

A SELECTION FROM THE VAST RANGE OF

# Clarke<sup>TM</sup>

**QUALITY PRODUCTS**

**AIR COMPRESSORS**

*From DIY to industrial. Plus air tools, spray guns and accessories.*

**GENERATORS**

*Prime duty or emergency standby for business, home and leisure.*

**POWER WASHERS**

*Hot and cold, electric and engine driven - we have what you need.*

**WELDERS**

*Mig, Arc, Tig and Spot. From DIY to auto/industrial.*

**METALWORKING**

*Drills, grinders and saws for DIY and professional use.*

**WOODWORKING**

*Saws, sanders, lathes, mortisers and dust extraction.*

**HYDRAULICS**

*Cranes, body repair kits, transmission jacks for all types of workshop use.*

**WATER PUMPS**

*Submersible, electric and engine driven for DIY, agriculture and industry.*

**POWER TOOLS**

*Angle grinders, cordless drill sets, saws and sanders.*

**STARTER/CHARGERS**

*All sizes for car & commercial use.*



## AIR COMPRESSOR

Model No: ZX 500

**Clarke** INTERNATIONAL

For spare parts and servicing, please contact your nearest dealer, or Clarke International on

**020 - 8988 - 7400**

e-mail: [Parts@clarkeinternational.com](mailto:Parts@clarkeinternational.com) e-mail: [Service@clarkeinternational.com](mailto:Service@clarkeinternational.com)

## OPERATION & MAINTENANCE INSTRUCTIONS



# Clarke<sup>®</sup>

## INTERNATIONAL

This is an important document and should be retained

### DECLARATION OF CONFORMITY



We declare that this product complies with the following standards/directives:

- 93/68/EC
- 98/37/EEC
- 89/336/EEC
- EN 60 335 - 1
- 2000/14/EC

Description: **Air Compressor**

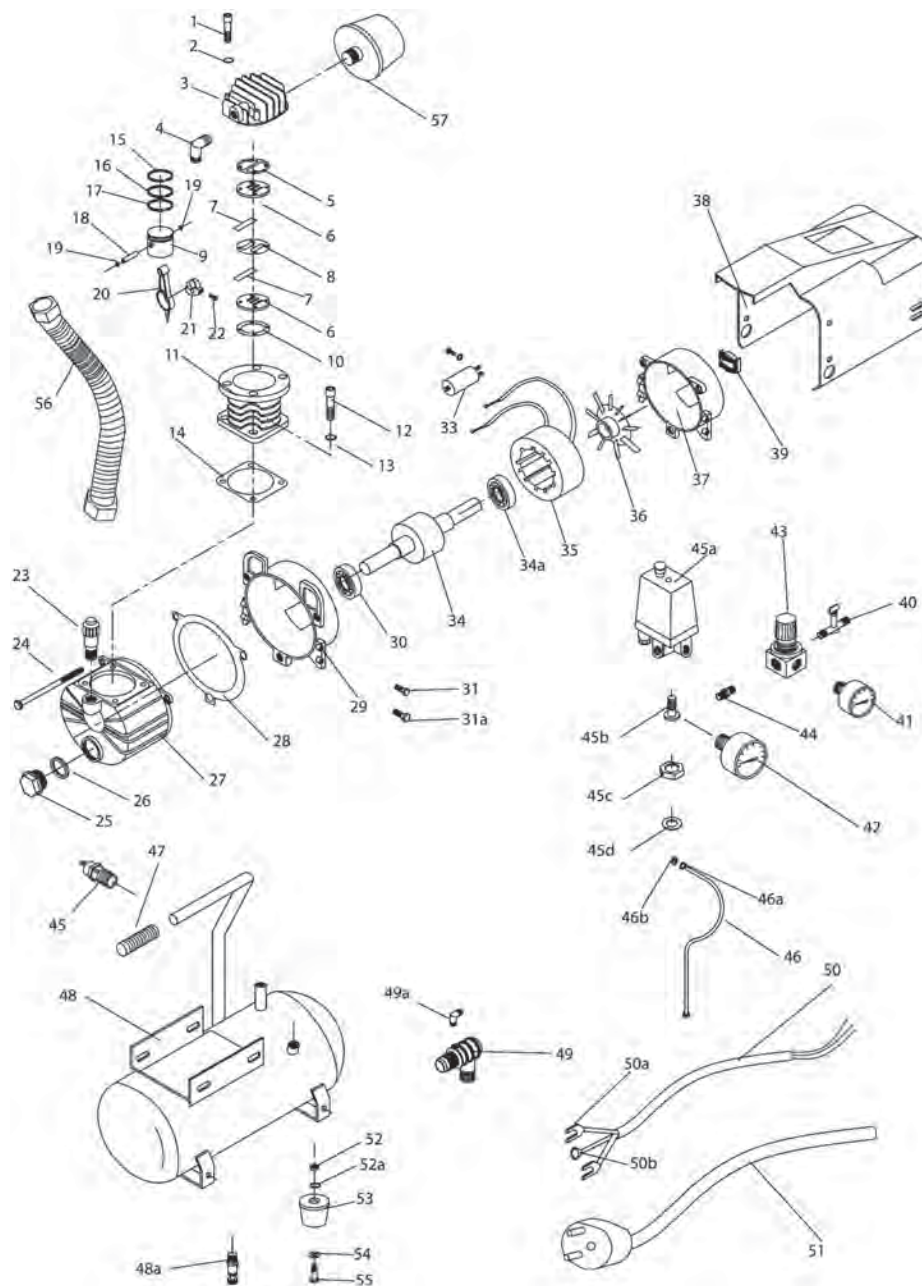
Model No: **ZX500**

Serial (Batch) No: **See Product Date Plate**

Signed: 

**Clarke<sup>®</sup>** INTERNATIONAL  
Hemnal Street, Epping, Essex CM16 4LG

### Parts Drawing



## Parts List

No.	Description	Qty	Part No	No.	Description	Qty	Part No
1	Head Bolt	4	TTZX50001	35	Stator	1	TTZX50035
2	Spring Washer	4	TTZX50002	35a	Shaft Seal	1	TTZX50035a
3	Cylinder Head	1	TTZX50003	36	Fan	1	TTZX50036
4	Exhaust	1	TTZX50004	36a	Circlip	1	TTZX50036a
5	Gasket	1	TTZX50005	37	Bearing Cover	1	TTZX500037
6	Valve Assy	2	TTZX50006	37a	Bolt	2	TTZX50037a
7	Valve Plate	2	TTZX50007	38	Casing	1	TTZX50038
8	Spacer	1	TTZX50008	39	Bolt	4	TTZX50039
9	Piston	1	TTZX50009	40	Air Cock	1	TTZX50040
10	Head Gasket	1	TTZX50010	41	Pressure Gauge	1	TTZX50041
11	Cylinder	1	TTZX50011	42	Pressure Gauge	1	TTZX50042
12	Crankcase Bolt	4	TTZX50012	43	Regulator	1	TTZX50043
13	Spring Washer	4	TTZX50013	44	Connector	1	TTZX50044
14	Gasket	1	TTZX50014	45	Safety Valve	1	TTZX50045
15	Compression Ring	1	TTZX50015	45a	Pressure Switch	1	TTZX50045a
16	Compression Ring	1	TTZX50016	45b	Pressure Switch Adj.	1	TTZX50045b
17	Piston Ring	1	TTZX50017	45c	Bolt	1	TTZX50045c
18	Gudgeon Pin	1	TTZX50018	45d	Washer	1	TTZX50045d
19	Circlip	2	TTZX50019	46	Air Pipe	1	TTZX50046
20	Con-Rod	1	TTZX50020	46a	Washer	1	TTZX50046a
21	Crankshaft	1	TTZX50021	46b	Unloader Screw	2	TTZX50046b
22	Bolt	1	TTZX50022	47	Hand Grip	1	TTZX50047
23	Breather	1	TTZX50023	48	Receiver	1	TTZX50048
24	Bolt	4	TTZX50024	48a	Drain Cock	1	TTZX50048a
25	Oil Sight Glass	1	TTZX50025	49	Check Valve	1	TTZX50049
26	O-Ring	1	TTZX50026	49a	Elbow	1	TTZX50049a
27	Crank Case Cover	1	TTZX50027	50	Cable	1	TTZX50050
28	Gasket	1	TTZX50028	50a	Connector (Y)	4	TTZX50050a
29	Crankcase	1	TTZX50029	50b	Connector (O)	2	TTZX50050b
30	Washer	4	TTZX50030	51	Power Cable	1	TTZX50051
31	Bolt	4	TTZX50031	52	Nut	4	TTZX50052
31a	Screw Nut	2	TTZX50031a	52a	Spring Washer	4	TTZX50052a
33	Capacitor	2	TTZX50033	53	Foot	4	TTZX50053
33a	Screw	2	TTZX50033a	54	Washer	4	TTZX50054
33b	Spring Washer	2	TTZX50033b	55	Bolt	4	TTZX50055
34	Rotator	1	TTZX50034	56	Air Pipe Complete	1	TTZX50056
34a	Bearing	2	TTZX50034a	57	Air Cleaner compl.	1	TTZX50057

Thank you for purchasing this Clarke Air Compressor set, which is designed for indoor use only.

Before attempting to operate the machine, please read this instruction manual thoroughly and carefully follow all directions given. This is for your own safety and that of others around you, and also to help you achieve long and trouble free service from your compressor.

Your Air Compressor can be used for a variety of applications including spraying paint and other liquids, powering tools, inflating and cleaning where the average air consumption of the tool being used does not exceed approximately 5 cubic feet per minute (5CFM).

### GUARANTEE

**This product is guaranteed against faults in manufacture for 12 months from purchase date. Please keep your receipt as proof of purchase.**

**This guarantee is invalid if the product has been abused or tampered with in any way, or not used for the purpose for which it is intended.**

**The reason for return must be clearly stated.**

**This guarantee does not affect your statutory rights.**

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## Safety Precautions



**WARNING**



*As with all machinery, there are certain hazards involved with their operation and use. Exercising respect and caution will considerably lessen the risk of personal injury. However, if normal safety precautions are overlooked, or ignored, personal injury to the operator, or damage to property may result.*

*It is in your own interest to read and pay attention to the following rules:*

- ✓ **ALWAYS** ensure that all individuals using the compressor have read and fully understand the Operating Instructions supplied.
- ✓ **ALWAYS** ensure that any equipment or tool used in conjunction with your compressor, has a safety working pressure exceeding that of the machine.
- ✓ **ALWAYS** adjust the pressure regulator to the recommended setting for the particular tool being used.
- ✓ **ALWAYS** protect yourself. Think carefully about any potential hazards which may be created by using the air compressor and use the appropriate protection. ALWAYS use Goggles when operating a nailer or similar tool. Face masks will protect you against paint spray and/or fumes.
- ✓ If spraying inflammable materials e.g. cellulose paint, **ALWAYS** ensure that there is adequate ventilation and keep clear of any possible source of ignition.
- ✓ **ALWAYS** make sure that children and animals are kept well away from the compressor and any equipment attached to it.
- ✓ **ALWAYS**, before spraying any material always consult paint manufacturers instructions for safety and usage.
- ✓ **ALWAYS**, when disconnecting air hoses or other equipment from your compressor ensure that air is shut off at the outlet and **ALL** pressurised air is expelled from the air line and other equipment attached to it. (see 'Operation')
- ✓ **ALWAYS** expel air from the receiver and disconnect from the mains supply BEFORE carrying out any maintenance.
- ✗ **NEVER** direct a jet of air at people or animals, and **NEVER** discharge compressed air against the skin. COMPRESSED AIR CAN BE DANGEROUS,
- ✗ **NEVER** adjust, or tamper with the safety valves. The maximum pressure is factory set, and clearly marked on the machine.
- ✗ **NEVER** leave pressure in the receiver overnight, or when transporting.
- ✗ **NEVER** operate your compressor with any covers removed.
- ✗ **NEVER** exert any strain on electrical cables and ensure that air hoses are not tangled or wrapped around machinery etc.
- ✗ **NEVER** operate in wet or damp conditions. Keep the machine dry at all times. Similarly, a clean atmosphere will ensure efficient operation. Do not use in dusty or otherwise dirty locations.
- ✗ **NEVER** touch metal parts of the machine as these can become quite hot during operation. Wait until the machine has cooled down.
- ! Electrical or mechanical repairs should only be carried out by a qualified engineer. If problems occur, contact your Clarke dealer.

## Technical Data

Model .....	ZX500
Maximum Air Pressure .....	8 BAR - 116 PSI
Air Displacement .....	5 CFM
Motor .....	1.25 HP
Voltage .....	230 VAC 50Hz 1pH
Motor Speed .....	2850RPM
Sound Power Level .....	82dB <sub>WA</sub>
Weight .....	20 kg (unpacked)
Part Number .....	3110278
Dimensions (mm) .....	490x235x545mm
Duty Cycle .....	S3 50%**

**\*\*Duty Cycle...The motor on this machine may be run for 5 minutes only in any 10 minute period.**

Please note that the details and specifications contained herein are correct at the time of going to print. However CLARKE International reserve the right to change specifications at any time without prior notice. Always consult the machines data plate

## Accessories

A range of accessories, for inflating tyres, air brushing, stapling, blowing, paint spraying etc., is available from your Clarke dealer.

### NOTE:

If this compressor is supplied with an Air Nailer as part of KIT ZX500, then an 8 metre (25ft)Recoil Hose is also provided. Part No. 3110458

## Parts & Service Contacts

For Spare Parts and Service, please contact your nearest dealer, or CLARKE International, on one of the following numbers.

PARTS & SERVICE TEL: 020 8988 7400  
PARTS & SERVICE FAX: 020 8558 3622  
or e-mail as follows:  
PARTS: [Parts@clarkeinternational.com](mailto:Parts@clarkeinternational.com)  
SERVICE: [Service@clarkeinternational.com](mailto:Service@clarkeinternational.com)

## MONTHLY

Start the compressor, and pressurise the system. Inspect all joints for leaks using soapy water, and rectify as necessary.

## EVERY 250 HOURS OR 6 MONTHS

(Whichever occurs first)

Change the compressor oil. Drain oil by removing the breather and turning the compressor on to its end. Support it in this position and leave for a period to ensure all oil is drained.

### Caution

Do not attempt any repairs or adjustments if you are uncertain as how it should be done. If you have any queries, please contact your nearest CLARKE dealer, or otherwise telephone CLARKE International, Service Department, on: 020 8988 7400).

## Shutting Down The Compressor

1. Push the STOP/START switch down to the OFF position.  
NEVER USE THE MAINS SWITCH TO STOP THE MOTOR.
2. Depress the tool's trigger to release air from the hose and compressor before disconnecting from the machine.
3. Switch off at the mains and remove plug.

## Fault Finding

With considerate use, your CLARKE Air Compressor should provide you with long and trouble free service. Routine checks should be made on both the electrical supply as well as the compressed air lines and connections. If any fault appears, the reason for which is not immediately obvious, please contact your local CLARKE Dealer.

PROBLEM	PROBABLE CAUSE	REMEDY
The compressor stops and will not start again.	Bad connections.  Thermal Overload has intervened.  Motor windings burnt out.	Check electrical connections. Clean and tighten as necessary.  Switch off and wait at least 5 minutes before trying to restart  Contact your local dealer for a replacement motor.
The compressor does not reach the set pressure and overheats easily.	Compressor head gasket blown or valve broken.  Broken piston	Contact your CLARKE dealer.  Replace Piston (contact your CLARKE dealer)
Low Pressure	Air Leak - safety Valve  Restricted air filter  Defective Check Valve	Blip safety valve by pulling the pull ring. If condition persists See your Clarke dealer  Clean air filter, or replace  See your Clarke dealer

## Electrical Connections

This product is provided with a standard 13 amp, 230 volt (50Hz), BS 1363 plug, for connection to a standard, domestic electrical supply. Should the plug need changing at any time, ensure that a plug of identical specification is used.

### ⚠ WARNING! THIS APPLIANCE MUST BE EARTHED ⚠

Should the plug need changing at any time, ensure that a plug of identical specification is used. IMPORTANT: The wires in the mains lead should be wired up in accordance with the following colour code:

Green & Yellow ..... Earth

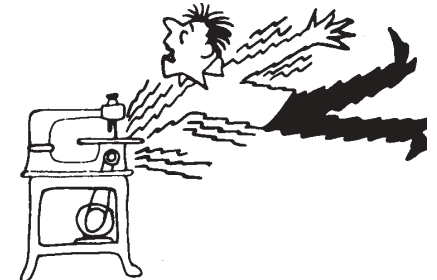
Blue ..... Neutral

Brown ..... Live

- Connect the Green & Yellow coloured cord to the plug terminal marked a letter " E " or marked with the symbol " "
- Connect the BLUE coloured cord to the plug terminal marked a letter " N "
- Connect the BROWN coloured cord to the plug terminal marked a letter " L "

If this appliance is fitted with a plug which is moulded on to the electric cable (i.e. non-rewireable) please note:

1. The plug must be thrown away if it is cut from the electric cable. There is a danger of electric shock if it is subsequently inserted into a socket outlet.
2. Never use the plug without the fuse cover fitted.
3. Should you wish to replace a detachable fuse carrier, ensure that the correct replacement is used (as indicated by marking or colour code).
4. Replacement fuse covers can be obtained from most DIY or electrical stores.



## FUSE RATING

The fuse in the plug must be replaced with one of the same rating (**13amps**) and this replacement must be ASTA approved to BS1362.

We recommend that this machine is connected to the mains supply via a Residual Current Device (RCD)

If in doubt, consult a qualified electrician. Do not attempt any electrical repairs yourself.

## CABLE EXTENSION.

Always use an approved cable extension suitable for the power rating of this tool (see specifications), the conductor size should also be at least the same size as that on the machine, or larger. When using a cable reel, always unwind the cable completely.

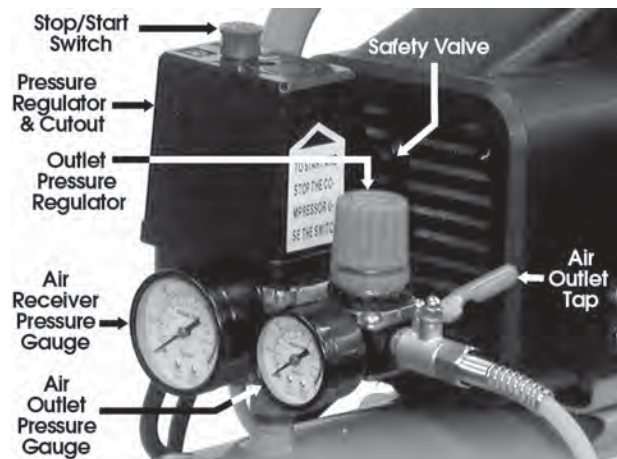
## Operation

Before connecting your compressor to the mains supply, check the following:-

1. The Oil Filler Travel plug is removed and replaced with the breather supplied.
2. The machine is located on a level surface in a clean dry environment with adequate ventilation and plenty of air flow around the unit. DO NOT place any materials whatsoever on the unit.
3. Check the oil level which should be at the red dot in the oil sight glass. If topping up is required, refer to 'Maintenance'.
4. Ensure the STOP/START switch is in the STOP position (Pressed fully Down).
5. The pressure regulator should be set to its lowest setting e.g. turned fully anti clockwise.
6. Check that the air receiver drain valve at the base of the receiver is fully CLOSED.

**IMPORTANT:** When using the compressor for the first time, open the drain cock and run the compressor for at least 20 minutes, off load, in order for full lubrication to take place.

Now connect the air hose to the air outlet, and at the other end to the air tool - screwed on directly.



Once the hose connections are complete, plug in and start the compressor by pulling the STOP/START switch upwards. Pressure will build up in the receiver, as indicated on the gauge, to a predetermined maximum 116 PSI/8bar, when it will then stop.

At this point, slowly turn the pressure regulator clockwise to reach the desired setting for the air tool to be used, as indicated on the Air Outlet Gauge.

Open the Air Outlet Tap and check to ensure there are no air leaks. Should leaks be apparent, they should be rectified before proceeding.

Operate the air tool in the normal way. (Refer to the Air Tool manual). The air compressor will restart when the pressure has fallen by approximately 20 PSI and this automatic STOP/START process will then continue as necessary to replenish the receiver.

When you have finished with the compressor, always switch OFF at the STOP/START switch on the machine, NEVER by switching OFF at the mains.

**ALWAYS** close the outlet tap and turn the pressure regulator fully anticlockwise, then operate the trigger on the air tool BEFORE disconnecting the tool or air hose. **NEVER** attempt to disconnect the tool or air hose before checking to ensure there is no air in the hose.

## THERMAL OVERLOAD

If the machine should overheat, the Thermal Overload will intervene and shut down the compressor. Should this happen, switch OFF the machine by pushing the STOP/START switch downwards, and wait for at least 5 minutes before starting again. It may take longer for the overload to reset, depending upon conditions.

## DRAIN VALVE

After a period of use, especially if the weather has been warm and humid, it is quite possible that water (condensate), will have accumulated in the receiver.

To remove this condensate, first switch OFF the machine after ensuring that there is at least some compressed air in the receiver.

Simply loosen the drain valve for a few moments allowing the air and any water to escape - tip the machine over slightly so that the drain is the lowest point, to ensure all condensate is drained. REMEMBER to ALWAYS Re-tighten the drain valve before storage.

## Maintenance

**IMPORTANT!** Before carrying out any service work, **ALWAYS** disconnect the compressor from the mains supply and release any air in the receiver. If necessary allow the machine to cool down before proceeding.

It is most important to keep the Air Compressor clean, this can be carried out using a small soft brush and a vacuum cleaner.

In particular the air filter should be inspected periodically, so that it is always kept clean. If this instruction is not adhered to, a loss of performance could occur, even worse, any dirt passing through the filter could make its way into the cylinder head and adversely affect the valves. This could lead to more extensive damage necessitating its dismantling and replacement parts etc.

## BEFORE EACH USE

Drain any condensate which may be present in the receiver, Undo the drain cock and tilt the machine so that the drain valve is at the lowest point in order to do so.

## WEEKLY

1. Unscrew and remove the air filter assembly. Unclip the cover, remove the foam filter and wash with warm soapy water. Allow to dry before reassembly. Renew if damaged.
2. Clean the fins of the compressor cylinder and the cylinder head to receiver pipe. A clean compressor will work more efficiently.
3. With the machine on a flat level surface, check the oil level, it should be in the centre of the oil sight glass, at the red spot. If necessary, top up with SEA20 or SAE30 non detergent oil, by unscrewing the breather and using a small funnel to top up. Ensure the hole in the breather is completely clear before screwing back in place.
4. Check to ensure all nuts and bolts are tight. Check cylinder head bolts which should be tightened to 10lbf ft.

