



USER MANUAL

SIP QT AIR® 200L 4.5HP ULTRA LOW NOISE OIL-FREE VERTICAL DIRECT DRIVE COMPRESSOR

ITEM NO: 05495



PLEASE READ AND FULLY UNDERSTAND THE INSTRUCTIONS IN THIS MANUAL BEFORE OPERATION.
KEEP THIS MANUAL SAFE FOR FUTURE REFERENCE.

Contents

1	Introduction	3
1.1	Product Overview	4
1.2	Manual Version History	4
2	Warranty	5
3	Safety Instructions	6
3.1	Safety Symbols Used Throughout This Manual	6
3.2	Safety Instructions	6
4	Electrical Connections	14
5	Technical Specifications	16
6	Getting to know your SIP QT AIR® 200L 4.5hp Ultra Low Noise Oil-Free Vertical Direct Drive Compressor	17
6.1	Accessories	18
6.2	Assembly Instructions	19
6.3	Safety Features	22
7	Operating Instructions	23
7.1	Air Compressor Operating Principles	23
7.2	Positioning the Air Compressor	23
7.3	Starting and Stopping the Air Compressor	24
7.4	Setting the Outlet Pressure	26
8	Maintenance	29
8.1	Checking for Air Leaks	29
8.2	Draining the Receiver of Condensate	29
8.3	Changing the Air Filters	30
8.4	Changing the Seals and Cylinders	30
8.5	Checking the Non-Return Valve (NRV) Pastille	34
8.6	Checking the Pressure Safety Valve	36
8.7	Tightening the Cylinder Head Screws	38
9	Troubleshooting	39
9.1	Exploded Drawing and Parts List	42
9.2	Exploded Drawing and Parts List	45
10	UK - Declaration of Conformity	46
11	EU - Declaration of Conformity	47
12	Notes	48

1 Introduction

Thank You for Choosing SIP

SIP Industrial Products Ltd is a flagship supplier of high-quality machinery and equipment to the ever-growing engineering, construction, automotive and agricultural marketplaces.

As an ISO9001 approved machinery specialist, we are passionate about innovation and offering quality, value and choice, making sure that our users have the most appropriate and reliable product for the task at hand.

Welcome to Your User Manual

This manual is designed to introduce the support in place for you as an SIP customer as well as guide you through the product that you have purchased and how to use and maintain it safely and effectively.

Technical and Aftersales Support

With a dedicated service centre at head office and service engineers across the UK and Ireland, SIP are committed to providing you with the optimum support to minimise any working downtime.

Our extensive Technical, Service Engineer and Customer Service teams are on hand to support with:

- Product selection
- Servicing and maintenance advice
- Troubleshooting

Feel free to contact us for more information.

Tel: 01509 500 400

Email: customerservice@sip-group.com

1.1 Product Overview

The SIP QT AIR® 200L 4.5hp Ultra Low Noise Oil-Free Vertical Direct Drive Compressor is a powerful electric air compressor designed with triple twin-cylinder motor pump units and slow-running 1400rpm brushless induction motors that displace 22.8CFM of dependable, high-quality air at just 67dB(A)*, perfect for noise-sensitive garages, workshops, sites, industry and agriculture.

With a space-saving vertical trolley design complete with large wheels, anti-vibration feet and frame handle that protects the controls, this portable air compressor also features a mains control box that initiates start-up on a 230V single-phase supply.

1.2 Manual Version History

Manual Version Number	Date Published
1.0	23/07/2026

2 Warranty

Warranty Registration

SIP proudly offer a 2 year warranty across all SIP branded machines.*

To benefit from the second warranty year, you must register within 30 days of purchase via the link or QR code below.

www.sip-group.com/warranty/register-warranty



***Excludes accessories and consumables**

3 Safety Instructions

3.1 Safety Symbols Used Throughout This Manual



Important: Please read the following instructions carefully, failure to do so could lead to serious injury, damage to the product or an invalidated warranty.



Danger/Caution: Indicates risk of personal injury and/or the possibility of damage.



Warning: Indicates risk of fire.



Note: Supplementary Information.



Warning: Indicates that ear protection must be worn.



Warning: Indicates that eye protection must be worn.



Warning: Indicates that protective gloves must be worn.

3.2 Safety Instructions

When using this air compressor, basic safety precautions should always be followed to reduce the risk of fire, electric shock, personal injury (or to others) and/or damage to the product. Read all these instructions before operating the item and save this user manual for future reference. SIP recommends that this product should not be modified or used for any application other than that for which it was designed; it was designed for the supply of compressed air to tools and equipment. If you are unsure of its relative applications do not hesitate to contact us and we will be more than happy to advise you.

3.2.1 General Safety Principles

Prior to first use read and understand this owner's manual and the labels affixed to the air compressor. Learn its applications and limitations, as well as the potential

Section 3: Safety Instructions

hazards specific to it. Only trained and competent individuals may operate this air compressor, and must follow the instructions provided in this manual. **Never** operate the air compressor under the influence of alcohol, drugs, or medication. Children under the age of 16 years or people unfamiliar with the air compressor **must not** be allowed to use it.

Keep all safety guards and covers in place and functional, and **do not** bypass, disable, or modify any safety guards, safety devices or warning system. **Do not** use this air compressor in damp or wet locations, or expose it to rain/water. **Always** check for damage before each use.

Compressed air is dangerous and can cause air embolisms, leading to death, if compressed air streams enter the blood stream. **Never** point the compressed air jet at persons or animals, and **never** discharge against skin. Disconnecting pressurised air couplers are also a hazard for compressed air jets coming into contact with a user's skin, **always** ensure that the air supply is turned off at the outlet/regulator and that pipework or tool(s) have been discharged before disconnecting couplers. It is possible for air hoses to move quickly and rapidly (whipping) when pressured or depressurised rapidly, **always** use a cable to secure the hose when working at high pressures.

Do not leave pressure in the receiver overnight or whilst transporting, **always** drain the receiver using a suitable air filter connected to the regulator output. During normal operation the receiver will fill with water, referred to as condensate, present as humidity in the air. This condensate **must** be drained from the receiver daily to prevent excessive rusting of the interior of the receiver, which may lead to failure of the unit. **Never** open the receiver drain valve when the receiver is at pressure.

Always operate the air compressor in a clean, dust free environment to prevent excessive wear of the pump. **Never** operate the air compressor without the air filters fitted. **Only** reposition this air compressor by using the handle, **do not** pull or attempt to move it using any hose or accessory connected to the air couplers. **Never** operate the compressor without anti vibration mounts, or the wheel kit fitted.

3.2.2 Personal Protective Equipment

Personal Protective Equipment (PPE) **must** be worn both during operation of the air compressor, and when performing maintenance. The PPE required will depend upon which is being carried out.

To reduce the risk of injury during use or maintenance always:

- Wear long trousers, close-fitting clothing and sturdy footwear (closed, not flip-flops or sandals).
- Avoid loose clothing, scarves or jewellery that could get caught in moving parts or control cables.
- Tie back long hair.

Section 3: Safety Instructions

- Wear suitable gloves to prevent compressed air discharges against skin, especially when there are any cuts or abrasions present on the user's hands.
- Never put hands or feet near rotating parts such as cooling fans, flywheels or belts.
- Wear safety goggles or a face shield to protect from debris dislodged/made mobile from compressed air jets.
- Wear suitable ear protection to protect against hearing damage.

3.2.3 Hazards During Use

Fire and Explosion Hazards: When spraying flammable materials e.g. cellulose paint, ensure that there is sufficient airflow and keep clear of any source of ignition. Before spraying any material always consult paint manufacturers instructions for safety and usage. **Never** operate the compressor in an area where dust, acids, vapours, explosive or flammable gases are present.

The air compressor stores pressurised air at up to 8 bar in the receiver and may be an explosion hazard if punctured, dented, exposed to excessive heat or if allowed to corrode by not draining condensate. **Do not** tamper with the safety valve or pressure cut-off switch as these are preset at the factory, attempting to change these settings may cause the compressor to over pressurise the receiver, leading to an explosion and/or an electrical fire.

Do not leave pressure in the receiver overnight or whilst transporting, **always** drain the receiver using a suitable air filter connected to the regulator output. **Do not** weld or machine the receiver; in the case of faults/leaks or rusting, replace the entire receiver.

Burn Hazards: The air compressor pump will get hot during operation, especially when under heavy loads. The pump head(s), delivery pipe(s) and non-return valves (NRVs) present a burn hazard. **Do not** touch these surfaces or perform maintenance until they have been allowed to cool. Leave a minimum of 1mtr around the compressor for cooling, air-flow and required maintenance to the pump and to allow sufficient cooling whilst it is in use.

Electrical Hazards: **Always** check the electrical mains cable prior to use and ensure that there is no damage to the cable. **Do not** expose the air compressor to water spray, rain, dripping water or moisture of any kind. Failure to do so may result in electrical shock or electrical damage and/or fire. Do not use this device on an extension cable that is not appropriately rated, as this may result in electrical damage to the air compressor and/or a fire.

Only use the pressure switch, and not the mains supply switch, to switch the air compressor on and off. Make sure that the pressure switch is set to off before connecting to an electrical supply to prevent accidental starting.

Section 3: Safety Instructions

3.2.4 Residual Risks

During normal use of the air compressor the pressure in the receiver will drop as air is consumed. When a set point is reached, the air compressor will automatically switch on to recharge the receiver if the air compressor pressure switch is set to on. The compressor is not designed for constant operation, if your air demand is causing the compressor to run constantly you should reduce demand and look to source a higher performance compressor.

Always select the correct output pressure for the air tools/equipment connected to the air compressor. Failure to do so may damage the air tools/equipment or cause injury to the user. **Always** make sure that any air tools or equipment used in conjunction with your compressor has a safe working pressure exceeding that of the compressor. Ensure all pipe work and hoses connected to the compressor are of the correct size, suitable for the working pressure and are well sealed at the joints. Permanently installed systems **must** be installed by a competent and qualified engineer, with regular inspections.

The compressed air produced by this air compressor cannot be used for pharmaceutical, food or medical purposes and not for refilling of breathing air bottles of any type.

3.2.5 Warning signs and symbols

This air compressor features warning labels and safety symbols, familiarise yourself with the meaning of each symbol before first use. Replace damaged or unreadable labels immediately.



Figure 1: The sound power level (LwA) and sound pressure level (LpA) noise rating label displayed on the side of the compressor in dB(A).

Section 3: Safety Instructions

The noise figure shown in Figure 1 is displayed on the side of the compressor, close to the pressure switch.



Figure 2: The warning icon label displayed at the side of the air compressor.

The warning label shown in Figure 2 is located on the receiver near the pump/motor. From left to right the warning signs inform the operator of the following hazards:

1. Read the instruction manual before use.
2. Wear eye protection when working with the compressor and the compressed air it supplies.
3. Do not expose the compressor to wet or damp conditions.
4. Exposed surfaces of the compressor get hot during operation, take care when touching the compressor during/after use.
5. When the pressure switch is set to on, the compressor will start automatically when the pressure in the receiver drops below a certain value.
6. The air compressor is electrically powered and may present an electrical hazard if improperly used or damaged.



Figure 3: The warning label informs users that the tops of the compressor pump will get hot during use.

The label in Figure 3 is located on both sides of the compressor on the pump/motor assembly, warning users that the heads of the pumps get hot during use and present a burn hazard if touched.



Figure 4: Label instructing users to drain the air compressor receiver of stored condensate weekly.

The label in Figure 4 instructs users to drain the compressors air receiver of condensate weekly to prevent corrosion. Corrosion of the air receiver may lead to its fatigue and failure, especially when fully pressurised.

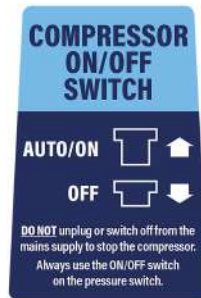


Figure 5: Label instructing users on the correct operation of the pressure switch.

The label in Figure 5 instructs users of the correct operation of the pressure switch. When pulled upwards the air compressor will pressurise the receiver to a set pressure and recharge automatically when it drops below a certain value. Pressing the pressure switch down will switch off the compressor. Never use the mains switch to switch the compressor on/off as this may cause damage to the compressor.

Section 3: Safety Instructions

3.2.6 Safety Devices

The compressor is fitted with a pressure safety relief valve, pressure switch and thermal overload protection.

- The pressure switch is the on/off switch for the air compressor. It allows for automated running of the compressor, switching off the pump when the maximum pressure is reached and switching back on when the pressure drops below a certain threshold.
- The safety relief valve will open if the pressure switch fails to shut off when the maximum pressure is reached. It is designed to prevent a mechanical failure of the receiver, which would cause an explosion. The safety valve must never be modified or removed from the compressor, and should be checked to see if it is still working, as part of the air compressors maintenance.
- If the air compressor is being run beyond its designed duty cycle the thermal overload protection will cut in and prevent further use until the air compressor has cooled down.

3.2.7 Maintenance and Servicing Safety

This air compressor requires periodic maintenance to ensure that it operates at peak performance and without unnecessary wear. When carrying out these maintenance activities the receiver must always be depressurised, emptied of condensate and the air compressor isolated from the mains electrical supply.

Repairs to this air compressor should only be carried out by qualified persons using original spare parts, otherwise this may result in considerable danger to the user and void the warranty.

3.2.8 Disposal Safety

Dispose of used air filters in accordance with local environmental regulations. At the end of the product's life, recycle components where facilities exist. Contact local authorities for approved disposal or recycling services.

3.2.9 Storage

Whether short or long-term storage the air compressor **must** have the pressure discharged from the receiver and the condensate drained. The compressor must be stored at room temperature and never exposed to temperatures close to, or below, 0°C.

Section 3: Safety Instructions

The air compressor must not be stored in a dusty environment, however if this is not possible it should be covered up to prevent a build up of dust on the unit. Before using for the first time after being in storage, the unit should be wiped down with a clean cloth to prevent the dust being drawn into the air filters or the motor vents.

When using the air compressor after a long period of time, it is recommended to only charge the receiver to a low pressure (just over 1 bar) and check all pipework and the receiver for leaks before allowing it to run to maximum pressure.

4 Electrical Connections

WARNING! It is the responsibility of the owner and the operator to read, understand and comply with the following:

You must check all electrical products, before use, to ensure that they are safe.

You must inspect power cables, plugs, sockets and any other connectors for wear or damage.

You must ensure that the risk of electric shock is minimised by the installation of appropriate safety devices; a Residual Current Circuit Breaker (RCCB) should be incorporated in the main distribution board. We also recommend that a Residual Current Device (RCD) is used. It is particularly important to use an RCD with portable products that are plugged into a supply which is not protected by a Residual Current Breaker with Over-Current (RCBO). If in any doubt consult a qualified electrician.

Never carry this product by the mains lead or pull it to remove the plug from the mains socket. Keep the mains lead away from heat, oil and sharp edges. If the mains lead is damaged, it must be replaced by the manufacturer, its service agent or a similarly qualified person in order to avoid unwanted hazards. **Always** disconnect from the power supply when not in use.



Danger/Caution: The wires in the power cable of this product are coloured in accordance with the following code: Blue = Neutral, Brown = Live, Yellow and Green = Earth.

This appliance is fitted with a plug for use with 230 V 16A, please note:

1. If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard
2. If the plug is damaged and needs to be replaced this must be with a suitable BS EN 60309 plug that is correctly rated and fitted by an electrician.
3. The plug does not contain a fuse.



Warning: Never connect live or neutral wires to the earth terminal of the plug. Only fit an approved plug with the correct rated fuse. If in doubt consult a qualified electrician.



Note: Always make sure the mains supply is of the correct voltage and amperage and the correct fuse protection is used. In the event of replacing the fuse, always replace the fuse with the same value as the original.



Note: If an extension lead is required in order to reach the mains supply; ensure that this too is rated for the correct voltage and fuse rating.



Note: The cross section of the extension lead should be checked so that it is of sufficient size to reduce the chances of voltage drops.

5 Technical Specifications

Parameter	Value
Input Supply	230v/ 16A
Motor Power	3 x 1.1kw 4.5 HP / 4 Pole
Receiver Size	200 L
Piston Displacement	22.8 CFM
Free Air Delivery	18.2 CFM / (515.4 L/min)
Max. Air Pressure	8 Bar
Pump Speed	1400 RPM
Noise power Level (LwA)	LwA = 86 dB(A)
Noise pressure Level (LpA)	LpA = 67 dB(A)
Net Weight	115kg
Gross Weight	140kg
Product Dimensions	H.1305mm x W.770mm x D.495mm
Packaged Dimensions	H.1440mm x W.770mm x D.490mm

6 Getting to know your SIP QT AIR® 200L 4.5hp Ultra Low Noise Oil-Free Vertical Direct Drive Compressor

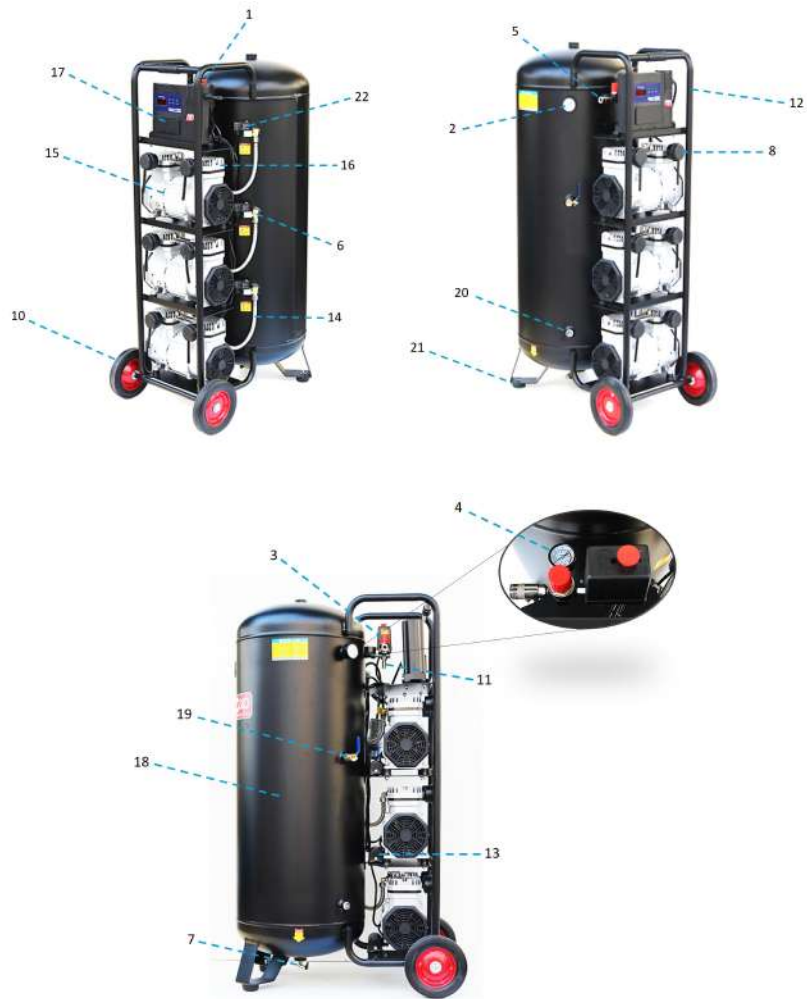


Figure 6: Points of interest on the 05495 SIP QT AIR 200L 4.5 HP Ulytra Low Noise Oil-Free Vertical Direct Drive Compressor

Section 6: Getting to know your SIP QT AIR® 200L 4.5hp Ultra Low Noise Oil-Free Vertical Direct Drive Compressor

Item	Description
1	Pressure switch
2	Pressure gauge (Tank)
3	Pressure regulator
4	Pressure gauge (Regulator)
5	Coupler
6	Non-return valve (NRV) x 3
7	Drain valve
8	Air filter x 6
10	Wheel
11	Safety valve
12	Handle
13	Capacitor housing
14	Delivery pipe x 3
15	Pump/motor x 3
16	Pump head x 6
17	Control box
18	Air receiver
19	Ball valve
20	Threaded hex plug
21	Rubber feet
22	Solenoid valve

6.1 Accessories

Quantity	Description
2	Wheels
2	M10 Bolts
2	M10 Washers
2	Front rubber pads
2	M8 x 17 Washers
2	M8 x 22 Washers

Quantity	Description
2	M8 Bolts
2	M8 Spring washer

6.2 Assembly Instructions

The compressor requires minor assembly before it may be used. The wheels, foot, handle and air filters are not fitted from the factory and must be fitted prior to first use.



Danger/Caution: Failure to fit the air filters will result in premature wear of the pump components, especially in dusty environments, resulting in poor performance and pump failure.



Danger/Caution: Sound emitted from the air compressor will be higher if the air filters are not fitted.

6.2.1 Removing The Packaging and Assembly



Danger/Caution: HEAVY OBJECT (115+ kg) > Do not attempt to lift or assemble this unit alone. Team lifting or mechanical lifting equipment (e.g., a hoist or forklift) is required to prevent severe back or bodily injury.

- 1. Unpack:** With the help of a second person, carefully remove all outer crated packaging.
- 2. Remove Transit Clamps:** Locate and remove the retaining clamps holding the wheel axle and rubber feet to the wooden pallet.
- 3. Attach the rubber feet:** While one person holds the handle and carefully tilts the compressor slightly, have the second person securely assemble the rubber feet, (explained in more detail below).
- 4. Attach the wheels:** Attach Wheels: Place a sturdy block of wood underneath the unit to chock it securely in place. This stabilizes the compressor and eliminates the need to hold or tilt it while fitting the wheels. (explained in more detail below).
- 5. Move to Final Location:** Carefully lower the unit off the pallet to a flat, level surface using proper lifting techniques or lifting equipment.

6.2.2 Fitting the Wheels and Rubber Feet

- The wheel fastening kit contains bolts, wheels, washers, nuts and rubber feet as shown in Figure 7.



Figure 7: Contents of the wheel fastening kit.

- Slide the bolt through the wheel, and then take the bolt/wheel and pass through the axle points on the compressor. Fit the washer and nut and tighten securely as shown in Figure 8.



Figure 8: Attaching the wheel to the compressor, this must be done for each side.

- Repeat these instructions to fit the wheel on the opposite side.

Section 6: Getting to know your SIP QT AIR® 200L 4.5hp Ultra Low Noise Oil-Free Vertical Direct Drive Compressor

- With the thread pointing upward, slide the bolt through the rubber foot centre hole, and then pass through the mounting points on the compressor foot bracket. Fit the nut and tighten securely as shown in Figure 9.



Figure 9: Attaching the rubber foot to the compressor, this must be done for each side.

6.2.3 Fitting the Air Filters

- Check that the two halves of the air filter are correctly fitted.
- Insert the plastic tubing into the hole on the metal air filter.
- Locate the threads for the air filters on the pump head.
- Screw the air filter into the pump head, tight enough that the o-ring compresses slightly as shown in Figure 10. Do not overtighten.



Figure 10: Fitting the air filters to the 05495 SIP QT AIR® 200L 4.5hp Ultra Low Noise Oil-Free Vertical Direct Drive Compressor.

6.3 Safety Features

The compressor is fitted with a pressure safety relief valve, pressure switch and thermal overload protection.

The compressor is fitted with a pressure safety relief valve, pressure switch and thermal overload protection.

- The pressure switch is the on/off switch for the air compressor. It allows for automated running of the compressor, switching off the pump when the maximum pressure is reached and switching back on when the pressure drops below a certain threshold.
- The safety relief valve will open if the pressure switch fails to shut off when the maximum pressure is reached. It is designed to prevent a mechanical failure of the receiver, which would cause an explosion. The safety valve must never be modified or removed from the compressor, and should be checked to see if it is still working, as part of the air compressors maintenance.
- If the air compressor is being run beyond its designed duty cycle the thermal overload protection will cut in and prevent further use until the air compressor has cooled down.

7 Operating Instructions

7.1 Air Compressor Operating Principles

This oil-free direct drive air compressor works by using a piston pump driven by an electrical motor to compress air. This compressed air is stored in the receiver until required, and is transferred from the pump to the receiver through the delivery pipe and Non-Return Valve (NRV). The NRV is a one-way valve that prevents the loss of pressure from the receiver back through the pump. A bleed pipe is present before the NRV to release stored pressure in the delivery pipe and pump when the compressor switches off.

The compressor is switched on and off using the pressure switch, which also automatically shuts off the pump/motor when the receiver has reached its maximum pressure. A safety relief valve is fitted in the event this pressure switch fails, to prevent overpressurisation of the receiver.

The compressed air is drawn from the receiver through couplers attached to the pressure regulator. The pressure regulator allows the user to set the pressure to a level that is compatible with their equipment.

You must select a compressor suitable for your needs. The air compressor is not designed for constant operation. If your demand for compressed air causes the air compressor to function for a time period greater than the duty cycle, then permanent damage may occur that is not covered by the warranty.



Note: Compressed air supplied by the air compressor will contain a small concentration of moisture. If your compressed air supply must be dry then a suitable filtration kit or dryer must be fitted.



Warning: Failure to observe the unit's duty cycle may lead to overheating and excessive temperatures. Do not exceed the duty cycle and keep the compressor away from any flammable materials.

7.2 Positioning the Air Compressor

The air compressor must be positioned in an environment where it does not come into contact with water. It must also be operated in a dust-free environment with good ventilation to allow adequate cooling, typically achieved by leaving a 1 meter radius around the air compressor.



Danger/Caution: Operating the air compressor in a dusty environment will cause premature wear and shorten the lifespan of the unit.

7.3 Starting and Stopping the Air Compressor

After completing the assembly required after unboxing the air compressor it is ready to be put into operation. The following instructions detail how to start and manually stop the air compressor.

- Ensure that the drain valve is fully closed.
- Plug the 16A 230v (Blue) plug into the supply, check that the ON/OFF switch on the compressor is OFF and that the pressure switch RED button is pressed down.
- Switch on the mains supply.
- Switch on the red ON/OFF switch on the control panel as shown in Figure 11.



Figure 11: The location of ON/OFF switch on control panel (A) on the compressor.

- The display on the control box will display the supply voltage.

Section 7: Operating Instructions

- This compressor is fitted with 3 motor pumps which are controlled by the control box.
- Pull the red knob on the pressure switch upwards, as shown in Figure 12a.
- The compressor will now start to run.
- There will be a delay of 3 seconds and then motor pump 1 will start; after another 3 seconds motor pump 2 will start and then after a further 3 seconds motor pump 3 will start.
- The compressor will now continue to run until it has reached its maximum pressure (around 8 bar).
- Once the maximum pressure is reached, the pressure switch will automatically turn the motor off.
- This sequence will happen every time the motor pumps start; this design will reduce mains in rush current on start up.
- The motor can be stopped manually at anytime by firmly pressing the red knob down and into the off position as shown in Figure 12b.



(a) Pulling the red pressure switch upwards turns on the compressor.



(b) Pressing the red pressure switch will turn off the compressor.

Figure 12



Danger/Caution: Never switch the air compressor on or off directly at the electrical mains supply. Only use the pressure switch to switch the air compressor on or off. Failure to do this may damage the air compressor.



Danger/Caution: The air compressor may start unexpectedly when the pressure in the receiver has fallen below the pressure switch cut-in threshold.

7.4 Setting the Outlet Pressure

The compressor has 2 pressure gauges fitted as standard and are detailed in Figure 13.

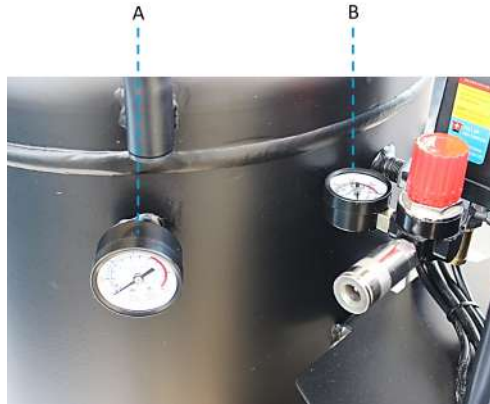


Figure 13: The location of gauge A and B on the front panel of the compressor.

- Gauge A - This gauge shows the pressure stored in the receiver.
- Gauge B - This gauge shows the outlet pressure set by the regulator.

Whilst the compressor is running, the pressure displayed on gauge A will keep rising until the maximum pressure is achieved (around 8 bar). The pressure switch will then stop the motor running and the compressor will stop compressing air until the pressure in the tank drops to a set level (around 6 bar). When this occurs, the pressure switch will start the motor running automatically again until the maximum pressure is achieved.

The pressure displayed on gauge B is the output pressure set by the regulator. This value will never exceed the pressure displayed on gauge A. The output pressure is set by turning the knob on the regulator until the required pressure is displayed on gauge B.

Section 7: Operating Instructions

To set the regulated pressure:

- Ensure that the locking ring is released from the regulator knob by turning it clockwise as shown in Figure 14



Figure 14: The locking ring released from the regulator.

- Ensure that the regulator is fully closed, by winding it out fully anticlockwise.
- Ensure all valves on the air compressor are fully closed, and any pipework/airtools or equipment connected to the regulator has been disconnected.
- Turn the compressor on and allow it to reach its full pressure.
- Turn the regulator knob clockwise until gauge B displays the required outlet pressure (this should increase from 0 to the desired pressure).
- Hold the regulator knob to stop it turning and turn the locking ring anticlockwise against it to secure in place as shown in Figure 15. This prevents the vibrations from the compressor unwinding the regulator and lowering the regulated pressure.

Section 7: Operating Instructions



Figure 15: The locking ring secured against the regulator to prevent changes in output pressure in operation caused by vibrations from the compressor.

The regulator will not be able to set/supply a pressure greater than what is stored in the receiver, always ensure that the receiver is at maximum pressure when setting the regulated pressure. If the pressure is being reduced at the regulator from a previously higher value, the reduction in pressure may not be seen on gauge B until there has been a flow of compressed air from the regulator. It is recommended instead to ensure that any pipework/airtools or equipment connected to the regulator outlet is discharged of pressure, disconnected, and to follow the process above again.

8 Maintenance

8.1 Checking for Air Leaks

During, before and after operation check for air leaks from the compressor, fittings, delivery lines and couplings etc. and reseal as necessary. Small leaks can cause a significant wastage of compressed air, placing unnecessary wear on the compressor and increased energy usage.



Warning: If you suspect a leak from the receiver and are unsure of how to diagnose and rectify it, immediately cease use of the air compressor and contact SIP customer service.

8.2 Draining the Receiver of Condensate



Warning: Do not open the drain port when the receiver is pressurised, first discharge the pressure through the regulator using an air filter or connected equipment. Contact with air from the drain port can lead to an air embolism and/or high velocity debris.

Condensation build up inside the receiver is normal during operation, and should be drained on a daily basis. It is advised that the pressure is released from the receiver before carrying out this operation.

- The drain valve is located on the underside of the receiver.
- Sit a container underneath the drain valve as shown in Figure 16, this will catch the condensation as it is released from the receiver.
- Simply turn the valve anti-clockwise until the condensation is released.
- Once the condensation has been drained, turn the valve clockwise to fully close it.



Figure 16: Opening the drain valve on the receiver to drain condensate.

8.3 Changing the Air Filters

How often the air filter needs to be changed / cleaned depends largely on how often the compressor is used as well as the ambient conditions in which it is used. A general rule would be to check it every month or so. It is possible to change the complete air filter assembly (inc. metal case and internal filter element) by simply removing the old one and replacing it (follow instructions on page 21 in reverse). If the metal section does not need to be replaced, it is possible to just clean / replace the filter element.

8.4 Changing the Seals and Cylinders



Caution: Always allow the compressor to cool before carrying out maintenance operations on the pump.

The air filters should be checked for built up of dust or other particulates that may restrict airflow every 100 hours of operation. Every 500 hours the air filters should be replaced and the sealing of the pistons checked to ensure that the compressor is still working efficiently. If the compressor has been used in a dusty environment the piston seals may be worn and need replacement, and in extreme conditions the cylinder may be scratched, both leading to a loss in compression performance.

The compressor service kit is made up of replacement piston seals, valve plates and air filters.

To inspect and/or replace the seals, valve plate and cylinder follow the below steps:

- Allow the compressor to cool and remove the 6 x screws from each of the two pump heads as shown in Figure 17.



Figure 17: Removing the screws from the compressor pump head.

- The pump heads may be lifted away together, joined by the two silver connecting pipes, or separated from each other.



Figure 18: The compressor without the pump head / valve plate attached, showing the piston and cylinder.

- The seals and cylinder may now be inspected for signs of wear or poor sealing.

The valve plate should also be inspected, the valves should lie flat and have no signs of damage or fatigue.

- If the seals and/or cylinder need to be replaced, remove the cylinder by pulling upwards, using enough force to overcome resistance from the piston seal.
- This will allow the piston to move freely around the bearing on the crankshaft, as shown in Figure 19.



Figure 19: The pump with the cylinder removed, showing the piston head and seal.

- To replace the seal, undo the screw in the centre of the piston to separate the piston head from the connecting rod, as shown in Figure 20. Leverage may be required to separate the two pieces. Note the position of the locating tab underneath the piston head and the connecting rod, these must be aligned during reassembly.



Figure 20: Removing the piston head from the connecting rod.

- The seal may now be removed from the bottom of the piston head and replaced.
- Noting the alignment of the locating tabs, reposition the piston head with the connecting rod and screw back together until tight. Do not overtighten. It is recommended to use a small amount of threadlock adhesive on this screw.
- Replace the cylinder over the piston, with a new cylinder if necessary.
- Gently wipe the orange seals on the valve plate with a clean cloth. Do not use solvents to clean these seals. These seals are shown in Figure 21.



Figure 21: Location of the seals on the valve plates.

- Align the cylinder heads with the pump body, reconnecting the connecting tubes if they were disconnected, and screw in both heads. Do not over tighten and ensure an even distribution of pressure during tightening to allow a flush contact between the seals. This will allow for optimum performance.

8.5 Checking the Non-Return Valve (NRV) Pastille



Warning: Do not open the non-return valve (NRV) when the receiver is pressurised, first discharge the pressure through the regulator using an air filter or connected equipment. Opening the NRV with the receiver under pressure will release stored air immediately and can cause severe injury and/or death.



Caution: Always allow the compressor to cool before carrying out maintenance operations on the pump. This includes the NRV and delivery pipe, which will both be hot if the compressor has run recently.

Depending on the age of the compressor or the amount of use it has had, the NRV pastille should be checked from time to time to ensure that it is not too brittle or cracked and that the spring provides sufficient pressure on the pastille.

- Allow the compressor to cool.

Section 8: Maintenance

- Drain all stored compressed air from the receiver, do not carry out these steps if air is stored in the receiver.
- Locate the Non-Return Valve (NRV) on the top of the receiver.
- Loosen (turn anticlockwise) and remove the NRV nut with the relevant spanner / socket (not supplied) as shown in Figure 22



Figure 22: Loosening the NRV on the compressor.

- Remove the pastille and spring as shown in Figure 23.



Figure 23: The pastille and spring removed from the NRV.

- Check/clean or replace the pastille and spring where necessary.
- Follow these instructions in reverse to refit the nut.

8.6 Checking the Pressure Safety Valve



Warning: Checking the safety valve can be dangerous and/or fatal if not carried out correctly. Read all steps in this section, including these safety warnings, before performing the maintenance operation.



Warning: Do not open the safety valve if the receiver is pressurised above 2 bar, first discharge the pressure to 2 bar through the regulator using an air filter or connected equipment. Opening the safety valve under pressure will release stored air immediately and can cause severe injury and/or death.



Warning: Releasing air from the pressure safety valve generates significant noise, always wear ear protection.



Warning: Releasing air from the pressure safety valve releases high pressure jets that can produce high velocity particles, dust and debris, always wear eye protection.



Warning: Releasing air from the pressure safety valve releases high pressure jets that can cause air embolisms, always wear protective gloves.

The safety valve has been set for the highest permitted pressure of the pressure vessel. It is prohibited to adjust the safety valve or remove its seal. Every few months or so, the safety valve should be tested to ensure that it works correctly.

To check the safety valve,

- Always wear gloves, eye protection and ear defenders when carrying out these steps.
- Make sure that no more than 2 bar of compressed air is in the receiver, either run the compressor to this set point or use an air filter or tool to reduce the pressure to this set point.
- Unscrew the collar of the safety valve, as shown in Figure 24.



Figure 24: How to unscrew the collar of the safety valve.

- Using a spanner, rotate the safety valve head clockwise as shown in Figure 25. This will release pressure from the receiver. This must only be done when wearing gloves, eye protection and ear defenders. Do not rotate the valve head in without wearing gloves.



Figure 25: Rotating the safety valve head to test the safety valve by releasing pressure from the receiver.

- If pressurised air is released successfully then remove the spanner or screw driver and retighten the safety valve head.
- If the safety valve does not operate then contact SIP Customer Service to arrange a replacement or service.



Warning: Do not use the compressor until the safety valve is replaced.

8.7 Tightening the Cylinder Head Screws



Caution: Always allow the compressor to cool before carrying out maintenance operations on the pump.

The screws should be checked and retightened after the first few initial days of running, after 50 hours, and thereafter every 4 months.

9 Troubleshooting

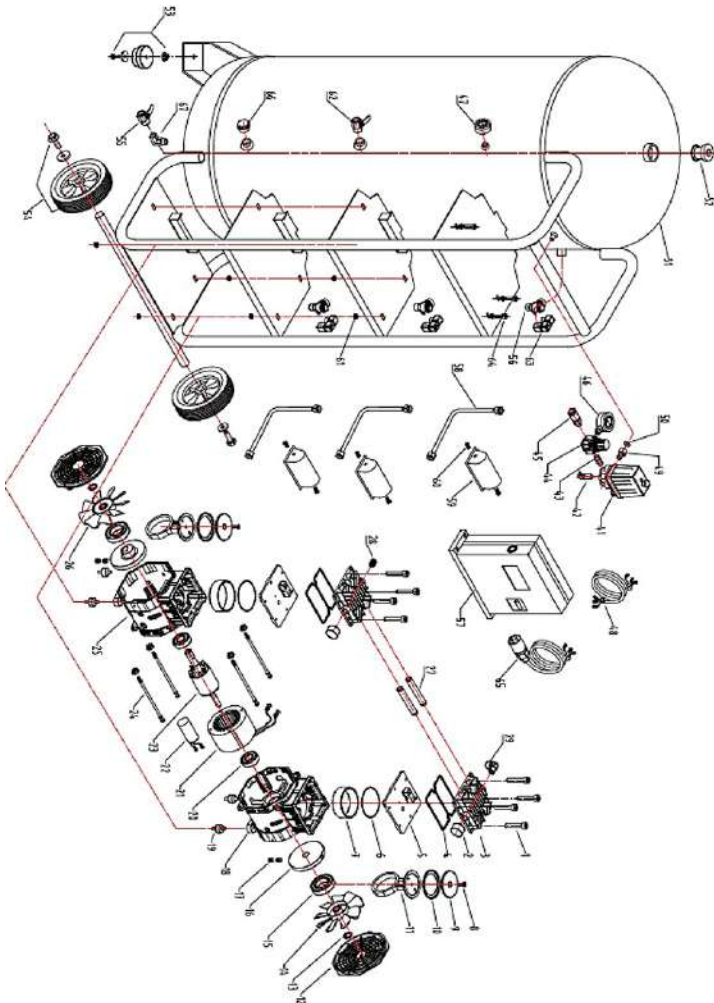
Problem	Possible Cause	Solution
Air leaking from pressure switch.	Dirt or ingress preventing the pastille from seating.	Unscrew the top of the Non-Return Valve (NRV), remove the pastille and clean.
Poor performance and frequent start ups.	• Air is leaking from the compressor. • Receiver is full of condensate. • Compressor capacity is too small for application(s).	• Check all joints and seals as necessary for any leaks. • Drain the condensate from the receiver, following the instructions in the maintenance section. • Check how much air is required by the tool(s)/application and purchase relevant tool(s) / compressor for the application.
Compressor suddenly stops and restarts after several minutes.	Compressor is overheating and thermal cut out is preventing operation.	Check that the tool(s) or airline(s) attached to the compressor are not leaking.
The compressor does not cut out at maximum pressure and the safety valve blows off.	Pressure switch is faulty or not set correctly and requires replacing.	Contact an SIP Service Agent to replace the safety valve. Do not carry out this replacement yourself.

Problem	Possible Cause	Solution
Buzzing sound coming from motor and the compressor does not operate.	• Low voltage in power supply. • Extension lead cross section area too small. • Motor capacitor is faulty.	• Check that the supply voltage is correct. • Replace the extension lead with a correctly specified one for this application. • Contact an SIP Service Agent to carry out the inspection and replacement of the capacitor.
The compressor never reaches maximum pressure and the pressure switch does not switch off the compressor.	• Air leak in compressor or attached tool(s)/airline(s). • Drain valve is open or faulty. • Damaged head/cylinder gasket. • Damaged/faulty valve plate.	• Check all joints etc. and seal as necessary. • Check the drain valve and close or replace if necessary. • Check gaskets and replace as necessary. • Check valve plate and replace as necessary.

Problem	Possible Cause	Solution
Excessive moisture in discharge air.	• Excessive water in receiver. • High humidity in atmosphere.	• Use the drain valve to empty water from the receiver. • Operate the compressor in a less humid atmosphere, or use a filter regulator (or similar).

9.1 Exploded Drawing and Parts List

Complete Compressor

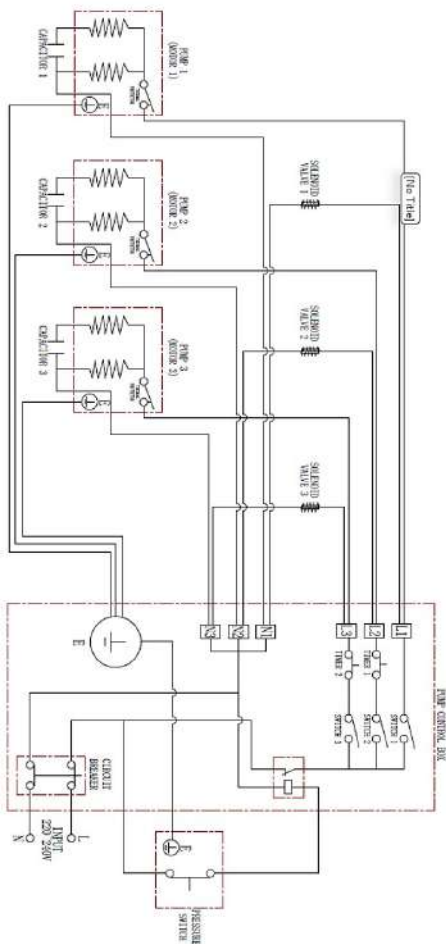


Ref No	Description	SIP Product Code
N/A	Complete Pump 1.5 HP	AI01-10020
N/A	Valve plate kit	AI01-10021
1	Cylinder bolt	AI01-10022
2	Black metal air filter 3/8	AI01-10023
3	Cyliner head	AI01-10024
4	Rubber ring for cylinder head	AI01-10025
5	Valve plate	AI01-10026
6	Rubber ring for cylinder	AI01-10027
7	Cylinder	AI01-10028
8	Bolt for piston cover	AI01-10029
9	Piston cover	AI01-10030
10	Piston ring 69.7mm	AI01-10031
11	Conrod	AI01-10032
12	Fan cover	AI01-10033
13	Snap ring	AI01-10034
14	Motor fan(no cabel side)	AI01-10035
15	Bering for conrod	AI01-10036
16	Crank	AI01-10037
17	Lock bolt for crank	AI01-10038
19	Pump foot	AI01-10040
20	Bearing for motor	AI01-10041
21	Motor stator 230V/50HZ	AI01-10042
22	Capacitor for 230V/50HZ	AI01-10043
23	Motor rotor	AI01-10044
24	Bolt for motor	AI01-10045
25	Crankcase (cable side)	AI01-10046
26	Motor fan (cable side)	AI01-10047
27	air connection tube	AI01-10048
28	Sealing plug 1/2	AI01-10049
29	Cylinder Elbow 1/2 x 1/2	AI01-10050
41	Pressure Switch 4 port 8 BAR	AI01-10051

Ref No	Description	SIP Product Code
42	CE Safty Valve 1/4 8.8-9.2BAR	AI01-10052
43	Line connector	AI01-10053
44	Small Regulator-4ports	AI01-10054
45	Euro type quick coupler	AI01-10055
46	Pressure Guage 50mm	AI01-10056
47	Pressure Guage 50mm	AI01-10057
48	Interal connection cord	AI01-10058
49	Connecing thud	AI01-10059
50	Sealing gasket of CT	AI01-10060
51	Air tank vertical 200 Ltr	AI01-10720
52	Tank plug 1.1/2 with sealing ring	AI01-10721
53	Rubber feet	AI01-10722
54	Red rubber Wheel 8	AI01-10064
55	Drain valve	AI01-10065
56	Non-return valve for	AI01-10066
57	Controller box for 3 pumps	AI01-10076
58	Delivery pipe	AI01-10068
59	Steel capacitor cover	AI01-10069
60	Lock bolt for capacitor cover	AI01-10070
61	Nut M8 for pump	AI01-10071
62	Ball valve outlet 1/2	AI01-10723
64	Lock bolt M6 for controller	AI01-10073
63	Solenoid valve 220v	AI01-10074
65	UK power cable and 16A plug	AI01-10724
66	Elbow for Drain valve	AI01-10725
67	Tank plug 1/2	AI01-10726

9.2 Exploded Drawing and Parts List

Wiring diagram



10 UK - Declaration of Conformity

We, SIP (Industrial Products) Ltd, Gelders Hall Road, Shepshed, Loughborough, Leicestershire, LE12 9NH, United Kingdom

As the manufacturer within the UK, England, Scotland and Wales, declare that the

SIP QT AIR® 200L 4.5hp Ultra Low Noise Oil-Free Vertical Direct Drive Compressor - 05495

Conforms to the requirements of the following regulation(s), as indicated:

Supply of Machinery (Safety) Regulations 2008

Electromagnetic Compatibility Regulations 2016

The Simple Pressure Vessels (Safety) Regulations 2016

Pressure Equipment (Safety) Regulations 2016

The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012

The Noise Emission in the Environment by Equipment for Use Outdoors Regulations 2001

The following designated standards have been applied:

BS EN ISO 12100:2010

BS EN 1012-1:2010

The following technical standards have been applied:

BS EN IEC 55014-1:2021

BS EN IEC 55014-2:2021

BS EN IEC 61000-3-2:2019+A2:2024

BS EN IEC 61000-3-11:2019

BS EN 286-1:1998+A2:2005

Noise measurements have been made and fulfil the requirements laid out in Annex VI in Directive 2000/14/EC. The declared noise values are as follows: Measured sound power level - 84.19 dB(A), Guaranteed sound power level - 86 dB(A) Measured sound pressure level - 64.71 dB(A), Guaranteed sound pressure level - 67 dB(A)

Safety Valve The notified body TUV SUD, 0036, performed an EU Type examination (module B) - Production Type - according to Directive 2014/68/EU and issued the certificate Z-IS-AN1-MAN-24-04-2708744-12141125.

Receiver The notified body Euro Cert, 1128, performed a Module B: EU-type examination (Production Type) and issued the certificate: 10.07.12047



Mr. P Ippaso - Managing Director

SIP (Industrial Products) Ltd

Date: 23/07/2026



11 EU - Declaration of Conformity

We, SIP (Machinery Europe) Ltd, ASM, Block One, Quayside Business Park, Dundalk, County Louth, A91 DP8R, Republic of Ireland

As the manufacturer's authorised representative within the EC, declare that the

SIP QT AIR® 200L 4.5hp Ultra Low Noise Oil-Free Vertical Direct Drive Compressor - 05495

Conforms to the requirements of the following directive(s), as indicated:

2006/42/EC	Machinery Directive
2014/30/EU	Electromagnetic Compatibility (EMC) Directive
2014/29/EU	Simple Pressure Vessels Directive (SPVD)
2014/68/EU	Pressure Equipment Directive (PED)
2011/65/EU	Restriction of Hazardous Substances (RoHS) Directive
2000/14/EC	Outdoor Noise Directive

The following harmonised standards have been applied:

EN ISO 12100:2010
EN 1012-1:2010

The following technical standards have been applied:

EN IEC 55014-1:2021
EN IEC 55014-2:2021
EN ICE 61000-3-2:2019+A1:2021+A2:2024
EN ICE 61000-3-11:2019
EN 286-1: 1998/A2:2005

Noise measurements have been made and fulfil the requirements laid out in Annex VI in Directive 2000/14/EC. The declared noise values are as follows: Measured sound power level - 84.19 dB(A), Guaranteed sound power level - 86 dB(A) Measured sound pressure level - 64.71 dB(A), Guaranteed sound pressure level - 67 dB(A)

Safety Valve The notified body TUV SUD, 0036, performed an EU Type examination (module B) - Production Type - according to Directive 2014/68/EU and issued the certificate Z-IS-AN1-MAN-24-04-2708744-12141125.

Receiver The notified body Euro Cert, 1128, performed a Module B: EU-type examination (Production Type) and issued the certificate: 10.07.12047



Mr. P Ippaso - Managing Director
SIP (Machinery Europe Ltd)
Date: 16/01/2026



12 Notes



Please dispose of packaging for the product in a responsible manner. It is suitable for recycling. Help to protect the environment, take the packaging to the local amenity tip and place into the appropriate recycling bin.



Never dispose of electrical equipment or batteries in with your domestic waste. If your supplier offers a disposal facility please use it or alternatively use a recognised recycling agent. This will allow the recycling of raw materials and help protect the environment.

**FOR HELP OR ADVICE ON THIS PRODUCT PLEASE CONTACT
YOUR DISTRIBUTOR OR SIP DIRECTLY ON:**

T: 01509 500400

E: sales@sip-group.com or customerservice@sip-group.com



SIP (INDUSTRIAL PRODUCTS) LTD

Gelders Hall Road, Shepshed, Loughborough,
Leicestershire, LE12 9NH, UK

www.sip-group.com

SIP (MACHINERY EUROPE) LTD

ASM, Block One, Quayside Business Park, Mill Street,
Dundalk, Co. Louth, A91 DP8R, Ireland

www.sip-group.eu

