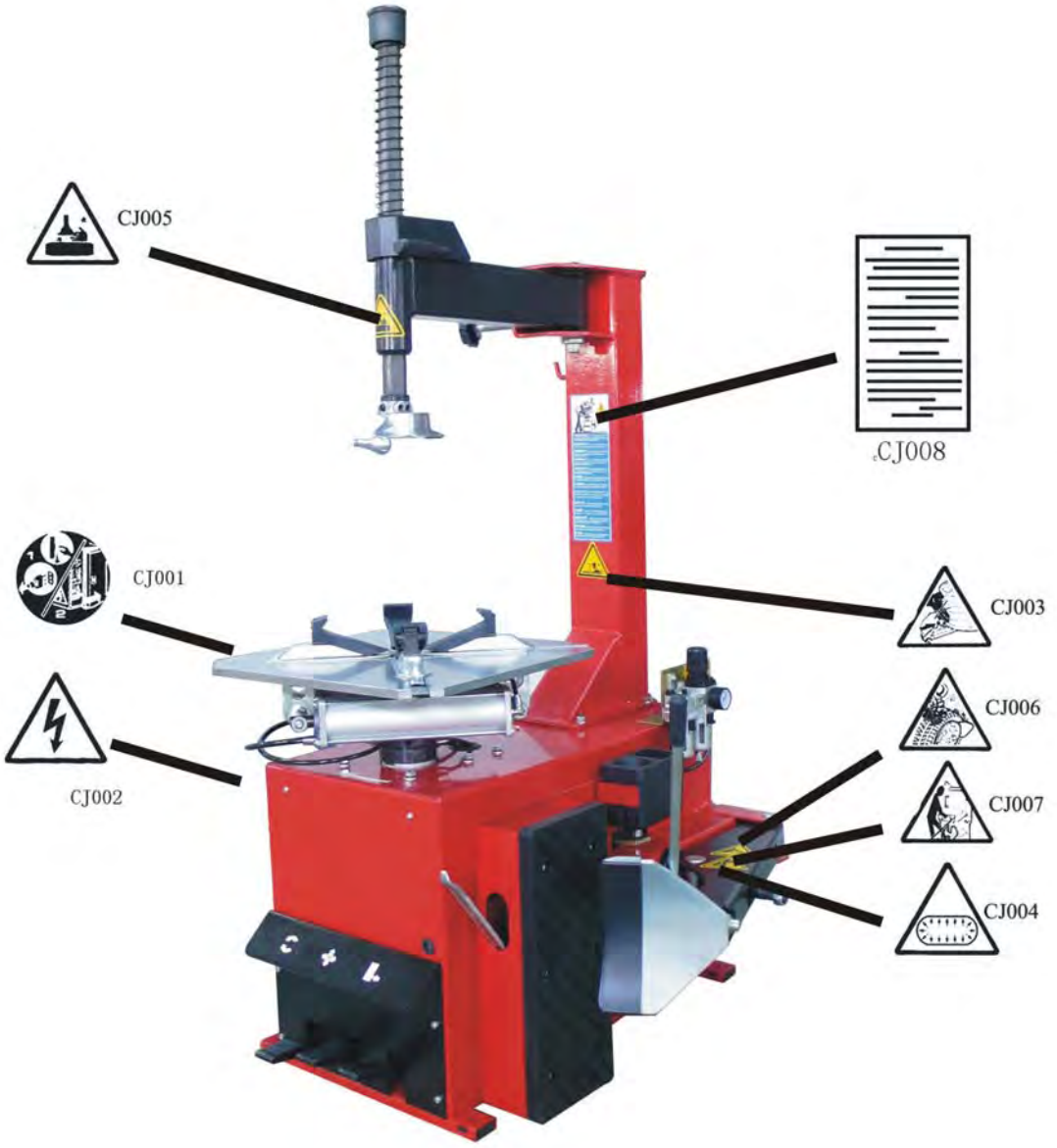
4-6 Pneumatic Link Up

1) Push the clamping pedal down completely to ensure that the clamping jaws do not open unexpectedly.
2) Connect the air hose to the union on bottom of the vertical column, which is as a tanker.
3) Connect the inflation gun, if it is to be installed, to its connector.
4) Connect the tire changer to a compressed air network. (Suggested working pressure is 8 bar) using the connector which is on the air-water separator located right side of the base assembly.

4-7 Electric Link up

1) Before making any electric link up, check to be certain that the main voltage corresponds to what is stamped on the voltage tag.
2) It is absolutely essential that the system is equipped with a good grounding circuit.
3) The machine must be connected to a power supply line circuit bracket set for 30mA.

5. WARNING LABEL



CJ001: Unplug the power supply cable before carrying out maintenance work on the machine.

CJ002: Danger: Electric voltage present.

CJ003: When clamping a tire, never have your hands under the tire.

CJ004: Danger: Compressed air cylinder inside.

CJ005: Do not place your hands on the wheel; when moving the post to its working position your hands could be crushed between the rim and the mounting head.

CJ006: Bead breaking with the table top slide grippers open can crush the operator's hands. During bead breaking NEVER touch walls of the tire with your hands.

CJ007: Bead breaking must be done with the utmost care and attention. When the bead breaker pedal is operated the bead beaker arm moves quickly and powerfully. Anything within its range of action can be in danger of being crushed.

CJ008: Important instruction of safe.

6.OPERATING INSTRUCTION

6-1 To Preliminary Operating Tests

1) Connect the tire changer to its air and electrical supply sources, and allow adequate time for the compressed air system to reach the recommended 110-PSI.
2) Depress the Reverse Pedal (3,Fig2) down, the turntable should turn in a clockwise direction. Pull the pedal up and the turntable should turn anticlockwise.
3) Press the bead breaker pedal (1,Fig2)to activate the paddle. When the pedal is released. The pedal should return to its original position.
4) Press the jaw clamp pedal (2,Fig.2) once to open the four jaws. Press the pedal again to close the jaws.
5) Press the trigger on the air gauge to release air from the nozzle.

Notice: Inflation gun is tire changer's standard accessory. It is not included when IT, IP or IE installed.

6-2 To Break Tire Bead

1) CAUTION: Before carrying out this procedure, deflate the tire fully, and remove all the wheel weights.
2) Close the turntable clumping jaws completely.
3) Open the bead breaker arm by hand by pushing it towards the outside. Place the wheel up against the Rubber Buffer. Bring the Paddle against the bead about 10mm from the edge of the rim. (see Fig.5)
4) Depress the bead breaker pedal fully to activate the paddle. Release pressure on the bead breaker pedal. When the blade has reached the end of its travel and / or when the tire bead is broken.
5) Rotate the tire slightly, and repeat the procedure around the entire circumference of the wheel rim until the bead is completely detached from the rim. (Fig.5)
6) Repeat the above steps for the other side of the wheel / tire.

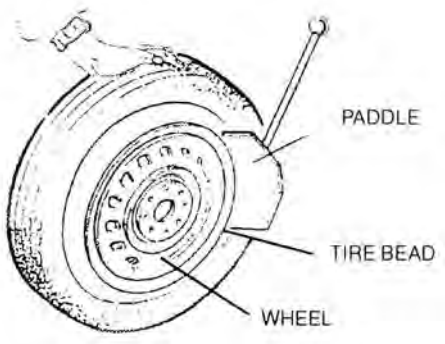


Fig.5

6-3 To Remove The Tire From The Wheel

1) CAUTION: Before carrying out this procedure, deflate the tire fully, and remove all the wheel weights.
2) Spread tire grease (or a similar lubricant) liberally on the complete circumference of the broken tire bead.
   NOTE: Failure to lubricate the tire bead may cause serious damage to the bead.
3) Place the wheel / tire evenly on the turntable.(4,Fig.2)
4) To lock the wheel on the turntable, proceed as follows according to the wheel size:
   Outside Clamping:
   Position the four jaws (5,Fig.2) according to the reference mark located on the turntable by depressing the jaw clamp pedal (2,Fig.2) halfway down.

Place the wheel on the four jaws and, while keeping the wheel rim pressed down, depress the jaw clamp pedal as far as it will go.
Check to make sure the wheel firmly secured by the jaws.
Inside Clamping:
Position the four jaws so that they are completely closed.
Place the wheel on the four jaws and depress the jaw clamp pedal to open the jaws, thereby locking the wheel rim in place.
Check to make sure the wheel is firmly secured by the jaws.

5) Lower the tools shaft (7,Fig.2) until the mounting head (6,Fig.2) rests next to the wheel rim and on top of the tire. Then, lock the tools shaft in position, using the block support.
6) Insert the lever between the tire bead and the front section of the mounting head. (Fig.6)

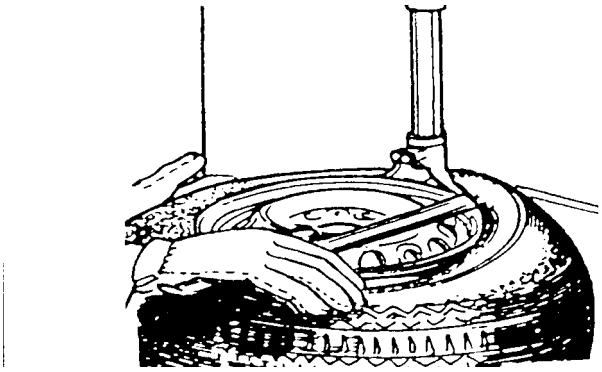


Fig.6

7) Move the tire bead over the mounting head by pulling upward on the reverse pedal.(3,Fig.2)
8) NOTE: To avoid damaging the inner tube (if there is one), it is recommended to perform this step with the inner tube valve stem positioned about 1” to the right of the mounting head.
9) With the lever (14,Fig.2) held in position, rotate the turntable in a clockwise direction by fully depressing the reverse pedal. Continue until the tire is completely separated from the wheel rim.
10) Remove the inner tube (if there is one), and repeat the above steps for the other side of the wheel / tire.

6-4 To Mount The Tire Onto The Wheel Rim

1) CAUTION: Before carrying out this procedure, deflate the tire fully, and remove all the wheel weights.
2) Spread tire grease (or a similar lubricant) liberally on the complete circumference of the tire bead to avoid damage to the tire bead to avoid damage to the tire and to facilitate the mounting procedure.
3) Lock the wheel rim, using the inner part of the jaws.(5,Fig.2)
4) NOTE: When you are working with wheel rims of the same size, it is not always necessary to lock and unlock the tools shaft. Instead, move the swinging arm (8,Fig.2) sideways with the tools shaft locked.(7,Fig.2)

Fig.7

5) Move the tire so that the bead passes below the front section of the mounting head and is brought up against the edge of the rear section of the mounting head. (Fig.7)
6) Keep the tire bead pressed down into the wheel rim channel with your hands. Then, depress the reverse pedal to rotate the turntable clockwise. Continue this process throughout the entire circumference of the wheel and tire.
7) Insert the inner tube (if there is one).
8) Repeat the steps above the mount the other side of the tire.

6-5 To Inflate The Tire

1) CAUTION: A burst tire can cause serious injury or even death to the operator. Always make sure the wheel rim and the tire are of the same size. Check the condition of the tire, and make sure it has no defects before beginning the inflation process. Keep your hands and body as far away from the tire as possible. Inflate the tire with brief jets of air, checking the air pressure frequently.
   Never inflate a tire above and or below the air pressure recommended by the tire manufacturer.
2) To inflate the tire, attach the air gauge nozzle to the tire valve stem with the locking lever in the “UP” position. Check the condition of the tire, and make sure the nozzle is pressed down completely over the threads of the valve stem.
3) When the air gauge nozzle is firmly in place, press the locking lever down to lock onto the valve stem.
4) Remember to inflate the tire with brief jets of air, checking the air pressure frequently. Once the proper air pressure has been reached, disconnect the nozzle from the valve stem and screw a valve cap onto the stem. (Fig.8)

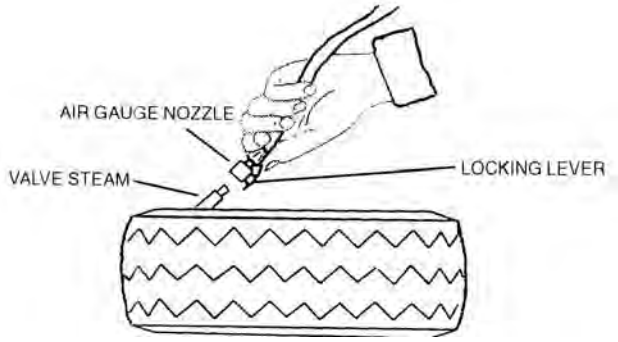


Fig. 8

NOTE

1) Failure to follow all warnings and instructions may lead to serious personal injury or death to operator or bystander.
   NEVER exceed 3.5 bar (50 psi) when seating beads or inflating tires.
2) If a higher tire inflation pressure is required, remove the wheel from the tire changer and

continue the inflation procedure with the wheel inside a special protection cage (commercially available).
NEVER exceed the maximum inflation pressure given by the tire manufacturer.

3) ALWAYS keep hands and entire body back from inflating tire.
ONLY specially trained personnel are allowed to perform these operations.
Do not allow other to operate or be near the tire changer

7. FRL INSTRUCTIONS

FRL include air filter, pressure reducer and lubricator.
The filter is used for avoiding water getting into the tire changer with the air.
The pressure reducer can stabilize pressure and prevent the valves, cylinders and other moving parts from impact by the input air pressure instability.
Lubricator can lubricate the moving parts that are inconvenient to lubricate.
In all, FRL can prolong the tire changer's service life greatly.

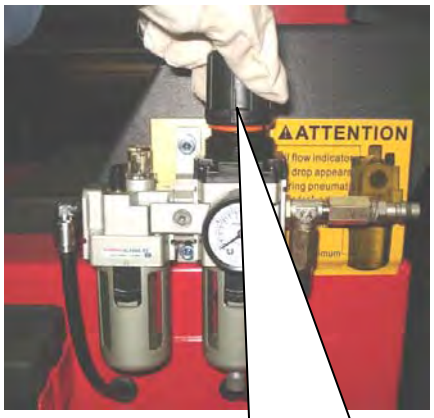
1) AIR INLET DIRECTION

Air inlet is marked ◁.

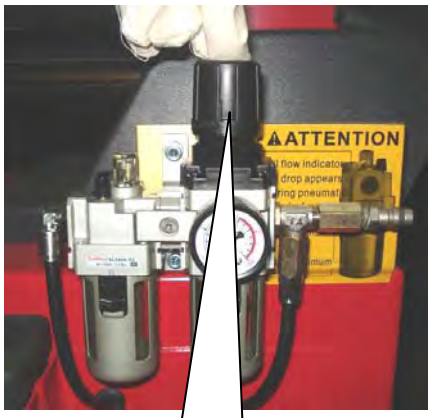
2) SPECIFICATION

Applicable fluid	Air
Max working pressure	1.0MPa
Environment temperature & Fluid temperature	5℃～60℃
Recommended applicable oil	50W hydraulic oil
Setting pressure range	0.05~1.0 Mpa

3) OPERATION AND MAINTENANCE



This is pressure reducer. Open (pull up) the knob and regulate the air pressure by turning the knob.
Setting press range: 0.05~1.0MPa.



Close (Push down) the knob to locking the air pressure.

This is filter to separate water from air. Check the level of water in the filter. We recommend the water level never reach above the 50% of the glass volume. When necessary, drain the water by pulling the locking ring.

Check the oil level in the lubricator once a day. If necessary, remove the oil cap. Fill the tank with 50W hydraulic oil, and replace the oil cap. Note that the oil can not be offered when the lubricator is being exerted pressure.

This is oil indicator that the oil dropping quantity should be checked once a day. Make sure that one drop of oil is injected into the tank every 3-4 times the Bead Breaker Pedal is depressed. If necessary, regulate the rate of oil injection with the oil regulator screw.
Note: If the oil dropping is out of condition, which will cause the trouble of the tire changer's components.

8.ROUTINE MAINTENANCE

1) CAUTION: Always disconnects the tire changer from its air supply source. Pump the bead breaker pedal several times to evacuate all compressed air from the machine, and disconnect the unit from its electrical supply source before performing any services or maintenance.
2) Before each use, inspect the general condition of the tire changer. Check for loose screws, misalignment, binding of moving parts, broken parts, loose or damaged air supply hose / electric power cord, and any other condition that may affect its safe operation. If abnormal noise or vibration occurs, disconnect the tire changer from its air and electric supply sources immediately and have the problem corrected before further use. Do not use damaged equipment.
3) At least once per week, clean the turntable with detergent or a nonflammable solvent. Also, grease the jaw guides.
4) For RFL routine maintenance, please see chapter 7.
5) After the first 20 days of use, retighten the jaws tightening screws and the screw located on the turntable slides.
6) In the event of a loss of power, check to see if the belt is tight. To do so, remove the left side of the cover by unscrewing the six screws. Tighten the belt, using the adjusting screw located on the motor support.

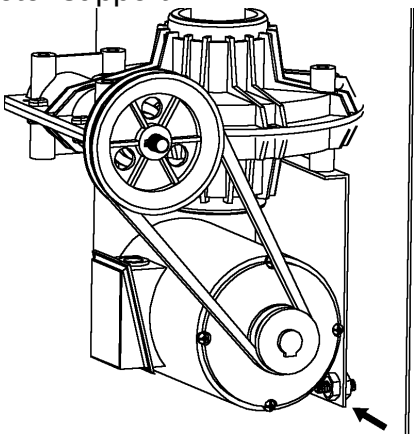


FIGURE 9

7) In the event the block support doesn't lock the tools shaft in place, or the mounting head doesn't rise at least 1/8" above the wheel rim which is necessary for working, adjust the nuts as shown in fig.10.

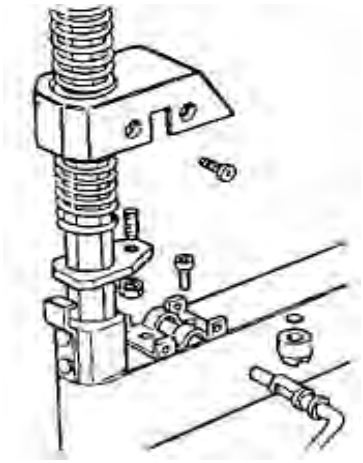


Fig 10

8) To clean or replace the center chuck value, remove the side cover, which is located on the left side of the body assembly, by unscrewing the six screws.
9) Remove the air hoses from the center chuck valve.
10) Clean the center chuck valve, using a jet of compressed air. Or if necessary, replace the unit.
11) For cleaning or replacing the bead breaker valve, follow steps 8, 9 and 10 above.(Fig.11)

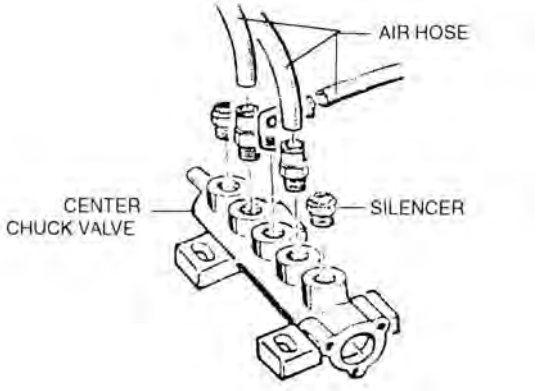


Fig.11

9.TROUBLE SHOOTING

1)

A) Situ.
Turntable does not rotate.

B) Reas.

a) The power plug S is not inserted or no power from the mains electric supply.

b) The problem with motor.
c) Reverse pedal broken.
d) Belt loosen or broken.

C) Disp.

a) Insert the plug correctly and reset the mains electric supply.
b) Check for loose wires in the motor.
c) Check and repair entire reverse assembly.
d) Regulate or replace the belt.

2)

A) Situ.

Turntable locks while mounting/removing tire.

B) Reas. Belt loose.

C) Disp. Adjust belt tension.

3)

A) Situ. Jaws slow to open/close.

B) Reas. Silencer clogged.

C) Disp. Clean or replace silencer.

4)

A) Situ. Turntable does not lock the wheel rim correctly.

B) Reas. a) Jaws worn. b) Defective piston

C) Disp. a) Replace jaws. b) Replace plate cylinder gasket.

5)

A) Situ. Tool touches the wheel rim during tire mounting/demounting process.

B) Reas. a) Locking slide incorrectly adjusted or defective.
b) Locking slide screw loose.

C) Disp. a) Adjust or replace locking slide.
b) Tighten screw.

6)

A) Situ. Bead Breaker Pedal and Jaw clamp pedal lock out of position.

B) Reas. Return spring of the pedal broken.

C) Disp. Replace spring.

7)

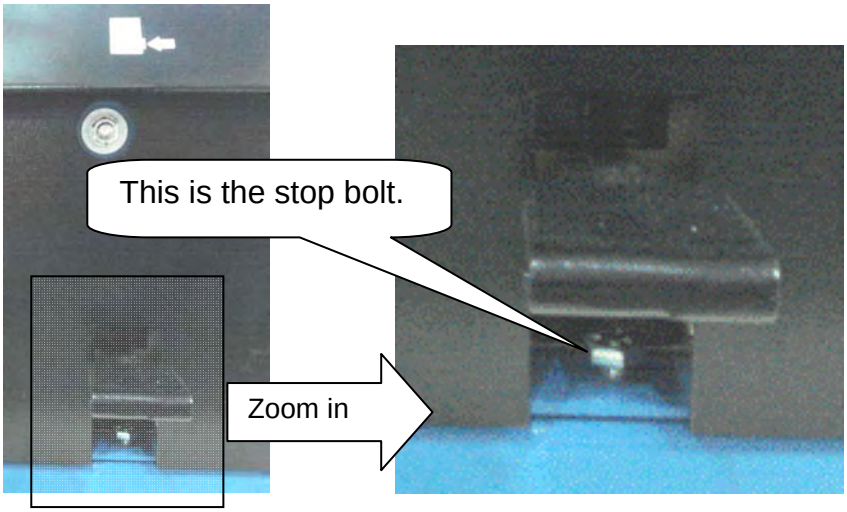
A) Situ. Bead breaking operation difficult or fail.

B) Reas.

a) The stop bolt incorrectly adjusted.
b) Silencer clogged.
c) Value shaft O-ring broken.
d) Cylinder piston V-seal or O-ring broken.

C) Disp.

a) Adjust the height of the stop bolt.
(The stop bolt is under the bead breaker pedal like the picture.)
b) Clean or replace silencer.
c) Replace O-ring.
d) Replace V-seal or O-ring



10. Mounting Head's Angle Adjusting

The mounting head standard position

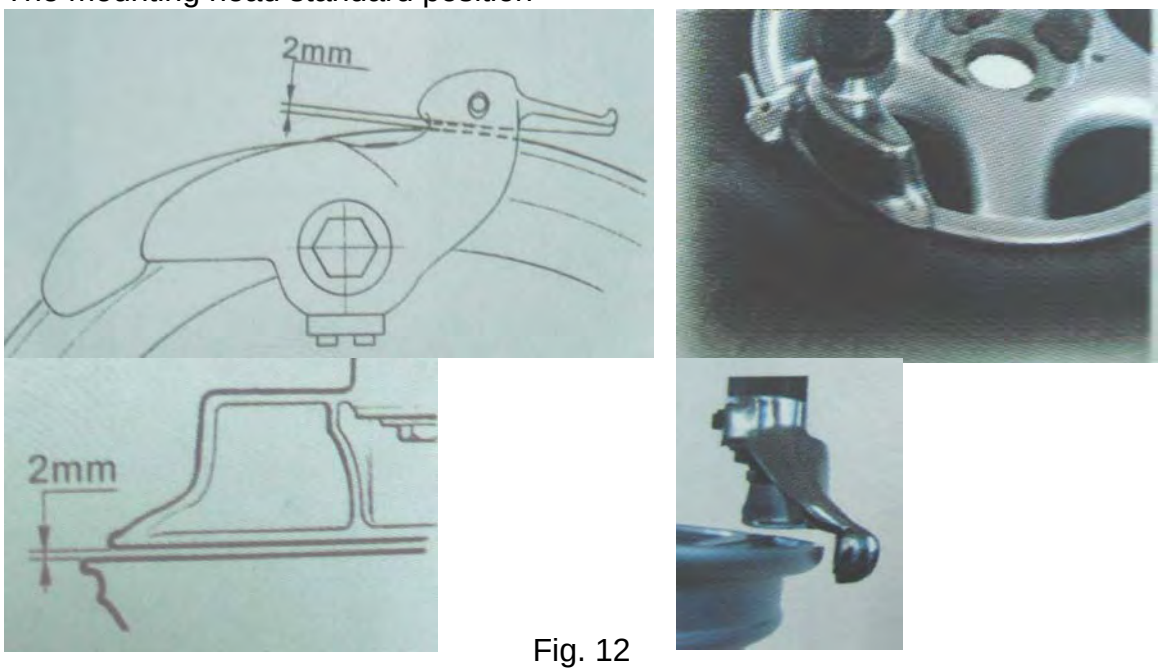


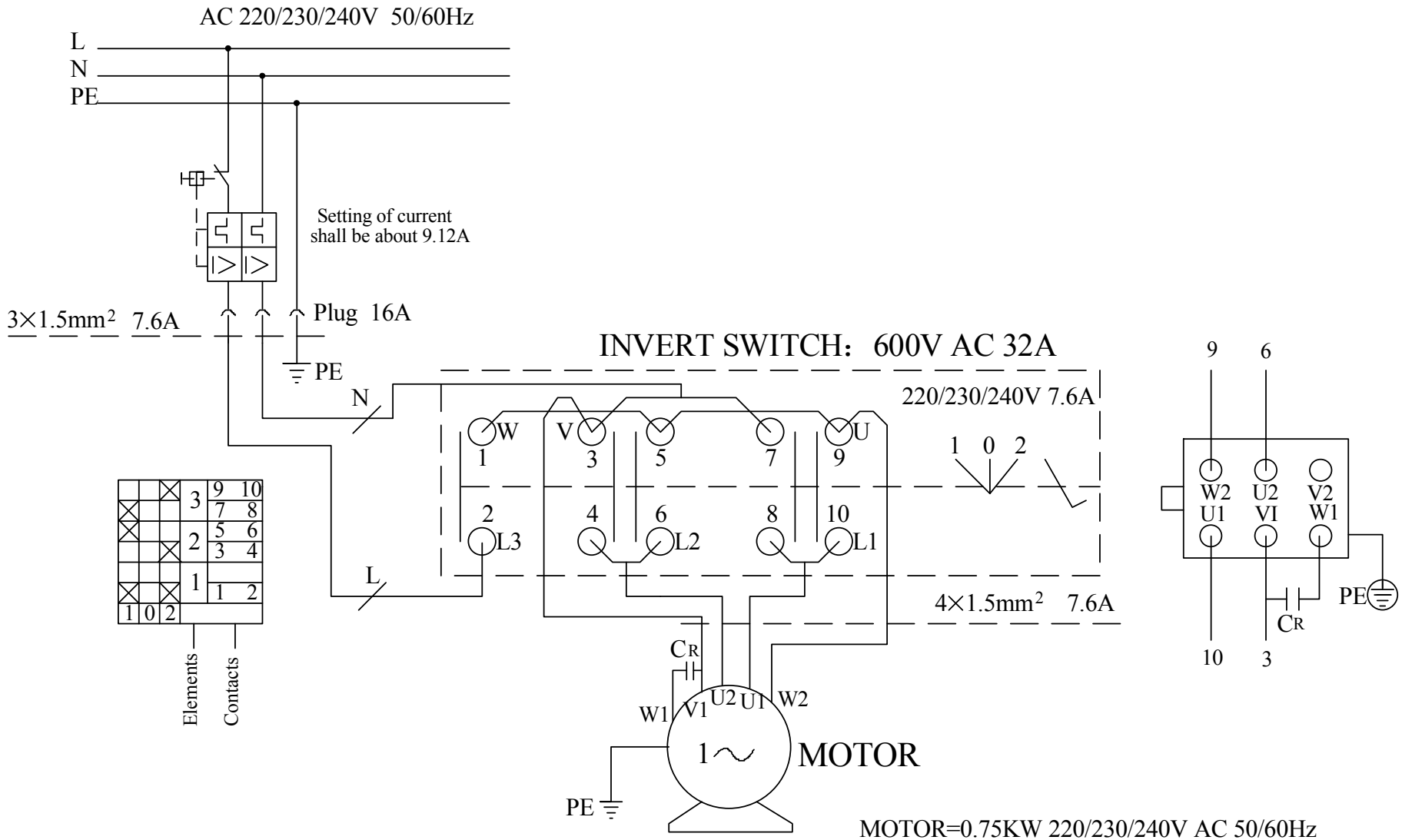
Fig. 12

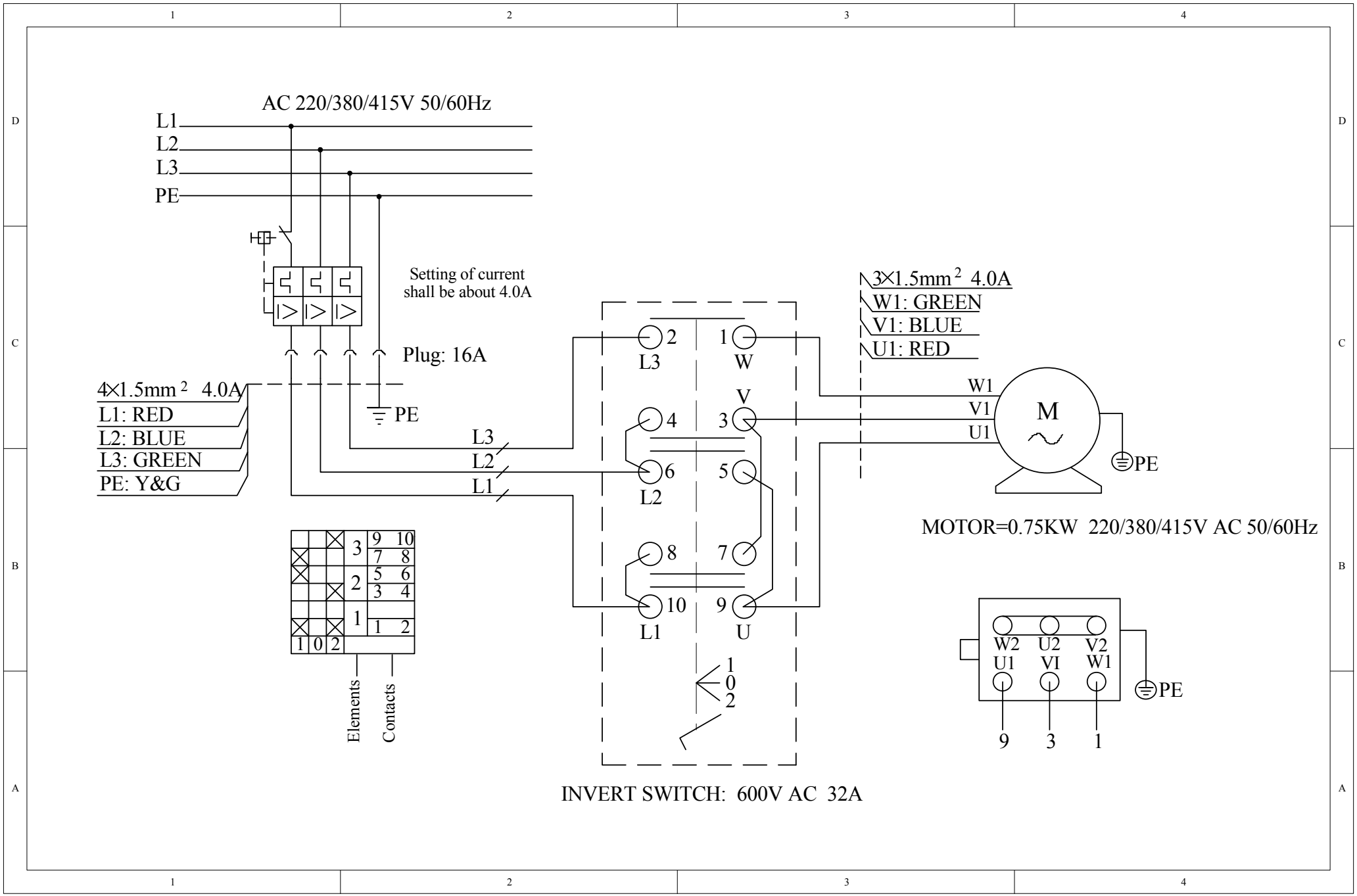
The following case is not correct:

The angle setting of this mounting head for shipment is set to fit for rim size 12" to 18". In case application of rim size over this range, appropriate adjustment to the angle of the mounting head or special mounting head replacement is needed.

Setting steps:

1. Lock the wheel on the turntable.
2. Lower the tools shaft (7,Fig2) until the mounting head (6,Fig2) rests next to the wheel rim and on top of the wheel.
3. Loosen the screws (part #125, #127) of the mounting head.
4. Adjust the angle of the mounting head by hand as shown in Fig. 12.
5. Tighten the screws.


AC 220/230/240V 50/60Hz
L
N
PE
Setting of current
shall be about 9.12A
3×1.5mm² 7.6A
Plug 16A
PE
INVERT SWITCH: 600V AC 32A
220/230/240V 7.6A
N
L
W
V
U
1
3
5
7
9
1 0 2
2
4
6
8
10
L3
L2
L1
4×1.5mm² 7.6A
9 6
W2 U2 V2
U1 VI W1
PE
CR
10 3
3 9 10
7 8
2 5 6
3 4
1 1 2
1 0 2
Elements
Contacts
CR
W1 V1 U2 U1 W2
1~
MOTOR
PE
MOTOR=0.75KW 220/230/240V AC 50/60Hz
CR=60uF 450V AC


AC 220/380/415V 50/60Hz
L1
L2
L3
PE
Setting of current
shall be about 4.0A
Plug: 16A
4×1.5mm 2 4.0A
L1: RED
L2: BLUE
L3: GREEN
PE: Y&G
PE
L3
L2
L1
3×1.5mm 2 4.0A
W1: GREEN
V1: BLUE
U1: RED
W1
V1
U1
M
PE
MOTOR=0.75KW 220/380/415V AC 50/60Hz
2
L3
1
W
V
4
3
6
L2
5
8
7
10
L1
9
U
1
0
2
3
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Elements
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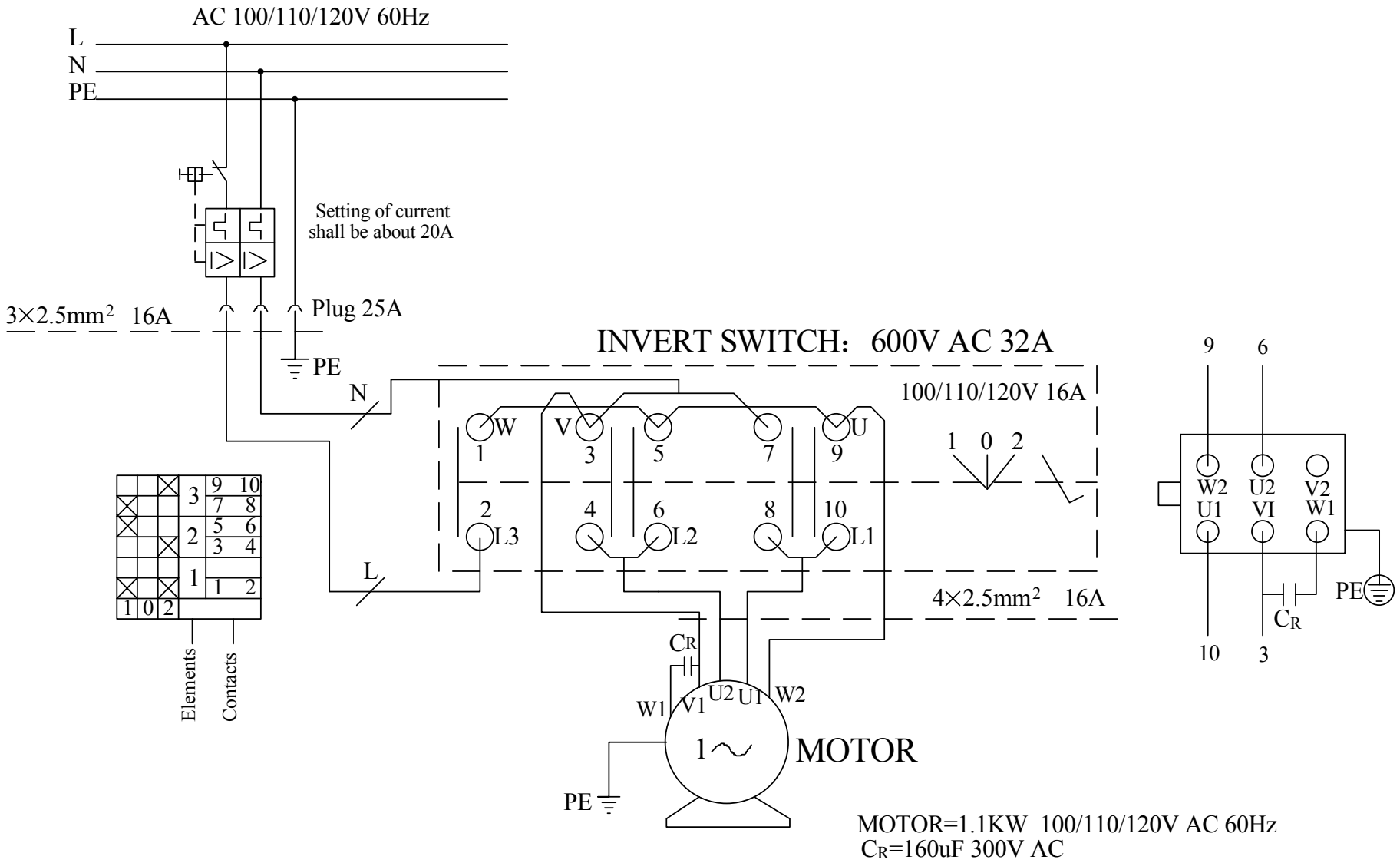
INVERT SWITCH: 600V AC 32A


AC 100/110/120V 60Hz
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Setting of current
shall be about 20A
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Plug 25A
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INVERT SWITCH: 600V AC 32A
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MOTOR=1.1KW 100/110/120V AC 60Hz
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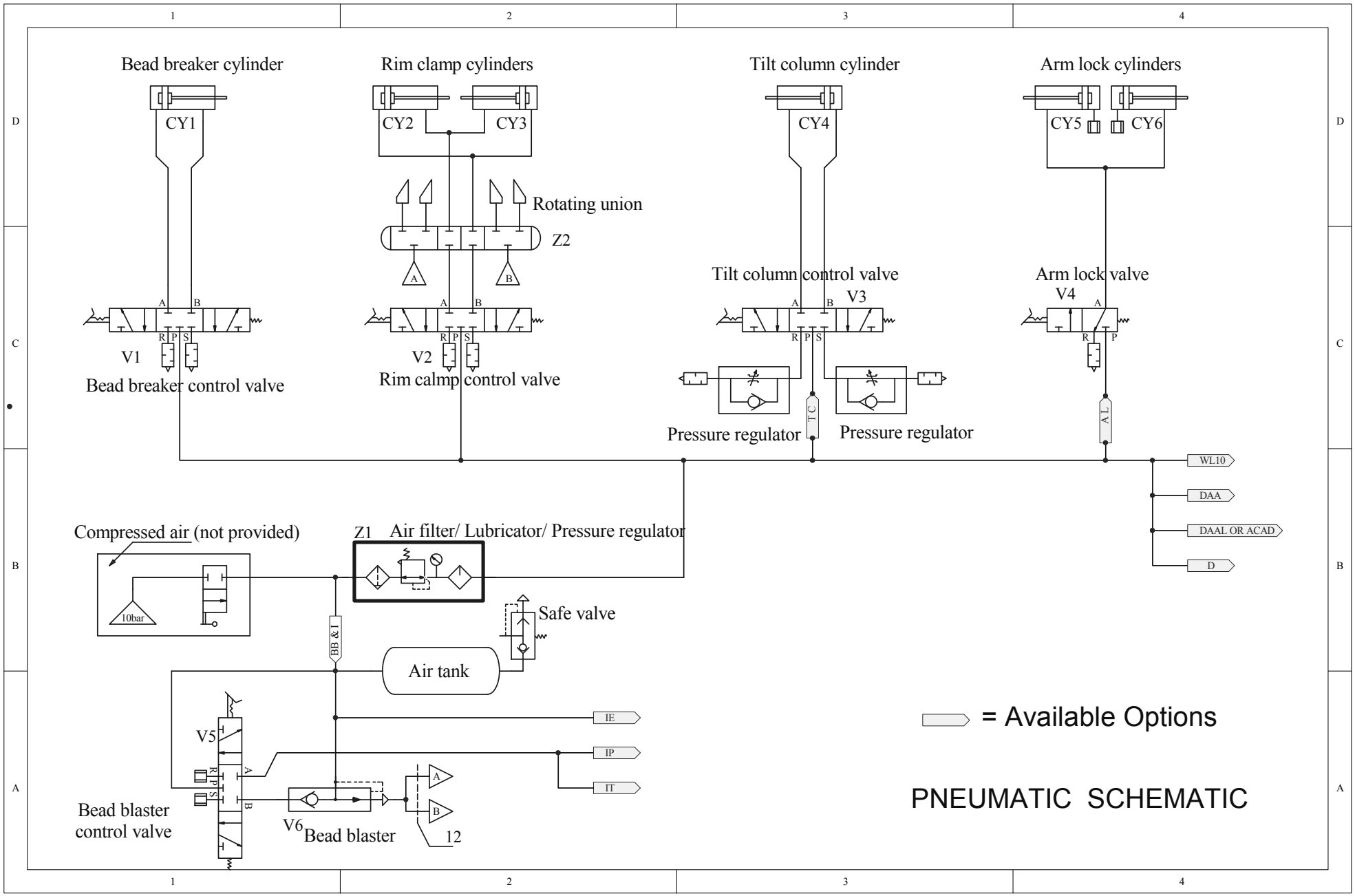
Bead breaker cylinder
CY1
Rim clamp cylinders
CY2
CY3
Rotating union
Z2
Tilt column cylinder
CY4
Arm lock cylinders
CY5
CY6
Tilt column control valve
V3
Arm lock valve
V4
V1
Bead breaker control valve
V2
Rim calmp control valve
Pressure regulator
Pressure regulator
TC
AL
WL10
DAA
DAAL OR ACAD
D
Compressed air (not provided)
10bar
Z1
Air filter/ Lubricator/ Pressure regulator
Safe valve
BB & I
Air tank
IE
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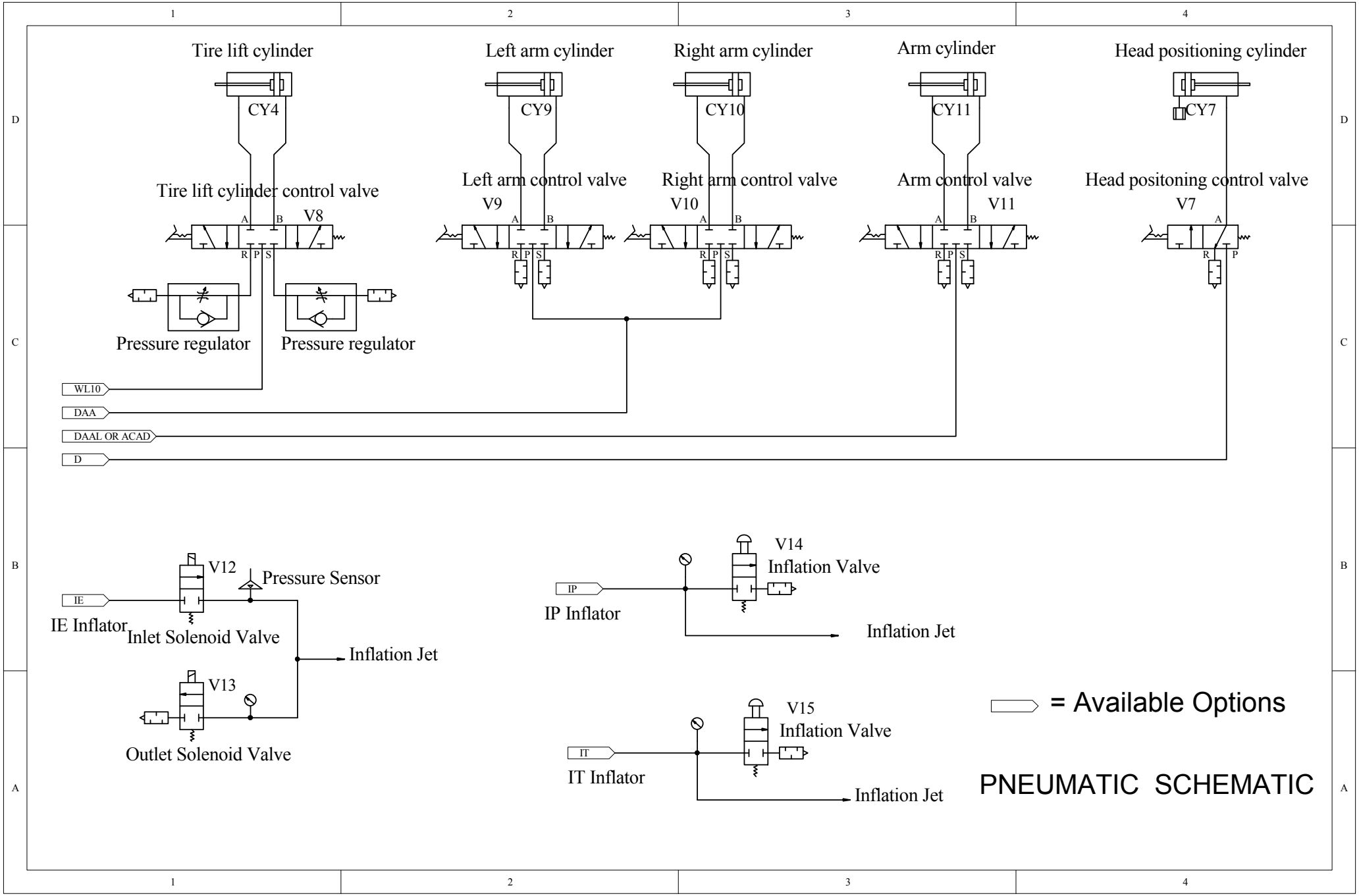
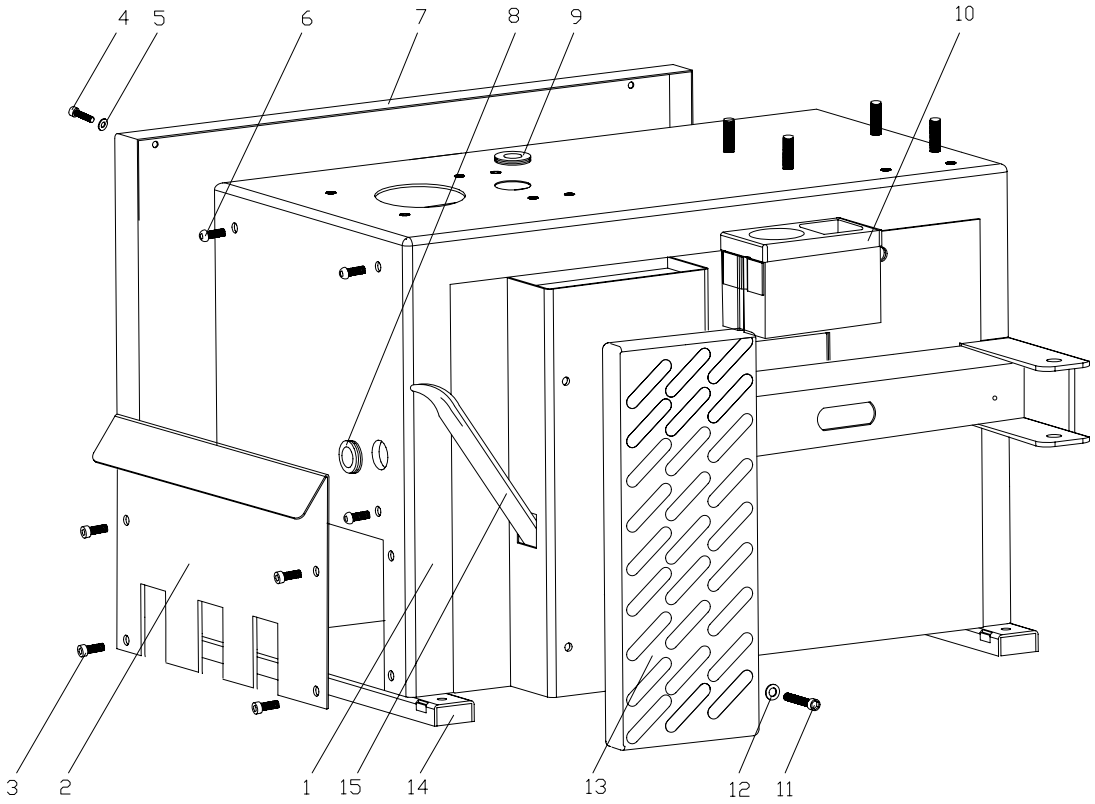
IT
V5
Bead blaster
control valve
V6
Bead blaster
12
= Available Options
PNEUMATIC SCHEMATIC


Tire lift cylinder
Left arm cylinder
Right arm cylinder
Arm cylinder
Head positioning cylinder
CY4
CY9
CY10
CY11
CY7
Tire lift cylinder control valve
V8
Left arm control valve
V9
Right arm control valve
V10
Arm control valve
V11
Head positoning control valve
V7
A
B
R
P
S
Pressure regulator
Pressure regulator
WL10
DAA
DAAL OR ACAD
D
V12
Pressure Sensor
IE
IE Inflator
Inlet Solenoid Valve
Inflation Jet
V13
Outlet Solenoid Valve
V14
Inflation Valve
IP
IP Inflator
Inflation Jet
V15
Inflation Valve
IT
IT Inflator
Inflation Jet
= Available Options
PNEUMATIC SCHEMATIC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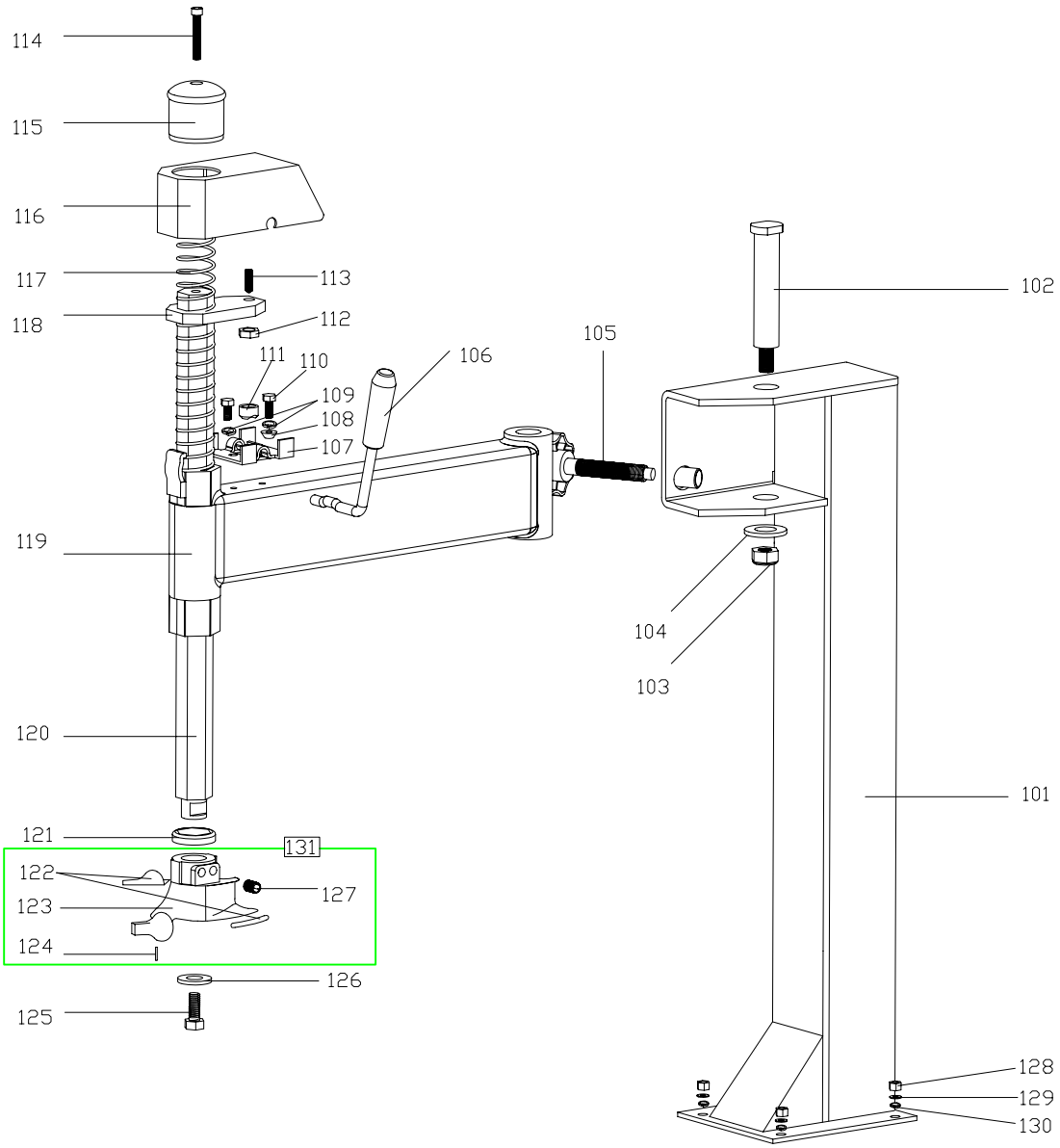
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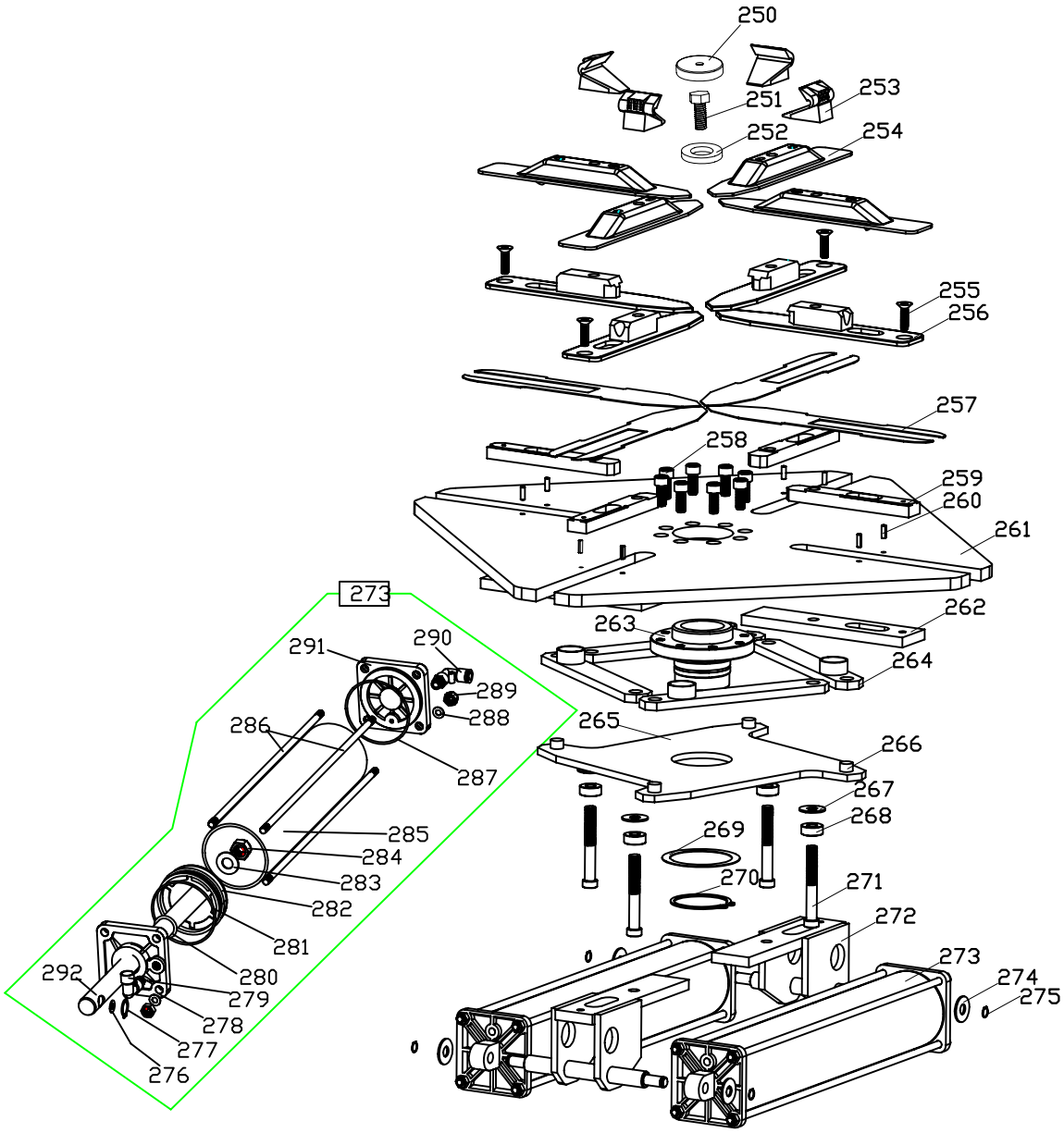
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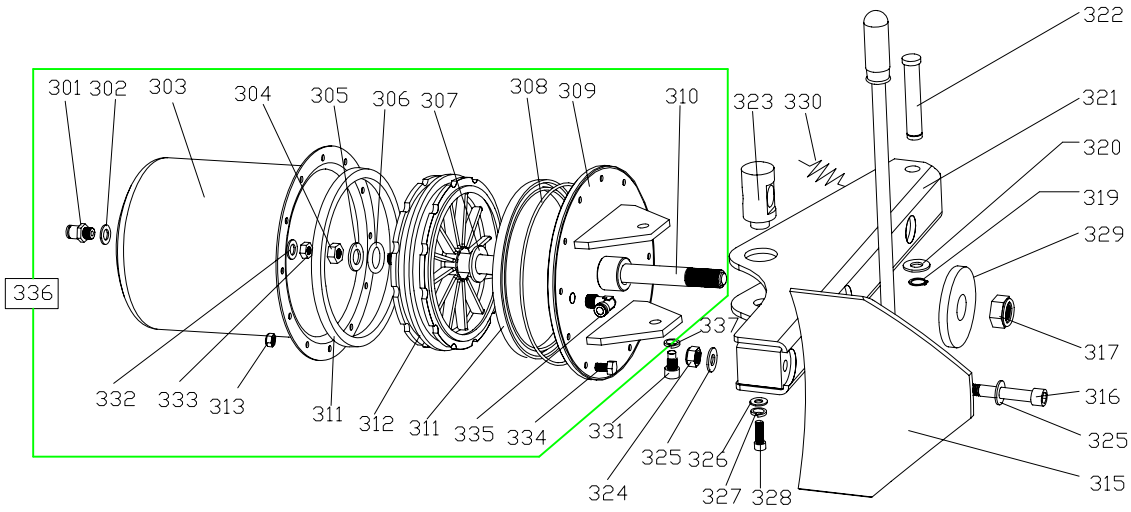
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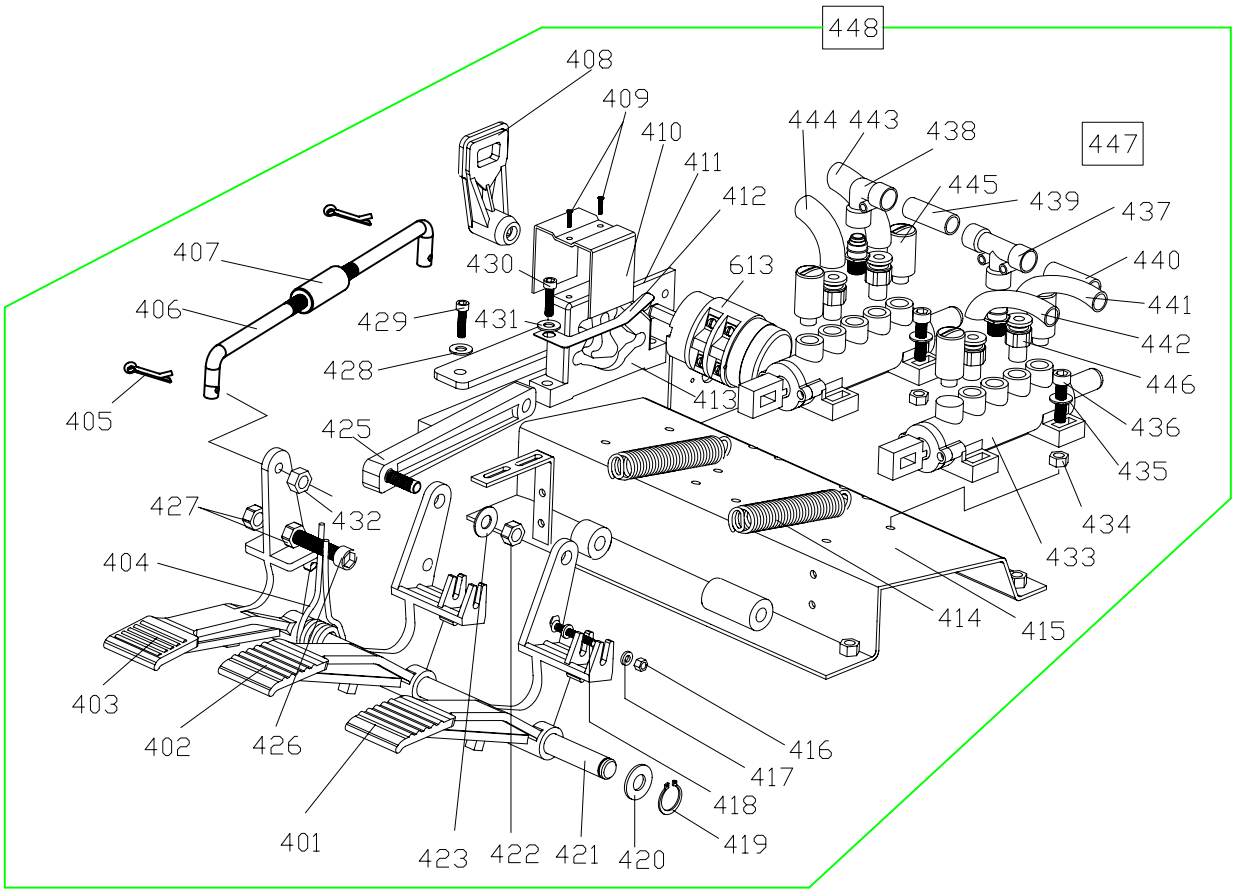
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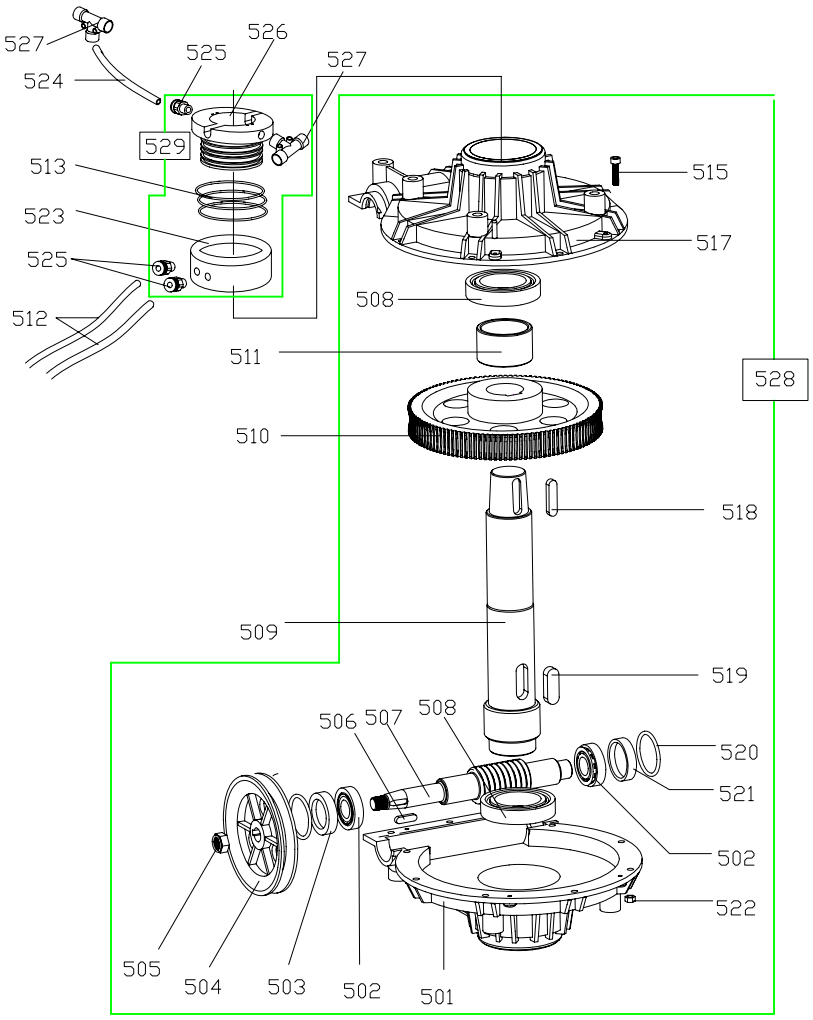
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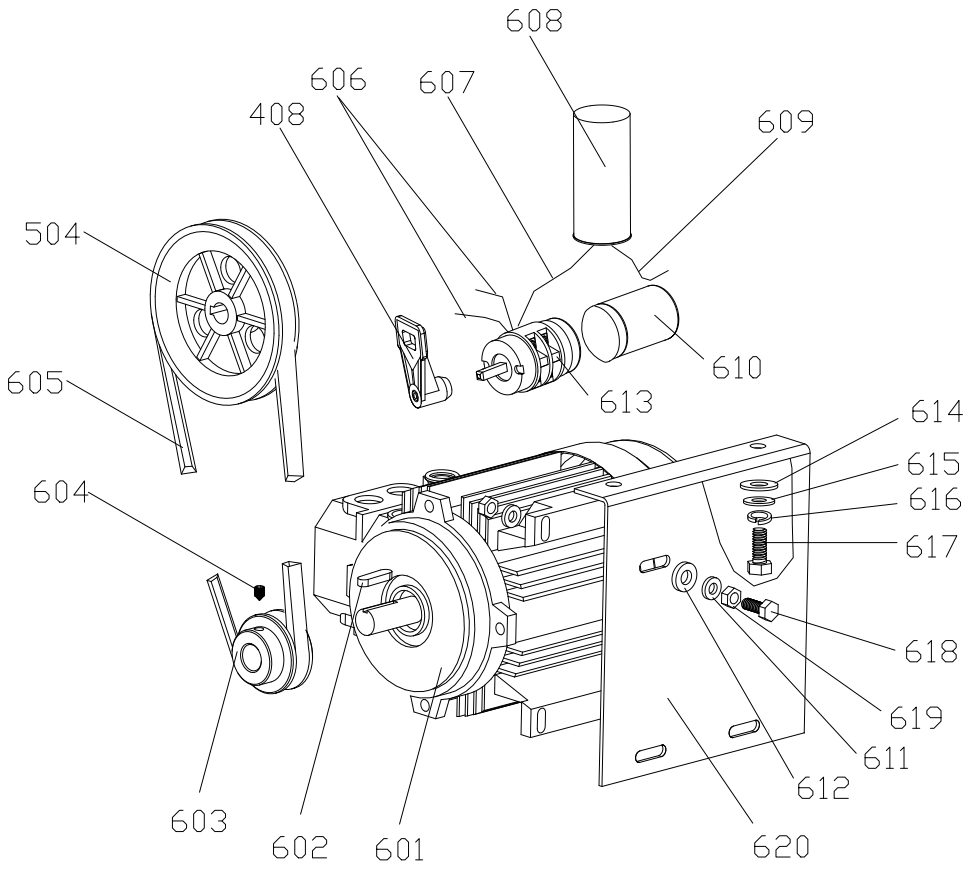
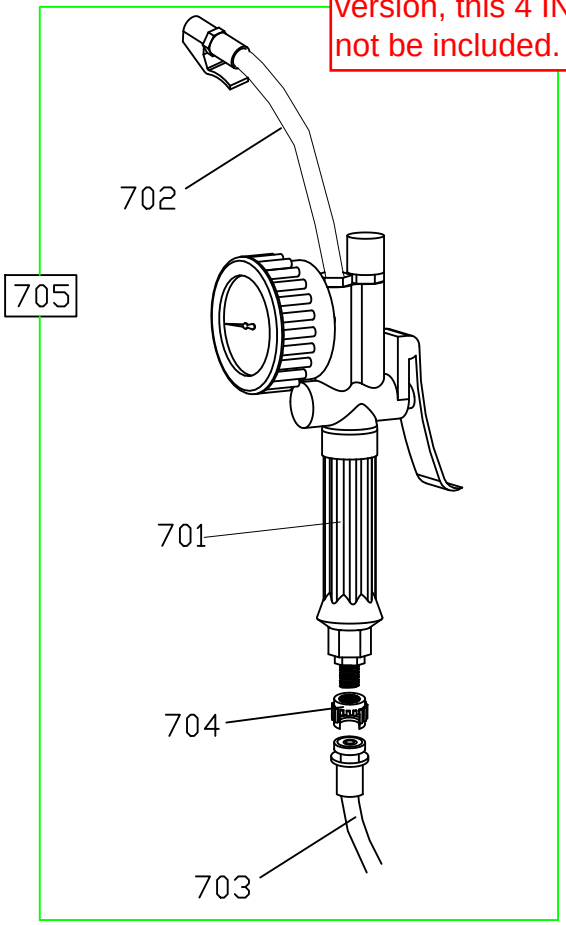
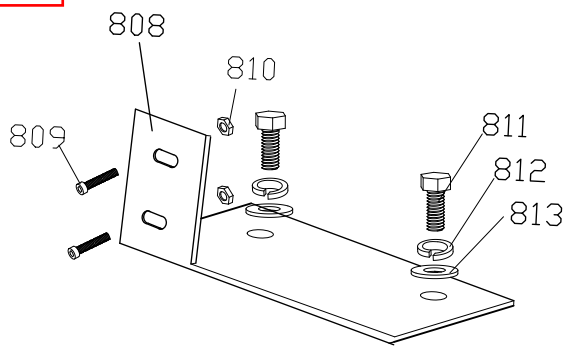
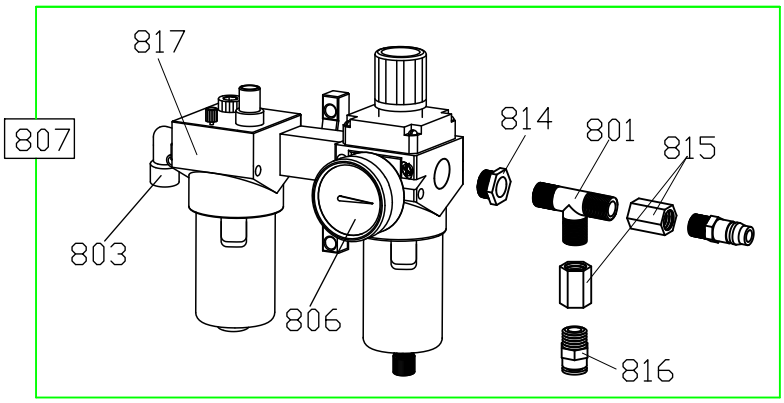


Notice !! If Machine is IP or IT version, this 4 IN 1 inflation gun will not be included.







SPARE PART LIST

No.	Part Code	Qt.	Part Name		No.	Code	Qt.	Part Name
1	C2110101	1	Body		267	GB/T 95	4	Washer Φ12
2	C2110615	1	Front cover		268	GB/T 95	4	Flat spacer for chuck
3	GB/T 70	4	Screw M5×10		269	C2880125	1	Washer for square turntable
4	GB/T 70	2	Screw M6×35		270	GB/T 894	1	Circlip φ65
5	GB/T 93	2	Washer φ6		271	GB/T 78	4	Bolt M12x40
6	GB/T 70	4	Screw M6×10		272	C288TR.01.55.01	2	Lower slide guide with pin
7	C2110143	1	Left cover		273	C2880162	2	Complete clamping cylinder
8	C2110170	1	Rubber plug φ21		274	GB/T 95	4	Washer Φ12
9	C2110171	2	Rubber plug φ45		275	GB/T 894.1	4	Circlip φ12
10	C2110159	1	Oil box		276	GB/T 95	4	Washer Φ12
11	GB/T 70	6	Screw M8×20		277	GB/T 894.1	4	Circlip φ12
12	GB/T 93	6	Washer φ8		278	C233016001	2	Front flange
13	C2110113	1	Rubber wheel support		279	PC08-01	2	Union 8-1/8"
14	C211010105	4	Rubber foot		280	JB/T 6997	2	V-seal Y28X20X10
15	C2110158	1	Bead liftng lever		281	JB1092	2	O-ring φ71X2.65
					282	C233011906	2	Piston
101	C2110138	1	Vertical column		283	GB/T 95	2	Washer Φ12
102	C2110135	1	Column pin		284	GB/T 1337	2	Self-locking nut M12
103	GB/T 95	1	Self-locking nut M16		285	C2880016203	2	Cylinder casing
104	GB/T41	1	Washer φ16		286	C288016201	8	Tightener
105	C2110137	1	Column adjusting screw		287	JB1092	2	O-ring φ71X2.65
106	C2110133	1	Locking block handle bar		288	GB/T 95	16	Washer Φ8
107	C2110127	1	Locking block support		289	GB/T 41	16	Nut M8
108	C2110134	1	Cone washer		290	PL08-01	2	L-union 8-1/8"
109	GB/T 93	2	Washer φ8		291	C233016203	2	Rear flange
110	GB/T 70	2	Screw M8×25		292	C288016202	2	Cylinder rod
111	C2110128	1	Locking block					
112	GB/T 41	1	Nut M12		301	C2110353	1	Union 8-M12
113	GB/T 78	1	Screw M12×30		302	C211010607	1	Washer φ12
114	GB/T 70	1	Screw M8×50		303	C211010603A	1	Bead breaker cylinder casing
115	C2110132	1	Knob		304	GB/T 1337	1	Self-locking nut M16
116	C2110129	1	Plastic cover		305	GB/T 95	1	Washer φ16
117	C2110131	1	Spring		306	JB1092	1	O-ring φ16
118	C2110130	1	Locking plate		307	GB/T 95	1	Washer φ16
119	C2110126	1	Horizontal arm		308	JB1092	2	O-ring φ180
120	C2110125	1	Hexagonal vertical arm		309	C211010606	1	Bead breaker cylinder lid (front)
121	C2110124	1	Buffer bush		310	C211010601	1	Bead breaker cylinder rod
122	C211012302	1	Mounting head plastic protector		311	JB/T 1091	2	V-seal
123	C2110124	1	Munting head		312	C211010602	1	Piston
124	GB/T 119	1	Pin		313	GB/T 41	12	Nut M6
125	GB/T 78	1	Screw M10×25		314			
126	GB/T 95	1	Washer φ10		315	C2110114	1	Shovel
127	GB/T 78	4	Screw M12×15		316	C2110111	1	Bead breaker arm pin (front)
128	GB/T 41	4	Nut M10		317	GB/T 1337	1	Self-locking nut M20
129	GB/T 95	4	Washer φ10		318			
130	GB/T 73	4	Spring Washer ¢ 10		319	GB/T 894.1	1	Circlip φ16
131	C2110123	1	Complete mounting head		320	GB/T 96	1	Washer φ16
					321	C2110105	1	Bead breaker arm
250	C2110163	1	Cap		322	C2110142	1	Bead breaker arm pin (rear)
251	GB/T 5781	1	Bolt M16x40		323	C2110168	1	Rotating pin
252	C2110120	1	Turntable washer		324	GB/T 1337	1	Self-locking nut M12
253	C2110144	4	Jaw		325	GB/T 95	2	Washer φ12
254	C288TR.01.55.05	4	Slide		326	GB/T 5287	1	Washer φ8
255	GB/T 78	4	Bolt M8x30		327	GB/T93	1	Spring washerφ8
256	C288TR.01.55.02	4	Upper slide guide		328	GB/T 5783	1	Screw M8×15
257	C288TR.01.55.04	4	Metal guide		329	C2110108	1	Cushion
258	GB/T 78	8	Bolt M8x20		330	C2110104	1	Spring
259	C288TR.01.55.03	4	Mid slide guide		331	C2110109	2	Screw M12X20
260	GB/T 75	5	Pin Φ5x15		332	C211010608	1	Washer φ12
261	C288012201	1	Square turntable		333	GB/T6173	1	Nut M12X1.25
262	C288TR.01.55.01.01	4	Lower slide guide		334	GB/T5781	12	Screw M6X12
263	C211.TC-421.02A	1	Spindle sleeve for turntable		335	JSM-L-Z6	1	L-union 8-M12
264	C2880147	4	Connecting rod		336	C2110106A	1	Complete bead breaker cylinder
265	C2880124	1	Control plate					
266	C2110148	4	Pin for control plate					
401	C211011201	1	Bead breaker pedal					
402	C211011201	1	Clamping pedal		515	GB/T 70	10	Screw M6×20

403	C211011201	1	Reverse pedal		516			
404	C211011213	1	Twist-spring		517	C211015203	1	Upper cover
405	GB/T 95	2	placket pin		518	GB/T 1096	1	Key 10×40
406	C211011205	1	Connecting spindle		519	GB/T 1096	1	Key 14×40
407	C211011206	1	Connecting sheath		520	JB1092	2	O-ring φ34
408	C211011207	1	Switch lever		521	C211015205	1	Plastic cap
409	GB/T 845	2	Self tapping screw ST3×8		522	GB/T 1337	10	Self-locking nut M8
410	C211011215	1	Cam cover		523	C211011701	1	Rotating union casing
411	C211011218	1	Switch support		524	C2110327	2	Hose
412	C211011216	1	Flat spring		525	PC08-01	4	Union 8-1/8"
413	C211011209	1	Cam		526	C211011702	1	Rotating union mandrel
414	C211011211	2	Spring		527	JSM-3T-Z6	2	T-Union 8-8-8
415	C211011208	1	Pedals support		528	C2110152	1	Complete gearbox
416	GB/T 1337	2	Self-locking nut M4		529	C2110117	1	Complete rotating union
417	GB/T95	4	Washer φ4					
418	GB/T 973	2	Screw M4X28		601	C2110201	1	Motor MY8024
419	GB/T 894.1	2	Circlip φ12		602	GB/T 1096	1	Key 6 ×20
420	GB/T95	2	Washer φ12		603	C2110141	1	Motor pulley
421	C211011203	1	Pedals shaft		604	GB/T 71	1	Screw M6×10
422	GB/T 1337	1	Self-locking nut M8		605	GB/T 11544	1	Belt A28"
423	GB/T95	1	Washer φ8		606	C2110211	1	Cable (switch to motor)
424	C211011219	1	Spacer		607	C2110212	1	Cable (switch to capacitor)
425	C211011210	1	Cam connecting rod		608	C2110202110	2	Capacitor 80μF(for 110V 1ph)
426	GB/T 70	1	Screw M8×50			C2110202220	1	Capacitor 60μF(for 220V 1ph)
427	GB/T 41	2	Nut M8		609	C2110213	1	Cable
428	GB/T95	2	Washer φ6		610	C202011217	1	Switch jacket
429	GB/T 70	2	Screw M6×25		611	C2110154	2	Shock absorber washer
430	GB/T 70	2	Screw M6×25		612	C2110154	8	Shock absorber washer
431	GB/T95	2	Washer φ6		613	IEC947-3	1	Reverse switch
432	GB/T 1337	2	Self-locking nut M8		614	C2110154	2	Washer
433	C21101122001	2	5-Way valve casing		615	GB/T95	2	Washer φ8
434	GB/T 41	8	Nut M6		616	GB/T 93	2	Spring washer
435	GB/T95	8	Washer φ6		617	GB/T 70	2	Screw M10×25
436	GB/T 70	8	Screw M6×25		618	GB/T 70	4	Screw M8×25
437	PT08-01	2	T-union 8-8-1/8"		619	GB/T 41	4	Nut M8
438	PL08-01	1	L-union 8-1/8"		620	C2110110	1	Motor support
439	C2110361	1	Hose (valve to valve)					
440	C2110361	1	Hose (tank to valve)		701	C211033001 C211033001A	1	Air gauge and gun body (old) 4 IN 1 Air gauge and gun body (new)
441	C2110361	1	Hose (valve to bead breaker cylinder)		702	C211033002	1	Air outlet hose
442	C2110361	1	Hose (valve to bead breaker cylinder)		703	C211033003	1	Air inlet hose
443	C2110361	1	Hose (valve to clamping cylinder)		704	C211033004	1	Open nut
444	C2110361	1	Hose (valve to clamping cylinder)		705	C2110330 C2110330A	1	Completed inflating gun with inlet hose (old) completed 4 IN 1 Air gauge with inlet hose (new)
445	QXS-L8	4	Silencer 1/8"					
446	PC08-01	4	Union 8-1/8"		801	JSM-3T	1	T-unon
447	C211011220	1	Complete 5-way valve		802			
448	C211011220	1	Complete pedals		803	JSM-L-Z6	1	L-union 8-3/8"
					804			
501	C211015203	1	Bottom cover		805			
502	GB/T 297	2	Roller bearing 30204		806	C2110333	1	Pressure gauge
503	GB/T 10708	1	V-seal		807	200-03-03	1	Filter and pressure reducer+lubr.
504	C211015207	1	Gear box pulley		808	C2110161	1	Gauge support
505	GB/T 41	1	Nut M10		809	GB/T 70.1-2000	2	Bolt M6×20
506	GB/T 1096	1	Key 6×20		810	GB/T 889.2-2000	2	Self locking nut M6
507	C211015206	1	Worm screw		811	GB/T 5783-2000	2	Bolt M10×25
508	GB/T 292	2	Bearing 7010		812	GB/T 93-1987	2	Spring Washer ¢ 10
509	C211015202	1	Worm gear shaft		813	GB/T 97.4-2002	2	Washer ¢ 10
510	C211015201	1	Worm gear		814	CU14-38	1	Copper union 1/4"-3/8"
511	C211015208	1	Spacer		815	CU14-14	1	Copper union 1/4"-1/4"
512	C2110328	1	Hose		816	PC08-14	1	Quick union
513	JB1092	3	O-ring φ60X2.65		817	AL3000-03	1	FRL only (not include gauge and unions)

IT VERSION

If the machine's version is with IT set, there is an inflating pedal on the left side of the machine. When the pedal is pushed down to its middle position, air is released from the airline gauge. When the pedal is pushed down completely, air is released from the inflation gauge along with powerful jet from the nozzles on the turntable clamps.

Assembly of air tank and tools box:

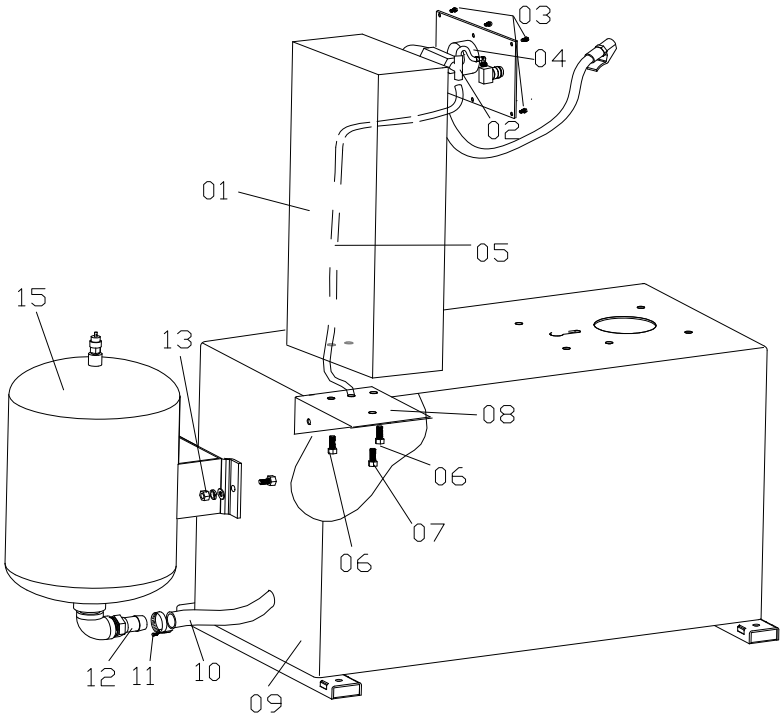


Fig.IT1

1) Place the air tank (15,Fig.IT1) on the body (9,Fig.IT1) of the tire changer and fix the air tank with nuts (13,Fig.IT1)
2) Insert the rubber hose (10,Fig.IT1) from of the body to the connection (12,Fig.IT1) of the air tank.
3) Fix the hose to the connection by tightening the hose clamp (11,Fig.IT1).
4) Unscrew the screws (03,Fig.IT1) of the front panel of the tools box (01,Fig.IT1).
5) Fix the tools box and its support frame (08,Fig.IT1) with screws and nuts in the pre-drilled holes.
6) Connect hose (05,Fig.IT1) from the body to the fitting (02,Fig.IT1) of the manometer (04,Fig.IT1) through the holes of the tools box.
7) Replace the front panel of the tools box and fasten with its screws.

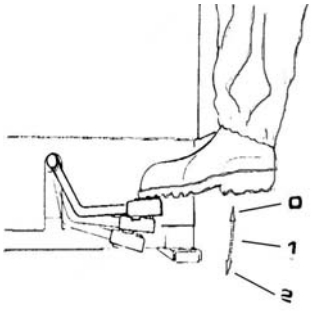


Fig.IT2

-1 <u>General information</u>

1) The IT inflating device is used during bead-seating operation and during inflation in place of the airline gauge.
2) NOTE: Before any installation work, check to make sure that the tire changer is disconnected from any power sources.
3) Before operating it should be to check the device correctly:
   -Press the inflating pedal, which is stretched out from the bottom of the left cover of the box assembly, down to the middle position (Fig.IT2, position1). The inflating head should give air.
   -Press the inflating pedal all the way down (Fig.IT2, position 2). A strong air blast should come from the holes in the four locking slides.

-2 Bead seating and inflating

NOTE: A WHEEL CAN EXPLODE IF:

1) The diameter of the rim is not exactly the same at the tire's.
2) The rim or tire are defective.
3) If the recommended pressure is exceeded during bead seating.
4) The tire is inflated to a pressure higher than the maximum recommended by the manufacturer.
5) The operator does not observe the requisite safety regulations.

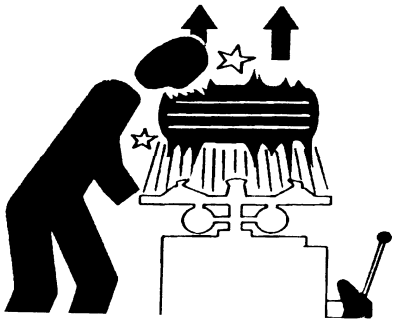
-3 Tubed tires

1) Remove the valve stem.
2) Clip the valve onto the inflator chuck making sure it is properly connected.
3) Make a last check to be certain that tire and rim diameter correspond.
4) Check to be certain that rim and beads are sufficiently lubricated. If necessary lubricate some more.
5) Press the pedal down to the middle position to start inflation.
6) Release frequently the inflating pedal to check pressure on the manometer. Introduce more air little by until the correct pressure is reached.

-4 Tubeless tires inflating

NOTE: When inflating tubeless tire using a strong jet of air, the wheel must be clamped from the inside of the rim.

1) Remove the valve stem.
2) Clip the valve onto the inflator chuck making sure it is properly connected.
3) Make a last check to be certain that tire and rim diameter correspond.
4) Check to be certain that rim and beads are sufficiently lubricated. If necessary lubricate some more.
5) Press the pedal down to the middle position.
6) If the bead of the tire is not well seated, due to a strong bead, lift tire manually until the upper bead seals against the rim, then press the pedal all the way down. A strong jet of air will be released through the nozzles in the slides and this will help the bead seal.(Fig.IT3)



CAUTION: Always keep hands and body back from inflating tire. Fig.IT3

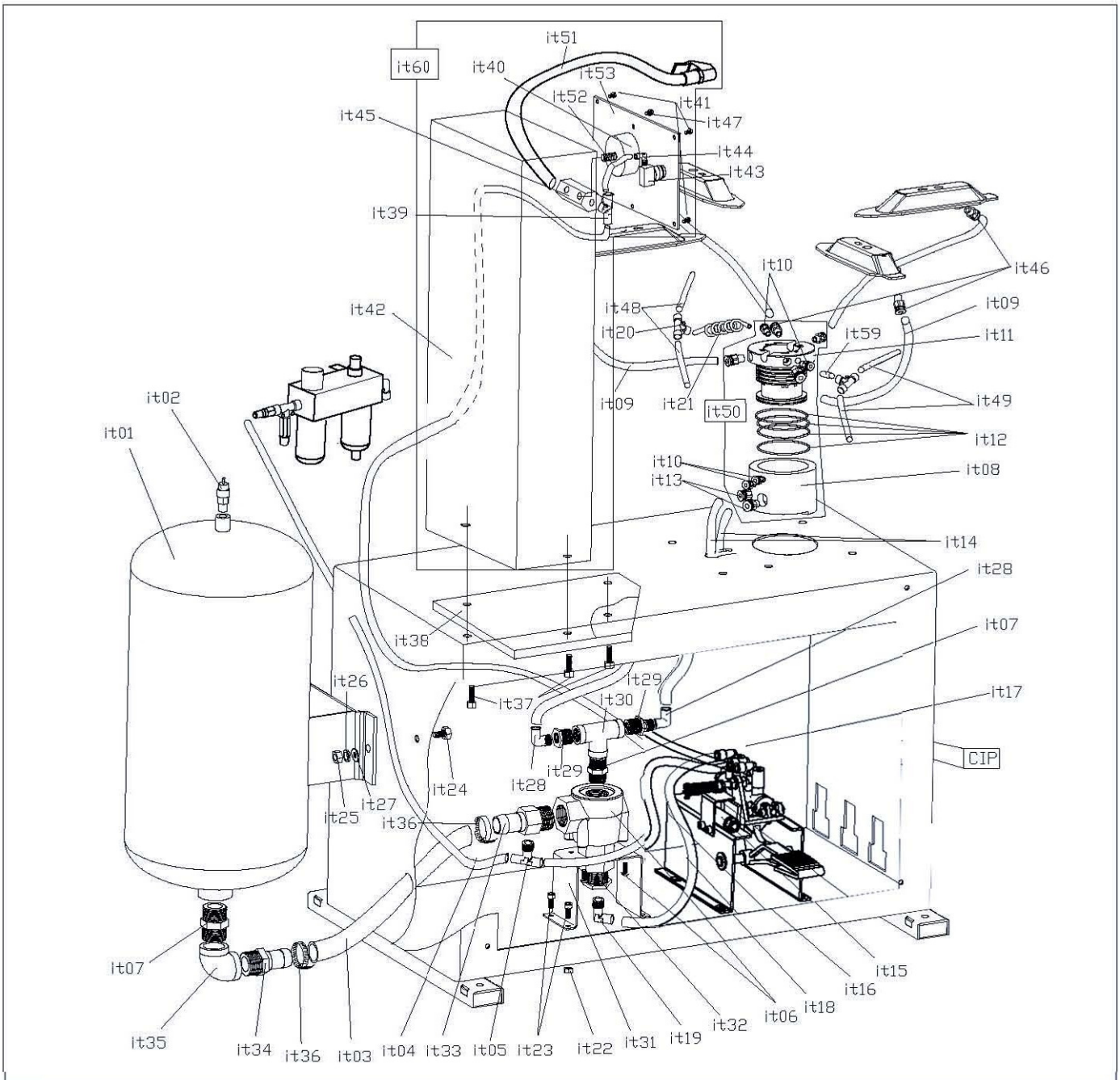
7) Release the tire , set the pedal back to the middle position and continue to inflate the tire to the required pressure.

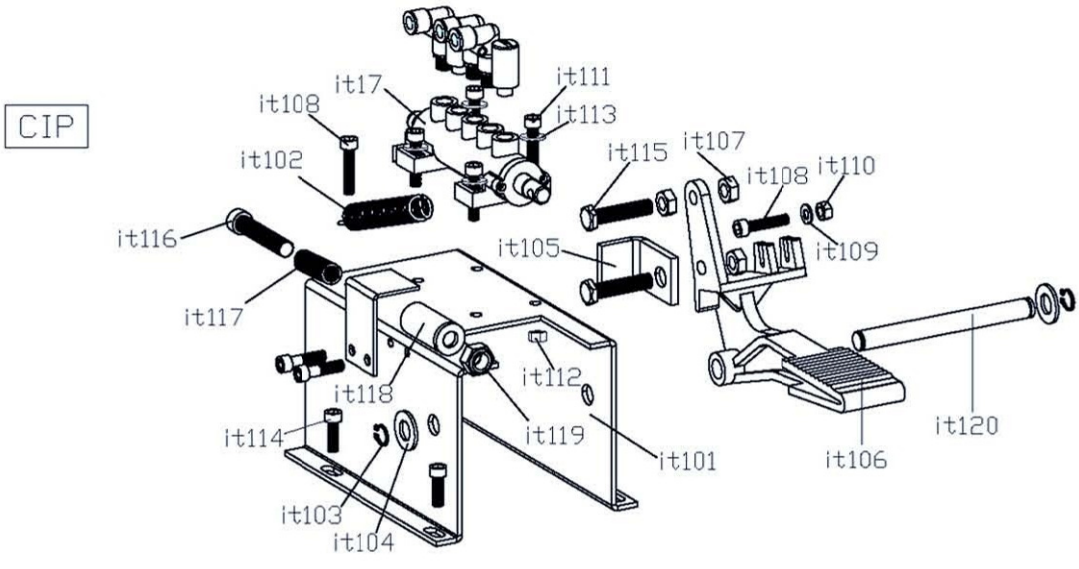
-5 NOTE

1) Failure to follow all warnings and instructions may lead to serious personal injury or death to operator or bystander. NEVER exceed 3.5 bar (50 psi) when seating beads or inflating tires.
2) If a higher tire inflation pressure is required, remove the wheel from the tire changer and continue the inflation procedure with the wheel inside a special protection cage. NEVER exceed the maximum inflation pressure given by the tire manufacturer.
3) ALWAYS keep hands and entire body back from inflating tire.

ONLY specially trained personnel are allowed to perform these operations. Do not allow others to operate or be near the tire changer.

IT Exploded View Drawing





IT Spare Part List

No.	Part code	Part Name	QTY
IT1	I2110301	Tank	1
IT2	PQ-L10	safety valve	1
IT3	I2330341	Hose (tank to quick exhaust valve)	1
IT4	I2110312	Hose (input to quick exhaust valve)	1
IT5	PT08-01	T-union 1/8"	1
IT6	KP-L25	Complete quick exhaust valve	1
IT7	C233030104	Tie-in	1
IT8	I21103011702	Rotating valve casing	1
IT9	I2110313	Hose(Rotating union to slide)	4
IT10	PC08-01	union 1/8"	3
IT11	I211011701	Rotating union mandrel	1
IT12	C211011704	O-ring Φ65x2.65	4
IT13	PC12-04	Connector 1/2"	2
IT14	I2110314	Hose (exhaust valve to Rotating union)	2
IT15	I2110315	Hose (5-way valve to IT air input)	1
IT16	C211011220	Hose (5-way valve to air input)	1
IT17	I2110316	complete 5-way valve	1
IT18	I2110317	Hose (5-way valve to quick exhaust valve)	1
IT19	PC08-01	L-union 1/8"	1
IT20	PC-3T-0803	T-union	1
IT21	C2110327	Solenoid hose	1
IT22	GB/T41	Nut M6	4
IT23	GB/T5781	Screw M6	4
IT24	GB/T5781	Screw M10	2
IT25	GB/T41	Nut M10	2
IT26	GB/T41	Spring washer	2
IT27	GB/T42	gasket	2
IT28	PL12-04	Angle connector 1/2"	2
IT29	I233030303	Tie-in	2
IT30	I233030304	T-Union	1
IT31	I233030301	quick exhaust valve support	1
IT32	I233030305	Union	1
IT33	I233030302	Union	1
IT34	I233030103	Union	1
IT35	I233030105	L-Union	1
IT36	I233030106	Nip	2
IT37	GB/T5781	Screw M8	3
IT38	C2110167	Tools box support	1

No.	Part code	Part Name	QTY
IT39	C211016504	T Union	1
IT40	I2330340	Air manometer	1
IT41	GB/T5781	Screw M5	6
IT42	C2110165	Tools box	1
IT43	MOV-03A	Exhaust valve	1
IT44	PL08-01	L-Union1/8"	1
IT45		Connecting block	1
IT46	PC10-02	Connector 1/4"	8
IT47	GB/T5781	Screw for fixing air manometer	3
IT48		Hose (rotating union to rear flange of clamping cylinder)	2
IT49		Hose (rotating union to front flange of clamping cylinder)	2
IT50	IT2110117	Complete rotating union	1
IT51	C211033002	Air outlet hose for IT version	1
IT52		Hose	1
IT53		Front cover	1
IT59	P/T-3T-0802	T Union	1
IT60	I2110164	Complete IT box	1
		Pressure regulator	
IT101	I2110101	Inflation pedal support	1
IT102	GB/T 1239.6	Spring	1
IT103	GB/T 50	Washer φ8	1
IT104	GB/T 5780	Bolt M8×30	1
IT105	I2110102	Pedal lever	1
IT106	I2110103	Inflation pedal	1
IT107	I2110104	Connecting rod	1
IT108	GB/T 5780	Bolt M4×20	1
IT109	GB/T 50	Washer φ4	1
IT110	GB/T 1337	Self-locking nut M4	1
IT111	GB/T 70	Screw M6×20	1
IT112	GB/T 1337	Self-locking nut M6	1
IT113	GB/T 50	Washer φ6	1
IT114	GB/T 70	Screw M8×25	1
IT115	GB/T 68	Screw M8×25	1
IT116	GB/T5781	Screw M10X70	4
IT117	GB/T 1239.6	Spring	1
IT118	GB/T 5780	Bolt M4×20	1
IT119	GB/T41	Nut M10	1
CIP		Complete inflation pedal	1