Pro-Tech TOOLS

# Pro-Tech TOOLS Air Compressor




## User Manual

**Translation of the original manual**

**BEFORE USE, YOU SHOULD FIRST FAMILIARISE YOURSELF WITH THE OPERATION MANUAL.**

**IMPORTANT NOTICE**

**WHAT YOU NEED TO DO BEFORE USING A NEW COMPRESSOR FOR THE FIRST TIME**

**1. On the upper front of the compressor, you will find a black plastic shipping plug inserted into the oil filler hole. Remove the shipping plug and replace it by pressing the oil filler plug (supplied in the parts bag) into the oil filler hole.**

**2. You will also find a black air vent in the parts bag.**

**Screw this assembly into the opening on the side and at the top of the compressor head.**

**3. Check the oil level using the sight glass built into the lower front part of the compressor (immediately behind the regulator). For normal operation, the level should be halfway up the sight glass. If you need to top up the oil, use any standard air compressor oil available from DIY stores and other large retailers.**

**4. There are two air outlet valves on the regulator. The air flow for one valve is controlled by turning the regulator handle. The second valve allows free flow from the tank. Before starting the compressor, screw a metal cap or a quick-connect coupling (not supplied) onto the free-flow outlet. When working with the air outlet, use nylon sealing tape to prevent leaks.**

## 1. INTRODUCTION

1. Before operating or maintaining this air compressor, read this manual carefully to familiarise yourself with the correct safety, operating and maintenance procedures. Failure to follow the instructions in this manual may result in personal injury, damage to property or loss of warranty. Following the instructions in this manual will ensure a longer and safer service life for your air compressor.

## 2. SAFETY INSTRUCTIONS



**DANGER – IMMEDIATE DANGER WHICH MAY CAUSE SERIOUS INJURY OR DEATH.**

2. TO AVOID THE RISK OF FIRE OR EXPLOSION, NEVER SPRAY FLAMMABLE LIQUIDS IN AN ENCLOSED SPACE



It is normal for the motor and pressure switch to produce sparks during operation. If sparks come into contact with petrol vapours or other solvents, they may ignite.
Do not smoke whilst spraying. Do not spray where sparks or flames are present. Keep the compressor as far away as possible from the spraying area.



3. Solvents such as trichloroethane and methylene chloride may react chemically with the aluminium used in paint spray guns, paint pumps, etc., and cause an explosion. If you are using these
solvents, use only stainless steel spraying equipment. This does not affect your air compressor, but it does affect the equipment used.



4. Never use the compressed air produced by the compressor for any purpose other than that for which it is intended. Such air is not suitable for breathing.

**WARNING – POTENTIAL HAZARD WHICH MAY CAUSE SERIOUS INJURY OR DEATH!**



1. Do not weld on the air tank of this compressor. Welding on the air compressor tank may weaken its structural integrity and create an extremely dangerous situation. Welding on the tank in any way will void the warranty.
2. Never use an electric air compressor outdoors when it is raining, or on a wet surface, as this can cause electric shock to many people.



3. This unit starts automatically; ALWAYS switch off the compressor. Before carrying out maintenance on the compressor and when the compressor is not in use, remove the plug from the outlet and release all pressure from the system.
4. Check the maximum pressure specified by the manufacturer for pneumatic tools and accessories; the compressor's outlet pressure must be regulated so that it never exceeds the tool's maximum rated pressure.



5. There are high temperatures and moving parts under the cover.
Allow the compressor parts to cool down before handling or carrying out maintenance.



6. When spraying paint or toxic materials, be sure to read all labels and follow the safety instructions. If there is a risk of inhaling the sprayed material, wear a respirator. Read all instructions and ensure that the respirator provides adequate protection.



7. Always wear safety goggles when using an air-powered tool.
Never point the nozzle or spray gun at a person or any part of the body.
8. Do not adjust the pressure switch or safety valve under any circumstances; doing so will invalidate all warranties, as they have been factory-set to the maximum pressure for this unit.

**WARNING – POTENTIAL HAZARD WHICH MAY CAUSE SERIOUS INJURY OR DEATH!**



1. Drain moisture from the tank daily. A clean, dry tank will help prevent corrosion.
2. Pull out the safety valve ring daily to ensure the valve is working correctly and to clear any obstructions from the valve.
3. To ensure proper ventilation for cooling, the compressor must be positioned at least 31 cm (12 inches) from the nearest wall in a well-ventilated area.
4. If the compressor needs to be transported, secure it safely; the pressure must be released from the tank before transport.
5. Protect the air hose and power cable from damage and punctures; check them weekly for weak or worn areas and replace them if necessary.

**WARNING!**

**BEFORE ATTEMPTING INSTALLATION, SERVICING, RELOCATION OR ANY MAINTENANCE, DISCONNECT THE POWER SUPPLY AND RELEASE ALL PRESSURE FROM THE SYSTEM.**

1. Comply with all local electrical and safety regulations as well as the Occupational Health and Safety Act.
2. Electric motors and starters must be safely and properly earthed using a three-pin socket.

**WARNING**

Never use an extension lead with this product. Use an additional air hose instead of an extension lead to prevent loss of power.

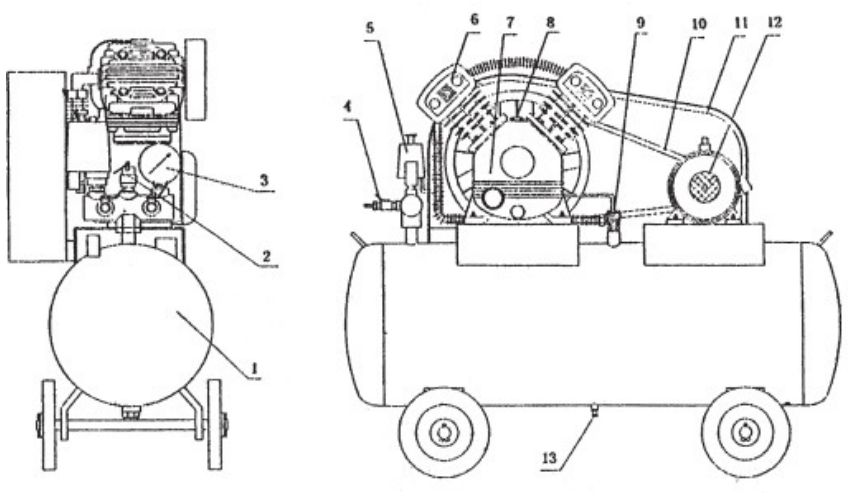
## 3. BRIEF DESCRIPTION

This air compressor features a new design and excellent workmanship; it offers the advantages of a compact, tapered design, a sleek appearance, low weight, ease of use, high safety and low noise levels. It can be widely used in mechanical engineering, the chemical industry, spraying and decoration, automatic control systems and other areas where compressed air is required.

**PERSONAL PROTECTIVE MEASURES**

When working with compressed air, wear safety goggles to protect your eyes from foreign objects and air jets. When using a compressor for painting, protect your nose and mouth with a special mask. In this case, do not work in enclosed spaces or near open flames. Ensure that there is adequate ventilation in the room.

## 4. GENERAL OVERVIEW AND MAIN COMPONENTS




1. Air tank
2. Safety valve
3. Pressure gauge
4. Outlet valve
5. Pressure switch
6. Air filter
7. Main compressor
8. Oil filling
9. Check valve
10. Belt
11. Pulley cover
12. Motor
13. Drain plug

## 5. MAIN TECHNICAL SPECIFICATIONS

| Model | W-0.9/8 (500L) | V-1.05T/12.5 | Z-0.6 | W-0.9/8 (300L) | V-0.25/8 (200L) | W-0.36/8 | V-0.25/8 (150L) | V-0.17/8 |
|---|---|---|---|---|---|---|---|---|
| Power supply | 400V/50Hz | 400V/50Hz | 400V/50Hz | 400V/50Hz | 230V/50Hz | 230V/50Hz | 230V/50Hz | 230V/50Hz |
| Power | 10.8 kW | 7.5 kW | 5.5 kW | 7.5 kW | 4.0 kW | 3 kW | 3.8 kW | 3.4 kW |
| Air volume | 500 L | 500 l | 300 l | 300 l | 200 l | 150 l | 150 L | 100 l |
| Maximum pressure | 9 bar | 12.5 bar | 8 bar | 8 bar | 8 bar | 10 bar | 8 bar | 8 bar |
| Number of pistons | 3 | 4 | 2 | 3 | 2 | 3 | 2 | 2 |

## 6. PREPARATION FOR START-UP

1) The location where the compressor is to be installed should be clean, dry and well-ventilated.
2) Use a voltage within ±5 % of the rated voltage.
3) Keep the oil level within the red circle on the dipstick.
4) We recommend using SAE30 or L-DAB 100 compressor oil at temperatures above 10 ℃ and SAE10 or L-DAB68 at temperatures below 10 ℃
5) Open the outlet valve, set the pressure switch knob to the 'on' position (Fig. 2), and allow the compressor to run for 10 minutes without a load to ensure that the moving parts are lubricated. Before routine servicing.

## 7. OPERATION AND SETTINGS

1) During normal operation, the compressor is controlled by a pressure switch. It may stop automatically when the pressure rises to the maximum and restart when the pressure drops to the minimum. The set pressure was adjusted at the factory. Do not alter it carelessly. As soon as the motor switches off, the compressed air in the discharge pipe should be released via the relief valve beneath the pressure switch. This is essential for restarting the unit; otherwise, the motor will be damaged. The set pressure can be adjusted by turning the adjustment screw on the pressure switch (Fig. 2).
2) The outlet pressure of the compressed air can be adjusted using the control valve (Fig. 2).
3) If you need to stop the compressor whilst it is running, set the pressure switch knob to the 'off' position.

**1. Safety valve**

**2. Drain valve**

**3. Adjustment screw**

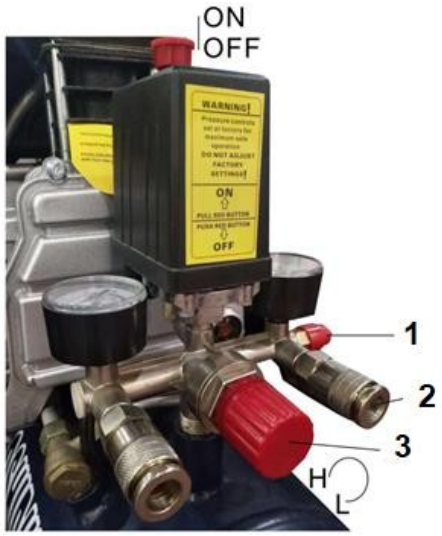



Fig. 2

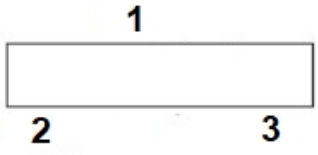
## 8. LUBRICATION

Suitable oils: Kuo Juang R68, R44, R47, Teresso 52 and 65, or Esstic 55 and 56, D.T.E. 103 or 105 (Mobil).
SAE 30 oil or its equivalents may also be used.
The oil level should always be at the red line. If the oil level is too low, the engine may seize. You must not exceed the oil level either, as this could lead to flooding or excessive lubrication.
If the engine oil is dark or contaminated, it must be changed.
To change the oil, unscrew the oil sump plug and wait for the oil to drain out. Then remove the old plug, insert a new one, and pour in fresh oil through the oil sump plug.
Do not change or top up the oil whilst the compressor is running. Do not use used oil.
Before starting the appliance, check that all its components are securely tightened. You should also check the condition of the pipework, electrical wiring and switches.

## 9. MOTOR INSTALLATION

1 If you purchase the motor for the compressor separately, ensure that its power rating is compatible with that required by the compressor.

2 Fitting the drive belt.

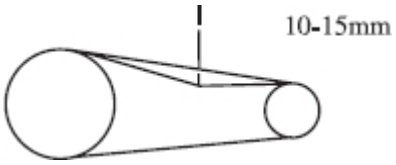



**1. Drive belt**

**2. Compressor**

**3. Motor**

3 Adjust the belt tension. To do this, tension the belt in the centre between the two pulleys to approximately 10–15 mm, as shown in the following illustration




If the belt is too tight, the load causes the pins to wear out more quickly
of the pins and increased energy consumption. The belt may also wear out more quickly and snap. On the other hand, if the belt is too loose, it may slip off the pulleys or snap.

## 10. PROBLEMS AND REMEDIES

| Problem | Cause | Solution |
|---|---|---|
| The compressor will not start | 1. No electricity<br>2. Blown fuse<br>3. Overheated compressor<br>4. Faulty pressure switch | 1. Connect to the mains<br>2. Replace the fuse<br>3. Wait 15 minutes for the compressor to cool down<br>4. Contact the service department |
| The motor is humming but not running,<br>or is running at very low speed | 1. Voltage too low<br>2. Damaged motor<br>3. Damaged pressure switch or check valve<br>4. Air in the cylinder | 1. Check the voltage with a voltmeter<br>2. Contact the service department<br>3. Contact the service department<br>4. Turn the switch to the 'off' position for 15 seconds, then switch it back on |
| Blown fuse, sudden<br>loss of power in the circuit | 1. A faulty fuse causes the circuit to overload<br>2. Faulty check valve or pressure switch | 1. Check that the fuse is correct; disconnect other appliances from the mains, or connect the compressor to its own circuit<br>2. Contact the service department |
| The overheating protection switches off the compressor | 1. Voltage too low<br>2. Clogged air filter<br>3. Poor room ventilation, temperature too high | 1. Check the voltage with a voltmeter<br>2. Clean the air filter<br>3. Move the compressor to a well-ventilated area |
| When the compressor switches on, the pressure drops | 1. Incorrectly connected tools or hoses, or leaky pipes<br>2. Open drain valve<br>3. The control valve is not closed | 1. Check where the air is escaping and seal these areas to prevent air leakage<br>2. Tighten the valve<br>3. Check and clean the valve, then tighten it. Replace the valve if necessary |
| High humidity in the exhaust air | 1. Too much water in the tank<br>2. High ambient humidity<br>3. The filter inlet is blocked | 1. Dry out the tank<br>2. Move the compressor to a location with lower humidity<br>3. Clean or replace |

| | | |
|---|---|---|
| The compressor is running continuously | 1. Faulty pressure switch<br>2. Excessive air consumption | 1. Replace the pressure switch<br>2. The compressor is not compatible with the tool |
| The compressor is vibrating | 1. Loose fixing screws<br>2. Damaged rubber cover on the tank base | 1. Tighten the screws<br>2. Fit the cover |
| Air output is lower than required | 1. Open the drain valve<br>2. Dirty filter inlet<br>3. Air leak | 1. Tighten the valve<br>2. Clean or replace the filter<br>3. Tighten the hoses and tools |