Portable High Pressure Helium Compresor

- Model: CN-300L
- Manual & Instruction

- Dimension: 115cmX 60cmX70cm
- Max Air Pressure: 2100 – 2400 psi/(15 Mpa – 16.5 Mpa)
- Net Weight: 150 kgs / 330 lbs
- Capactiy: 300 L/m
- Flow Rate: 18 m3/ hour
- Motor: 7.5 Kw
- RPM: 1600
- Max Working Altitude: 2,000m

Technic Support:
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Warning: 

1. The Portable High Pressure Helium Compressor is strict adherence to the quality standards, ignoring operation and maintenance procedures, can cause serious injury or death. We strongly recommend that you read this manual carefully before using the compressor, and strictly enforced. Machine damage due to violation of operating instructions caused, will not be included in the product warranty.

2. The Portable High Pressure Helium Compressor is manufactured according to the highest technical standards and safety standards. However, the operator and third parties can still cause harm or result in damage to machinery and other equipment during operation. So the machine can only be manufactured with this manual compression of the gas, as its other use is strictly prohibited.

3 . All work on the compressor must be at a complete standstill state, no pressure and cut off the power of the state to do the next procedures.

4 . Do not braze or weld pressure piping or/and tubing, do not attempt to bolt or modify the structure or configuration of any component or subcomponent of this compressor while under pressure.

This manual contains the operating instructions and Maintenance schedules for high pressure helium compressors. The operator must read and understand all the information in the manual.

ATTENTION.

This machine only be used after a careful reading of this instruction manual by skilled and trained operator. The machine may only used to compress helium gas. Other use is strictly prohibited. The manufacturer and the supplier void all responsibility for damage or injury resulting from failure to follow these instructions.

Before using the machine please put your attention to this general information:

1. Personnel engaged to operate the machine must have read the instruction manual before beginning work, especially the safety notices chapter.
2. Personnel may not wear long hair loose, loose clothing or jewellery, including rings.
3. Keep all safety and danger notices on the unit complete and in readable condition.
4. No modifications may be made to the unit which could impair safety without first obtaining permission from the suppliers.
5. Piping must be thoroughly checked (pressure and visual inspection) by the operator at appropriate time intervals, even if no safety related faults have been noticed.
6. Intervals stipulated or given in the instruction manual for recurring checks/ inspections must be adhered to.
7. It is absolutely essential that the workplace is appropriately equipped for Maintenance measures.
8. Work on/with the unit may only be carried out by reliable personnel. Observe the legal minimum age permissible.
9.Operator must be trained and have experience on compressor

Remember that your machine is not a ‘toy’, but a highly Efficient internal-combustion machine whose power is Capable of harming you, or others, if it is misused of abused.As ower,you,alone,are responsible for the safe operation Of your machine, so act with discretion and care at all time.If at some future date,your machine is acquired by another Person,we would respectfully request that these instructions are also passed on to its new owner.

Genernal

1. Basic information of the (CN-300L)

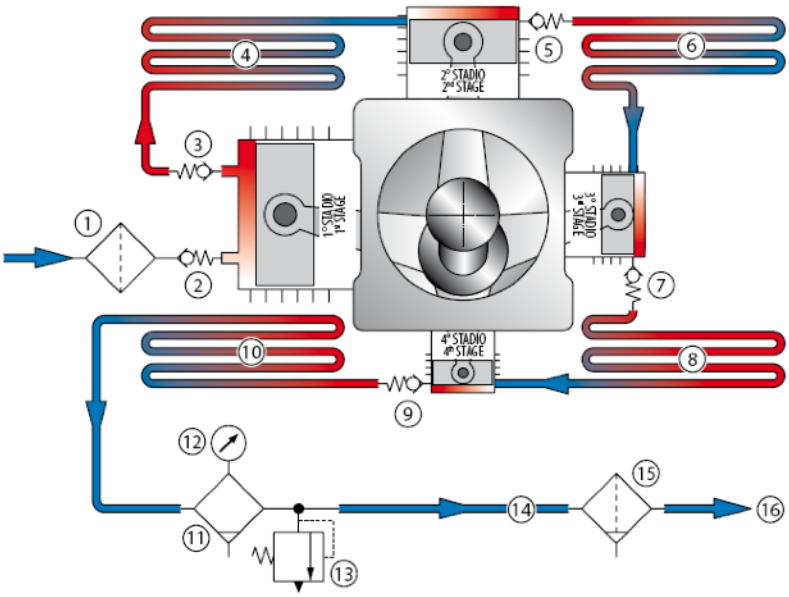
The **CN-300L Model** are manufactured for the primary purpose of Press helium gas to cylinder.It provide high quality helium gas balloon and blimp recycle usage.

1.1 Technical Data

Technical Data CN-300L		
Number of stages	3 stage	
Working pressure:	15 -16.5	Mpa
Capacity	300	l/min
Power	7.5	Kw
Motor	Three-phase	
Votage	380--400	V
Frequent	60	Hz
Noise	80.7	dB(A)
Dimension	1150 x 600 x 700	mm
Weight	150	kg
Quality	EN12021 standard	

1.2 Structure

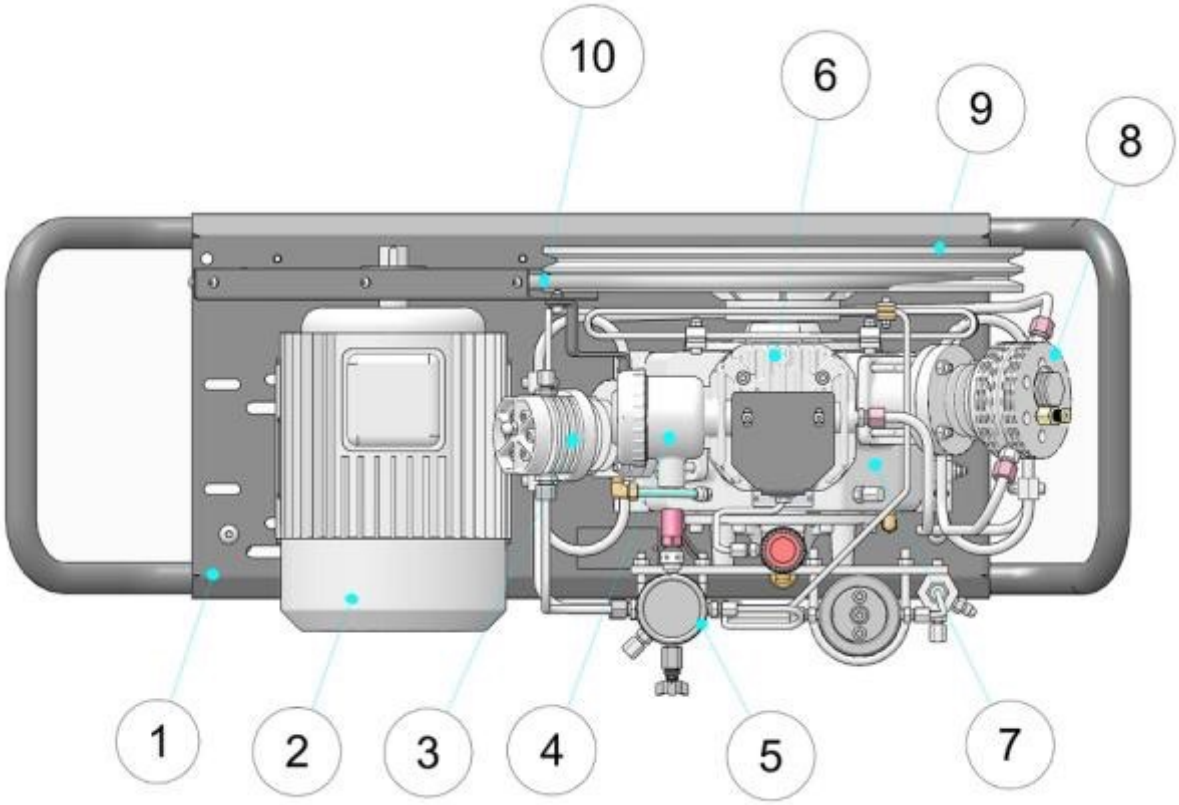
- Structure: Block, Compressor
- Frame
- Oil/mosture Separator （Manual)
- Filtration: Filter cartridge activated carbon and molecular sieve: 1st stage 3.1in, 2nd stage 1.5in, 3rd stage 0.76in, 4th 0.38in
- Dimension: 1st stage 95mm, 2nd stage 38mm, 3rd stage 14mm
- Driven: Electrical motor or Petrol Engines)
- Lubricant:
- Compressore Oil: 2 liter



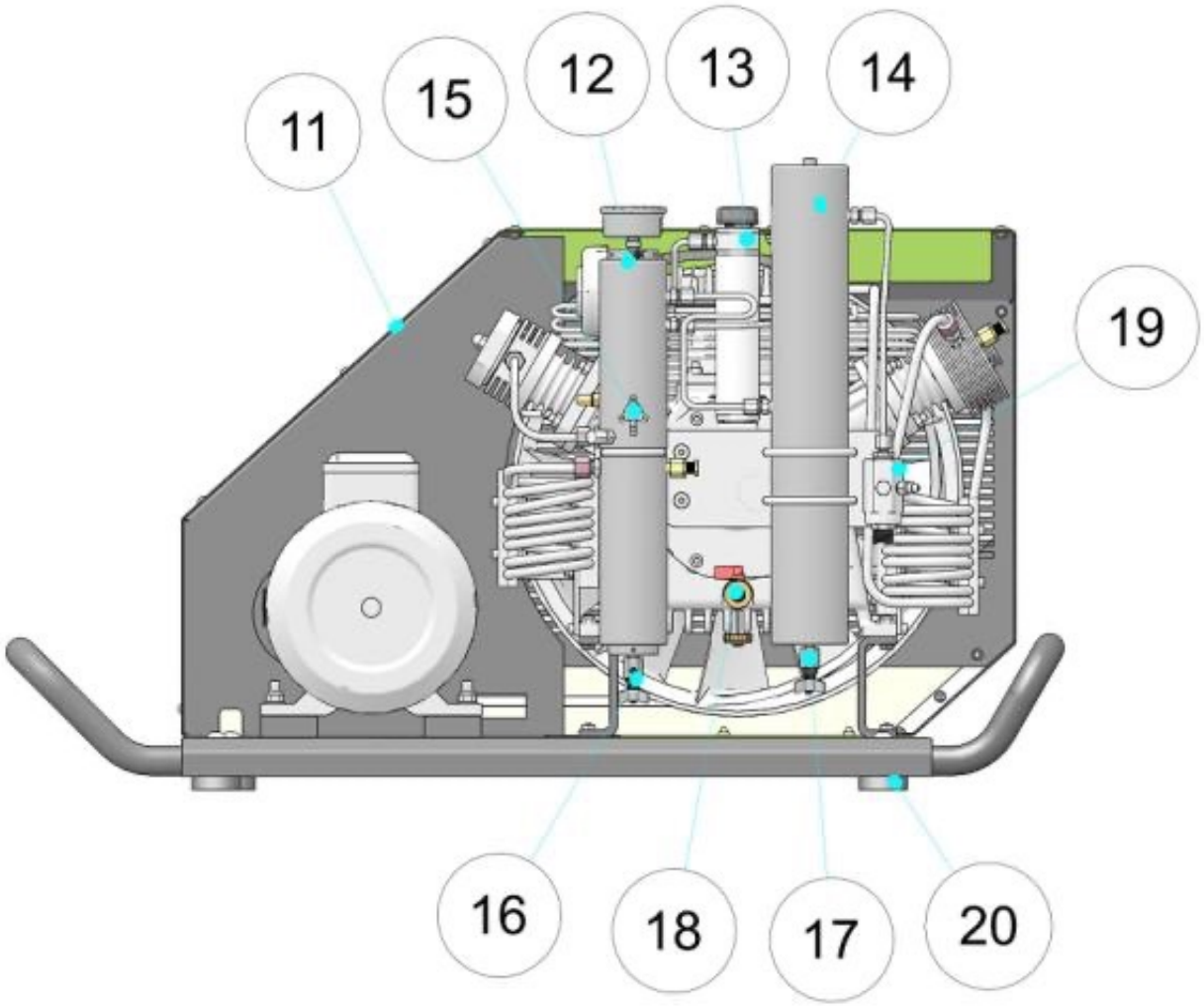
Air enters through 1. the air filter, through 2. the first stage cylinder intake valve into the first stage cylinder.

After compression, it exits through the 3. first cylinder vent valve into the 4. first stage cooling pipe. The cooled air enters the second stage cylinder for additional compression. It exits through the 5.second stage cylinder vent valve into the 6. second stage cooling pipe.

After 7. the oil-water separator, the air continues through the 8. third stage air inlet valve intothethird cylinder for final compression. The air then flows past the cylinder vent valve into the 9third stage cooling pipe and then enters 10the activated carbon

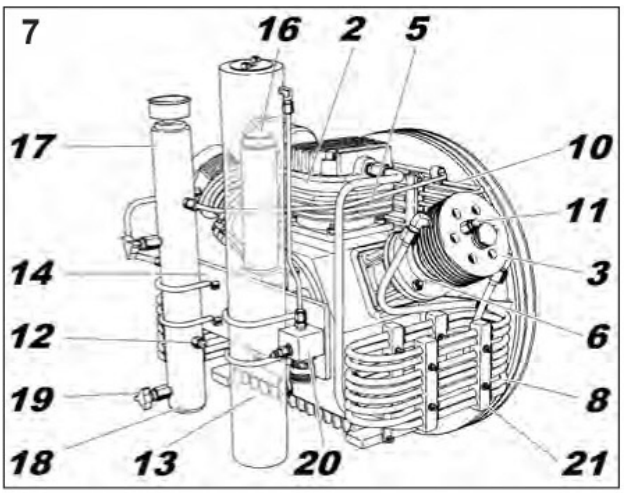


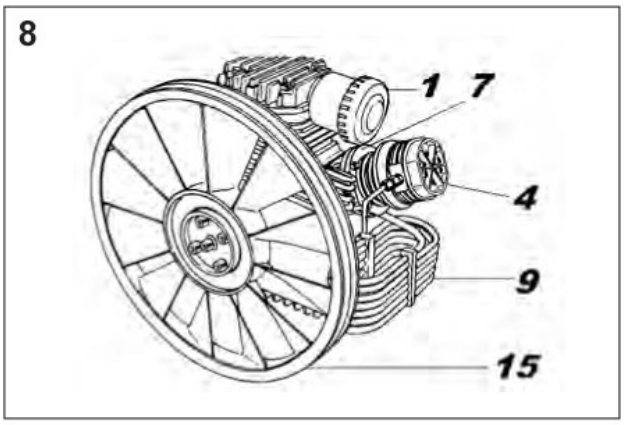
1 - Bottom plate
2 - Three- phase motor
3 - The third stage cylinder
4 - Inlet air filter
5 - Pressure gauge
6 - First stage cylinder
7 - Block
8 - The second stage cylinder
9 - Cooling fan
10 - Belt



11 - Protective enclosure
12 - Blow out the drum
13 - Oil filler
14 - Activated carbon molecular sieve filter
15 - Drain valve
16 - Drain valve
17- Drain valve
18 - Oil drain valve
19 - Back pressure valve
20 - Earthquake feet

1.3 Compressor Structure



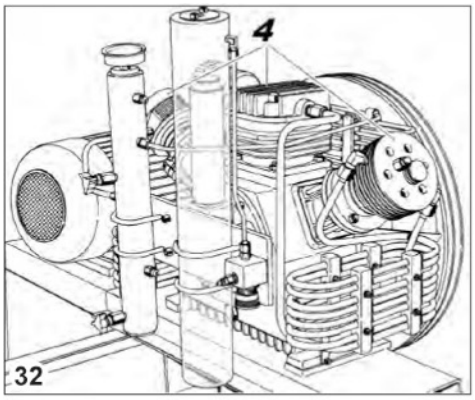


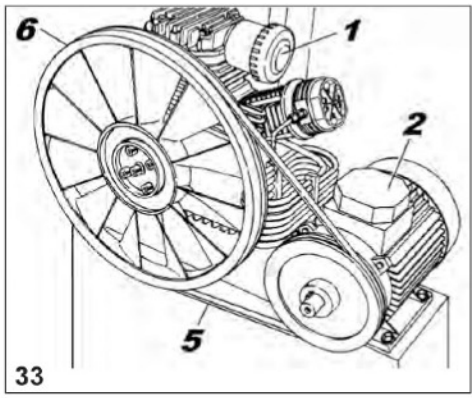
No.	Name	No.	Name
1	Intake Fliter	12	2 stage safety valve
2	1 stage cylinder head	13	Crankcase
3	1 stage cylinder head	14	Filter bracket
4	1 stage cylinder head	15	Cooling fan
5	1 stage cylinder	16	Oil stopper
6	1 stage cylinder	17	Last stage oil-water separator
7	1 stage cylinder	18	Inter-stage oil-water separator
8	1-2 stage cooler	19	Drain valve
9	2-3 stage cooler	20	Stabilizing valve
10	Final Cooler	21	Cooler bracket
11	1 stage safety valve	22	Last stage safety valve

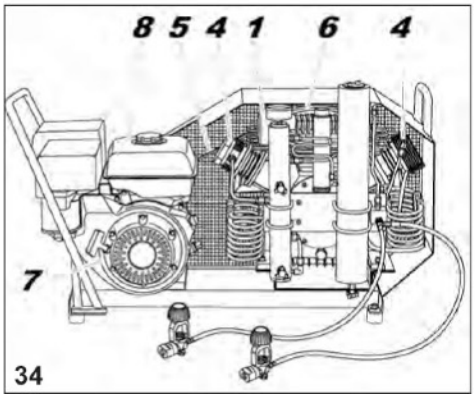
No.	Safety device	Describe	Testing
1	Safety Valve	Ensure that the final stage pressure is not too high	Check the safety valve every time you turn on the machine
2	Protection cover	All steel structure.	Periodic Testing
3	Manual Sewage Discharge Valve	Ensure that the filter element works properly.	Condensate water is a mixture of water and oil discharged every 30 minutes. Milky white liquid. Brown is acceptable. If the color is brown, please maintain the compressor immediately.
4	Activated carbon filter	Ensure that the quality of the exhaust gas meets the standard.	Please replace the gas immediately when it smells bad. The replacement cycle can be seen in the maintenance section.
5	Pressure gauge		
8	Warning label: mechanical moving parts		
9	Warning label: electric shock danger		
10	Maximum working pressure		
11	Warning label: Strictly prohibit removal of protective structure warning label: pay attention to pressing hands		
12	Warning label: No operation during exercise		
13	Warning label: Do not smoke		
14	Warning label: please wear protective gloves		
15	Warning label: please wear protective glasses		
16	Warning label: Please wear protective helmet		
17	Motor wiring indication		
18	Warning label: please wear a hairdresser		
	Please refer to the random provision of safety manual maintenance work, please cut off the power supply		

1.5 Hazardous area

There will be unavoidable potential dangerous areas in unit operation. Operators should keep this area in mind to avoid possible accidents.。







No.	Desicription
1	During the operation of filling pump, oil-gas mixture may pollute the intake por
2	Electric shock is dangerous. Please use complete circuit protection, especially in the working environment with water and humidity.
3	Internal combustion engine drive units may be dangerous, please refer to the Internal combustion engine manual.
4	Compressor area: Prevent scald, high temperature will occur when the compressor works. Any maintenance work should be done after 30 minutes of shutdown.
5	Noise pollution may cause harm to people.
6	Fan area: prevent impact and wear
7	Belt area: Be careful of belt breakage in unprotected maintenance
8	Fans can suck and blow air, which is dangerous.
9	Danger of Breakage of pipe

2. Install and Use

2.1 Unpacking

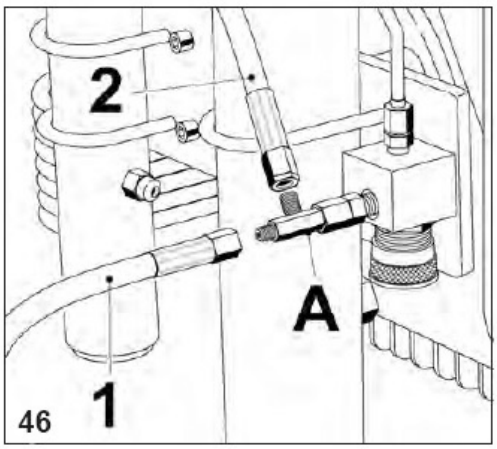
- CN-300L is fully assembled and manufactured. The intake pipe is in bulk.
- Please handle it carefully.
- There are the following items in the box:
- High Pressure Compressor
- 1 intake pipe
- 1 high pressure exhaust pipe
- Operational Maintenance Hand

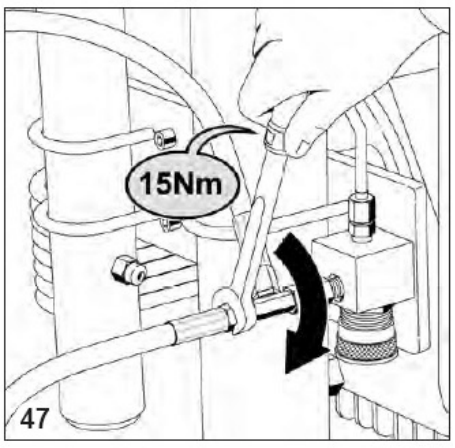
2.2 Install

All installation operations are carried out on the basis of the operator's full understanding of the unit

2.2.1 Enplace

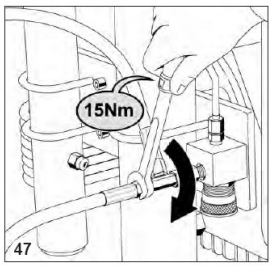
- Please place the unit on the horizontal surface.
- Please ensure that the installation area can ensure good ventilation and heat dissipation of the unit.
- Make sure that there are no dust, explosion, corrosion and fire hazards in the installation area.
- When the unit runs at ambient temperature above 40 C, please use air conditioning to cool down the use space.
- Make sure the unit is more than 1M away from the wall.
- Make sure the unit is more than 1.5M away from the ceiling.
- Make sure that the installation area is well illuminated and the various components and labels are clearly visible.





Follow the Steps

A Connect intake pipe with machine

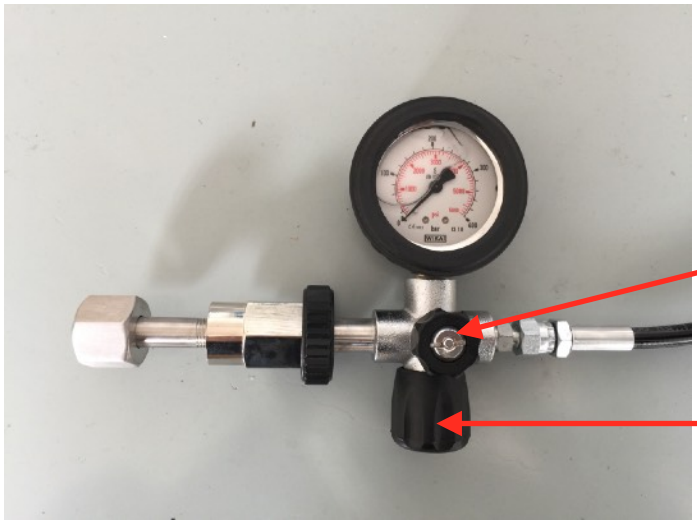


B Connect pipe with helium cylinder

C Before starting the machine

C.1 Before starting the machine, attention should be paid to 1. Closing state of cylinder valve 2. Closing state of oil-water separator valve 3. Closing state of exhaust valv

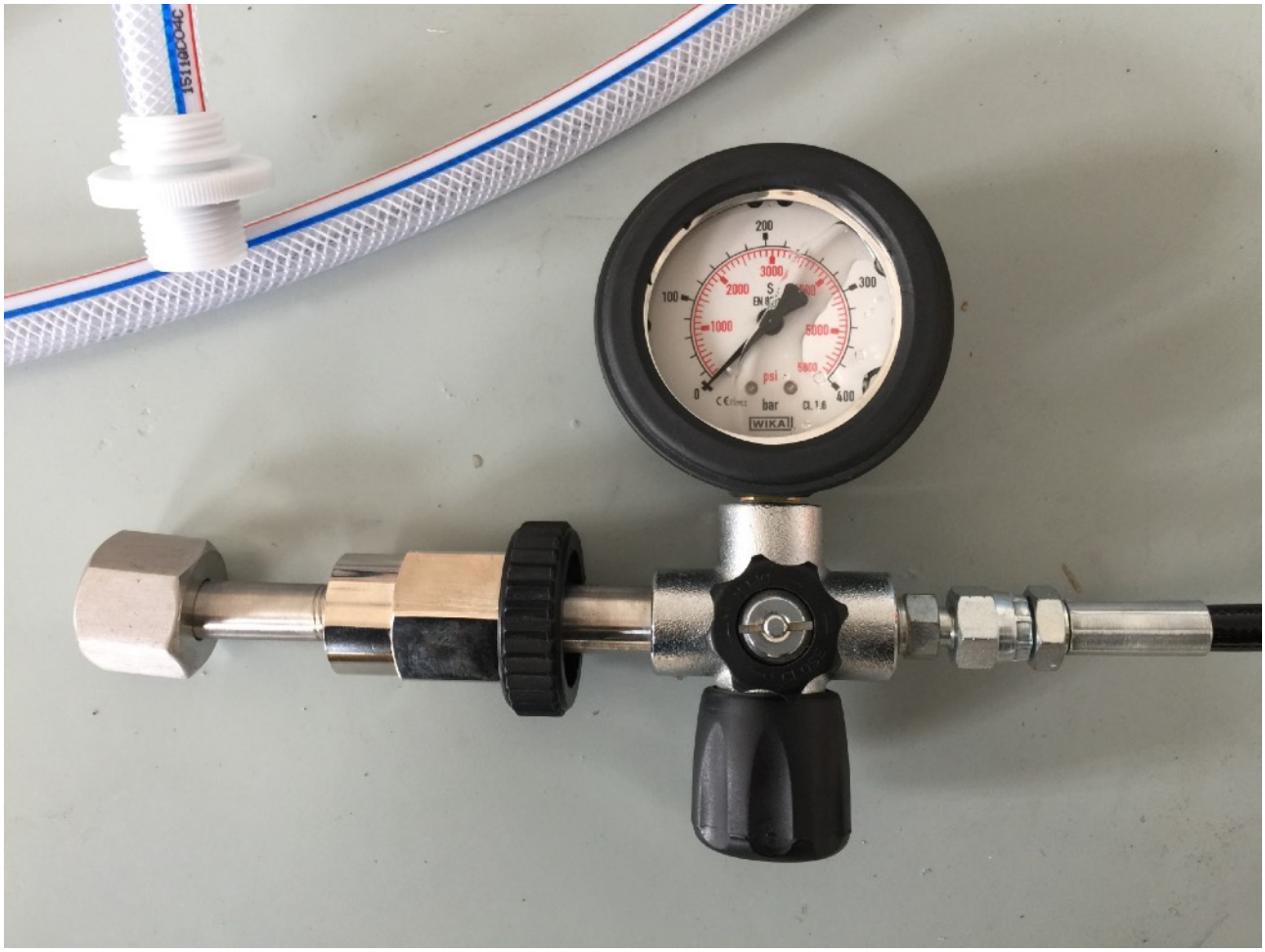
Cylinder valve



Exhaust Valve B Opens the exhaust pipe and the machine with air in it before opening it.

Exhaust Valve A Closed

Pay attention to pressure gauges and cylinders after starting the machine



The exhaust valve B is open at this time because it needs to be excluded after about 10s of air in the machine and pipe.

Close exhaust valve B and open exhaust valve A to allow helium to enter cylinders

Notes 1. Oil-water separator should be turned on every 10-15 minutes to discharge.
2. The machine needs a moderate rest when it runs for 25 minutes each time, because this minimal power machine needs to wait for the compressor cylinder to be cooled before it can be used again.
3. When the machine suddenly stops or rests, it needs to close the helium cylinder valve, close the exhaust valve A and slowly open the exhaust valve B.
The function is to let the high-pressure gas in the machine exhaust to facilitate the start-up again when there is air pressure inside the cylinder block.
4. Note that instrument gas is about 11-12 MPa and cylinders can be replaced because it takes a long time to change from 12 to 14, which is more efficient.
5. Some gas companies sell cylinders with installations behind cylinder valves to prevent customers from recovering helium correctly.
Check cylinders when there is no gas

2.2.4 Lubricant Oil Filling

Turn the injection plug off and add LS special lubricant. Lubricating oil capacity 1.5L。