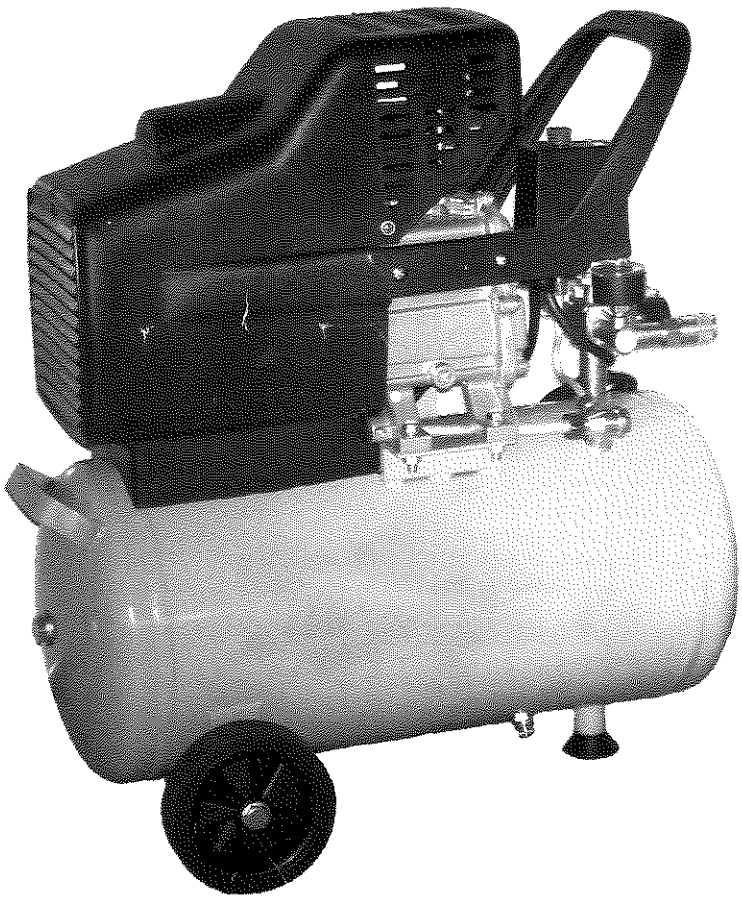
AIR COMPRESSOR

OPERATION MAMUAL

BM



PLEASE READ AND BE FAMILIAR WITH THE INSTRUCTION MANUAL BEFORE OPERATION. FAILURE TO DO SO MAY RESULT IN INJURY OR DAMAGE TO THE AIR COMPRESSOR.

1. MAIN COMPONENTS (Fig.1)

(1) Main compressor
(2) Pressure switch
(3) Outlet Valve
(4) Regulating Valve
(5) Pressure gauge
(6) One-way Valve
(7) Drain cock
(8) Wheel
(9) Discharge pipe
(10) Air tank
(11) Safety valve
(12) Fan cover

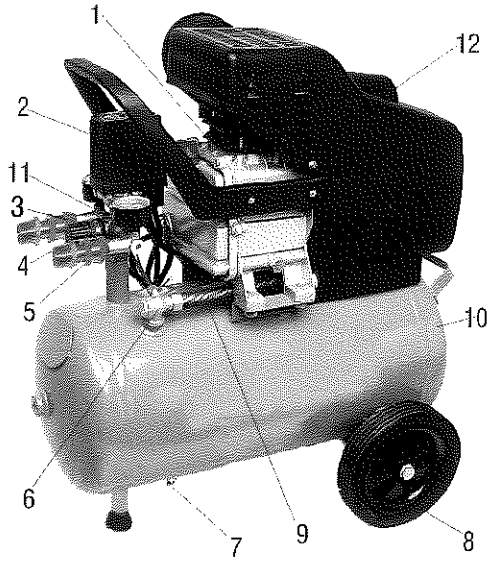


Fig.1

2. MAIN TECHINICAL PARAMETER

ITEM	DATA				
Model	BM				
Power	1Kw/1.5HP&1.5Kw/2HP&1.8Kw/2.5HP				
Voltage	100V/110V/120V	220V/230V/240V	220V		
Frequency	60HZ	50Hz	60Hz	60Hz	
Motor Poles	2P	2P	2P	4P	
Rated Speed	3450r/min	2850 r/min	2850 r/min	1750r/min	
Current	15A	7.5A	7.5A	5.5A	
Theoretic	7.3CFM	7.3CFM	7.3CFM	7.3CFM	
Discharge	115PSI/0.8MPa				
Restart Pressure	70 PSI/0.5MPa				
Tank Capacity	24L	30L	40L	50L	80L
Dimensions(cm)	60×29×64	69×30×64	69×32×72	77×33×74	97×38×83
Air Outlet Size	1/4"				
Net Weight	28kg	31kg	33kg	38kg	50kg

3. PREPARATION FOR STARTING

(1) Check all bolts and nuts. Make sure all parts loosened must be tightened.

(2) The place to set the compressor should be clean, dry and ventilated.

(3) Keep the using voltage within ±4% of the rated.

(4) Keep the oil level in the red circle of the oil leveler.

(5) Recommend SAE30 or L-DAB100 over 10℃, and use SAE10 or L-DAB68 below 10℃ of the compressor oil.

(6) Open the outlet valve, set the knob of pressure switch in position on (Fig.2), let the compressor run 10 minutes with no load to ensure lubricating the moving parts before regular service.

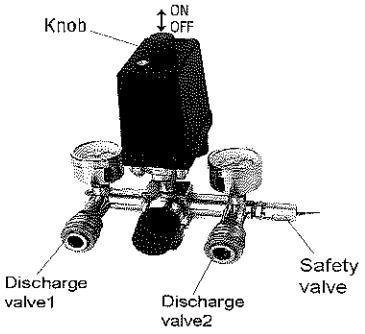


Fig.2

4. OPERATION AND ADJUSTMENT

(1) The compressor is controlled by pressure switch when normal working. It can be stopped automatically as pressure increasing to the maximum and restart as pressure decreasing to the minimum. The rated pressure has been adjusted when produced. Don't change it carelessly. As soon as motor switched off, the compressed air in the discharge pipe should be released through the release valve under the switch. This is the necessary condition for restart, or the motor will be damaged. The rated pressure can be adjusted by turning bolt of the switch (Fig.3).

(2) The output pressure of compressed air can be adjusted by regulating valve. Pull up the knob of regulation valve and turn it clockwise to increase the pressure (Fig.3).

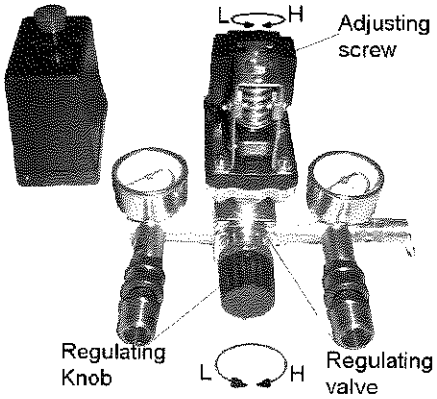


Fig.3

(3) When the compressor in running need to be stopped, only set the knob of pressure switch in position off.

5. CAUTIONS

(1) Put the cover off first and put the breath pipe on the oil-hole and set the air filter before the compressor run (Fig.4).

(2) Never unscrew any connecting part when the tank is in pressure condition.

(3) Never disassemble any electrical part before disconnecting the plug.

(4) Never adjust the safety valve carelessly.

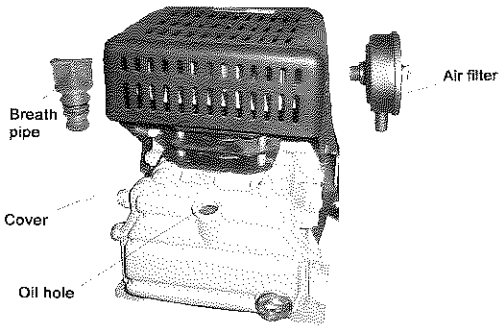


Fig.4

(5) Never use the compressor in place where voltage is too low or too high.
(6) Never use electric wire more than 5m long with less than the section of 1.5mm^2, 16A.
(7) Never disconnect the plug to stop compressor, set the switch knob in position off instead.
(8) If the release valve doesn't work as motor stopped, find the cause immediately so as not to damage motor.
(9) Lubricating oil must be clean, oil level should be kept in red circle of the oil leveler.
(10) Before restarting the motor by pushing the reset button, check the air compressor carefully, find the causes of the trouble and solve them, check the pressure in the air tank and make sure it is under 0.8Mpa.
(11) Disconnect the plug to cut off power supply and open the outlet valve and discharge all air in the air tank after use.

6. MAINTENANCE

(1) Before maintenance operation, stop the air compressor, cut off power supply and discharge all air in the air tank.
(2) Clean crank case and renew lubricating oil after the first 10 working hours.
(3) Check the oil level after every 20 working hours, and replenish if necessary (Fig.5).
(4) Clean crank case and renew the oil, clean air filter every three months.
(5) Open the drain cock under the tank to exhaust the condensate after every 60 working hours but less than every 7 days.
(6) Check the safety valve and pressure gauge by professional organization every 6 months and make sure they are in correct condition.

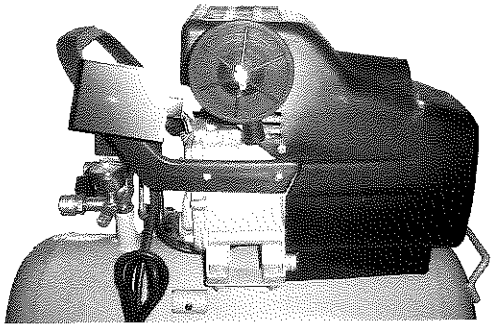


Fig.5

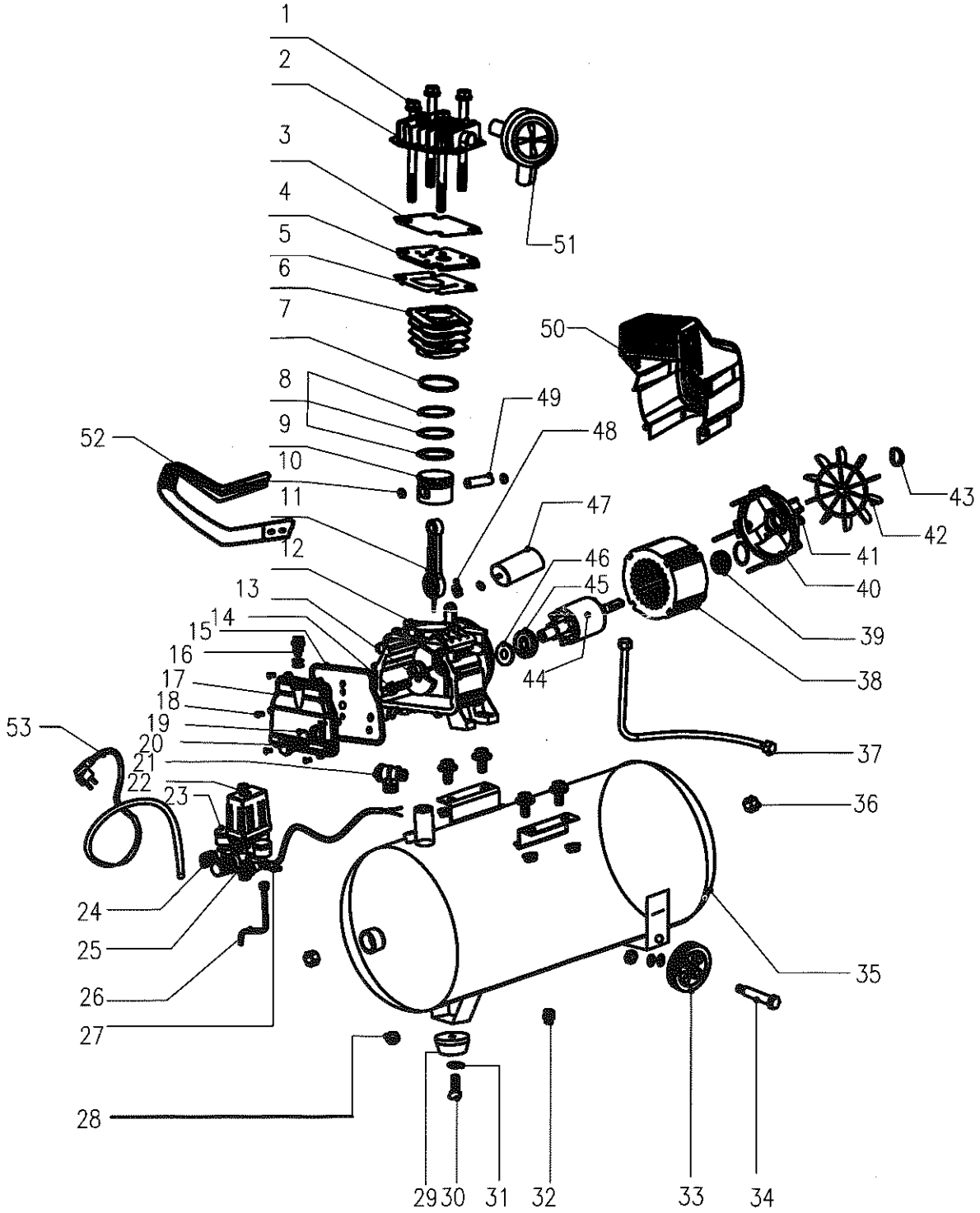
(7) Make sure there is no rust on the air tank and the air tank is not damaged.
(8) Check the thickness of the air tank by professional organization every year and make sure the thickness is not less than 2.1mm.

7. TROUBLES AND REMEDIES

Table 2

Trouble	Possible causes	Remedies
Motor unable running. running too slow, or getting hot	(1) Fault in line, or voltage insufficient (2) Power wire too thin or too long (3) Fault in pressure switch (4) Fault in motor (5) Sticking of main compressor	(1) Check the line (2) Replace the wire (3) Repair or replace (4) Repair or replace (5) Check and repair
Sticking of main compressor	(1) Moving parts burnt due to the oil insufficient (2) Moving parts damaged, or stuck by foreign body	Check crankshaft, bearing, connecting rod, piston, piston ring, etc. and replace if necessary
Terrible shake or abnormal noise	(1) Connecting part loosed (2)Foreign body got into main compressor (3) Piston knocking valve seat (4) Moving parts seriously worn	(1) Check and retighten (2) Check and clean away (3) Replace with thicker paper gasket (4) Repair or replace
Pressure insufficient or discharge capacity decreased	(1) Motor running too slow (2) Air filter choked up (3) Leakage of safety valve (4) Leakage of discharge pipe (5) Sealing gasket damaged (6)Valve plate damaged, carbon buildup or stuck (7) Piston ring and cylinder worn or damaged	(1) Check and remedy (2) Clean or replace the cartridge (3) Check and adjust (4) Check and repair (5) Check and replace (6) Replace and clean (7) Repair or replace
The oil consumption too excessive	(1) Oil level too high (2) Breath pipe choked up (3) Piston ring and cylinder worn or damaged	(1) Keep the level within set range (2) Check and clean (3) Repair or replace

8. PARTS ILLUSTRATION



9.PARTS LIST

PARTS ILLUSTRATION					
NO	Designation	Qty	NO	Designation	Qty
1	Blot M8x103	4	28	nut M8	3
2	cylinder cover	1	29	washer foot	1
3	cylinder seals	1	30	bolt M8*25	1
4	valve plate	1	31	washer 8	1
5	valve plate gasket	1	32	drainage	1
6	cylinder	1	33	wheel	2
7	cylinder gasket	1	34	hollow column ϕ10	2
8	piston ring	3	35	tank	1
9	piston	1	36	stem Rp1/2	2
10	circlip	2	37	discharge pipe	1
11	conncting rod	1	38	stator	1
12	crank case	1	39	brearing 6203	1
13	crank	1	40	motor cover	1
14	hex bolt M8x22(left)	1	41	bolt M5x105	4
15	rubber gasket	1	42	fan	1
16	breath pipe	1	43	circlip	1
17	crank case cover	1	44	rotor	1
18	bolt M6x10	6	45	brearing 6204	1
19	oil leveler gasket	1	46	sealing ring	1
20	oil leveler	1	47	capacitance	1
21	only-way valve	1	48	nut M8	2
22	pressure switch	1	49	piston pin	1
23	pressure gauge	2	50	Fan cover	1
24	quick couplers	2	51	Air filter	1
25	regulator valve	1	52	plastic hand	1
26	release pipe	1	53	plug line	1
27	safety valve	1			

10. LIST OF GOODS

No	Designation	Qty
1	Air compressor	1
2	Air filter	1
3	Breath pipe	1
4	Wheel	2
5	Wheel axis	2
6	Rubber gasket	1 or 2
7	Instruction manual	1