USER MANUAL

SILENT OILFREE COMPRESSORS

STEALTH25 *STEALTH60*

:

FOUR TEK • QUALITY AIR TECHNOLOGY

Sommario

1 Introduction

By purchasing the 4TEK compressor, you have made a good choice.
Before commissioning, please read the operating manual carefully.
This manual is an important component and must be kept near the compressor, accessible to every user.
It provides information on proper commissioning, intended use, as well as safe and efficient operation and maintenance of the compressor.
The operating manual informs you about proper commissioning, intended use, as well as safe and efficient operation and maintenance of the compressor.
In addition, observe local accident prevention regulations and general safety standards for the compressor's area of use.
Illustrations in this manual are for general understanding and may differ from the actual design.

1.1 Limitation of Liability

All information and instructions in this operating manual have been compiled in consideration of applicable standards and regulations, state of the art, as well as our many years of knowledge and experience.
In the following cases, the manufacturer accepts no liability for damages:

- Failure to observe the operating manual,
- Improper use,
- Use of unqualified personnel,
- Unauthorized modifications,
- Technical alterations,
- Use of unauthorized spare parts.

The actual scope of delivery may differ from the descriptions and illustrations provided here in the case of special designs, optional features, or the latest technical changes.
The obligations agreed upon in the purchase contract, the general terms and conditions, as well as the manufacturer's delivery conditions and the legal provisions valid at the time of contract conclusion, apply.

2 Safety

This section provides an overview of all important safety measures for protecting people and ensuring safe and trouble-free operation. Additional task-specific safety instructions are included in the individual chapters.

2.1 Explanation of Symbols

Safety Instructions
Safety instructions in this manual are marked by symbols. They are introduced by signal words that indicate the degree of hazard.

DANGER!
This combination of symbol and signal word indicates an immediate hazardous situation that will lead to death or serious injury if not avoided.
WARNING!
This combination of symbol and signal word indicates a potentially hazardous situation that may lead to death or serious injury if not avoided.
CAUTION!
This combination of symbol and signal word indicates a potentially hazardous situation that may lead to minor or moderate injury if not avoided.

ATTENTION!
This combination of symbol and signal word indicates a potentially hazardous situation that may lead to property damage or environmental damage if not avoided.

NOTE!
This combination of symbol and signal word indicates a situation that may lead to property damage or environmental damage if not avoided.

Tips and Recommendations
This symbol highlights useful tips and recommendations as well as information for efficient and trouble-free operation.

To reduce the risk of personal injury and property damage and to avoid hazardous situations, the safety instructions in this manual must be observed

2.2 Operator's Responsibility

Operator
The operator is the person who operates the compressor for commercial or business purposes or makes it available for use by a third party and bears legal product responsibility during operation for protecting the user, personnel, or third parties.

Operator's Duties
If the compressor is used in a commercial environment, the operator is subject to legal occupational safety obligations. Therefore, the safety instructions in this manual as well as the applicable safety, accident prevention, and environmental regulations for the compressor's area of use must be observed. In particular:

- The operator must be aware of applicable occupational safety regulations and, in a risk assessment, identify additional hazards arising from the specific working conditions at the compressor's location. These must be implemented as operating instructions for the compressor.
- The operator must check throughout the compressor's entire operating period whether the operating instructions he has created comply with the current regulations and update them if necessary.
- The operator must clearly define responsibilities for installation, operation, troubleshooting, maintenance, and cleaning.
- The operator must ensure that all persons handling the compressor have read and understood this manual. Furthermore, the operator must train staff regularly and inform them of hazards.
- The operator must provide the necessary protective equipment and make its use mandatory.

Additionally, the operator is responsible for ensuring the compressor is always in proper technical condition. Therefore:

- The operator must ensure that the maintenance intervals described in this manual are observed.
- The operator must have all safety devices regularly checked for functionality and completeness.

2.3 Personnel Requirements

Qualifications
The tasks described in this manual place different demands on the qualifications of the personnel assigned to them.

WARNING!
Hazard due to insufficiently qualified personnel!
Inadequately qualified persons cannot properly assess the risks involved in handling the compressor and may expose themselves and others to serious or fatal injury.

- Only allow qualified personnel to perform tasks.
- Keep unqualified personnel away from the work area.

Only persons who can be expected to reliably perform the tasks may carry them out. Persons whose responsiveness is impaired by drugs, alcohol, or medication are not permitted.
In this manual, the following personnel qualifications are specified for different tasks:

- ✓ **Operator**
  The operator has been instructed by the employer on the tasks assigned and possible hazards resulting from improper behaviour. Tasks beyond normal operation may only be carried out by the operator if specified in this manual and explicitly authorized by the employer.
- ✓ **Electrical Specialist**
  An electrical specialist, based on training, knowledge, and experience as well as knowledge of applicable standards and regulations, is capable of performing work on electrical systems and independently recognizing and avoiding potential hazards. The electrical specialist is specifically trained for the work environment and familiar with relevant standards and regulations.
- ✓ **Qualified Personnel**
  Qualified personnel, based on training, knowledge, and experience as well as knowledge of applicable standards and regulations, are capable of performing assigned tasks and independently recognizing and avoiding hazards.
- ✓ **Manufacturer**
  Certain tasks may only be performed by the manufacturer's qualified personnel. Other personnel are not authorized to carry out these tasks. To perform such tasks, contact our customer service.

2.4 Personal Protective Equipment (PPE)

Personal protective equipment is intended to protect individuals from health and safety hazards at work. Personnel must wear personal protective equipment during various tasks on and with the compressor, as indicated in specific sections of this manual.
The following personal protective equipment is required:

 **Hearing Protection**
Protects the ears from hearing damage caused by noise.

 **Eye Protection**
Safety goggles protect the eyes from flying parts and liquid splashes

 **Respiratory Protection**
A dust mask protects against coarse dust particles

 **Protective Gloves**
Protect hands from sharp-edged components as well as friction, abrasions, or deep injuries.

 **Safety Shoes**
Protect feet from crushing injuries, falling objects, and slipping on slippery surfaces.

 **Protective Work Clothing**
Close-fitting clothing with low tear resistance.

2.5 General Safety Instructions

- Observe the guidelines and accident prevention regulations of the trade association for handling compressors and compressed air tools.
- The compressor and/or motor become hot during operation. Never touch the motor or compressor pump while in operation.
- The air generated by the compressor must not be inhaled.
- When spraying paint, chemicals, or sandblasting, always use respiratory protection.
- When using compressed air tools, always wear a face mask or dust mask to avoid inhaling hazardous dust or airborne particles such as wood dust, crystalline quartz dust, and asbestos dust.
- Always ensure the compressor is switched off before connecting it to a power source.
- Before performing maintenance or adjustments:
    - Switch off the compressor and unplug it.
    - Allow the compressor to cool down completely.
    - Release all compressed air from the tank and the air lines.
    - The tank and lines must not be under pressure!
- Do not wear loose clothing, ties, or jewellery that could get caught and pulled into moving parts.
  For outdoor work, rubber gloves and non-slip shoes are recommended. Wear a hairnet to protect long hair.
- Unauthorized persons must not remain in the work area.
- Protect the compressor, power cable, and air tools from heat, oil, and sharp edges.
- Always use a clean cloth for cleaning. Never use brake fluid, gasoline, petroleum-based products, or other solvents to clean the compressor.
- Check air tools for damage before connecting them to the compressor.
- Never leave the compressor unattended while it is running. Leave the work area only after the compressor has come to a complete stop.
- Do not leave tools on the compressor during operation.
- Use only appropriate accessories and original spare parts.
- Do not operate the compressor in the rain or in damp or wet environments.
- Keep the compressor’s cooling fins clean and free of objects to avoid impairing cooling.

2.6 Inspection of Operational Safety

The compressor's pressure vessel is subject to inspection. The pressure vessel has been tested by the manufacturer in accordance with EU Directive 2014/29/EU. A copy of this type certificate and/or declaration of conformity is supplied with each compressor.
The operator must have the components subject to inspection checked by an expert or "qualified person" at the prescribed intervals. The operational requirements for this may differ between EU member states.

CAUTION!
RISK OF INJURY

- Never point compressed air at people or animals.
- When disconnecting the quick coupling, hold the end of the air hose firmly to prevent whipping due to overpressure.

Allow the compressor to cool down before starting maintenance work.

2.7 Safety Labels on the Compressor

The compressor is equipped with safety symbols:

Fig. 1: Safety Symbols:

1. Mandatory signs – general mandatory sign, follow instructions, wear hearing protection, unplug the power cord
2. Warning signs – ground before use, warning of electrical voltage, warning of hot surface.

Damaged or missing safety labels on the compressor may result in incorrect operation and property damage. The safety labels affixed to the compressor must not be removed.
The following must be observed:

- Always follow the instructions on the safety labels.
- If the safety labels fade or become damaged during the machine's lifetime, new labels must be applied immediately.
- If the labels are no longer immediately visible and understandable, the compressor must be taken out of service until new labels are attached.

2.8 Safety Devices

Safety Valve
The safety valve is located on the pressure switch or fitting. When the safety limit is reached, the safety valve opens and releases air.
After the safety valve has been triggered, the operator must switch off the compressor and request an inspection by maintenance personnel.
Motor Protection
The compressor is equipped with motor protection that automatically shuts it down in case of overload.

After sufficient cooling and after the cause of the overload has been eliminated, the motor protection switch must be pressed and the compressor restarted.

3 Intended Use

The compressor is intended exclusively for generating compressed air and operating pneumatic tools. The compressor must only intake and compress clean, dust-free, dry, and uncontaminated ambient air. Proper use also includes compliance with all instructions in this manual.
The STEALTH compressors are piston compressors with an attached compressed air storage tank, driven by an electric motor. They are intended for sale and operation within the EU and the geographical European area.

3.1 Reasonably Foreseeable Misuse

Any use beyond or different from the intended purpose is considered misuse.
Possible misuse includes:

- Installing spare parts and using accessories or operating materials not approved by the manufacturer.
- Operating the compressor outside the performance limits specified in the “Technical Data” chapter.
- Using the compressor without appropriate filtration in the food or medical sector, e.g., for filling breathing gas cylinders.
- Service work performed by untrained or unauthorized personnel.
- Operating the compressor in enclosed spaces without sufficient ventilation.
- Failure to follow the instructions in this manual or the operating instructions for the connected pneumatic tools.
- Using the compressor in environments containing aggressive or flammable substances in the air (the piston compressor is not explosion-proof as standard).
- Operating the compressor without the intended protective devices.
- Ignoring signs of wear and damage.

Misuse of the compressor can lead to hazardous situations.
Any claims for damages resulting from improper use are excluded.

3.2 Residual Risks

Even when all safety regulations are observed and the compressor is used properly, residual risks remain, including:

- Heat development on components can cause burns and other injuries.
- Hearing damage from prolonged work on the machine without effective hearing protection.
- Risk of electric shock when using improper power cables or plugs.
- Risk of injury and property damage from flying parts or broken tool attachments.

4 Technical Data

	CYLINDERS									
STEALTH 25	2	375 W	230 /50	25 lt/min	9 bar	4 lt	60	35x35x32	10,5	NO
STEALTH 60	2	750 W	230 /50	60 lt/min	9 bar	8 lt	62	40x42x35	19	NO

5 Transport, Packaging, Storage

5.1 *Delivery and Transport*

Delivery

Check the compressor for visible transport damage upon delivery. If the compressor shows any

damage, report this immediately to the transport company or the dealer.
Check whether the compressor is complete and if all parts included in the delivery scope are present.

Transport

Improper transport of individual units, packaged or unpackaged unsecured units, stacked on top of or next to each other, is hazardous and can cause damage or malfunctions for which we accept no liability or warranty.
Secure the delivery contents against shifting or tipping and transport them to the installation site using adequately dimensioned industrial trucks.
The compressor must only be transported with the motor switched off and disconnected from the power supply. The tank must not be under pressure during transport.

5.1 Packaging

Keep the packaging for potential relocation, or at least during the warranty period.
All packaging materials and packing aids used for the compressor are recyclable and must be returned for material recycling.
Cardboard packaging components should be shredded and placed in paper recycling.
The foils are made of polyethylene (PE) and the padding parts of polystyrene (PS). These materials should be taken to a recycling center or the responsible waste disposal company.

5.2 Storage

Store the thoroughly cleaned compressor in a dry, clean, and frost-free environment.
Do not store or transport the compressor outdoors or in damp conditions without protection.

6 Device Description

	Carrying handle 2 Withdrawal coupling 3 Tank 4 Stand 5 Drain valve (drainage) 6 Withdrawal pressure gauge 7 Tank pressure gauge 8 Withdrawal pressure regulator

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7 Operation

WARNING!

- Before starting up the compressor, be sure to read the section **"Safety"**, especially Chapter 2.8 **"Checking Operational Safety"**!
- The compressor may only be operated within the permitted temperature range of **+5°C to +40°C**!
- Do not overload the compressor! Operate the compressor only within the performance range specified in the **Technical Data**.
- Always maintain a minimum distance of **4 meters** between the compressor and the working area.
- Move and carry the compressor **only by the carrying handle**.
- The compressor is designed for **intermittent operation**. For trouble-free operation, the duty cycle of **70 percent must not be exceeded**.
  For example: If you spray paint for 10 minutes, the compressor must not run for longer than **7 minutes**.
  Do not operate the compressor for more than **15 minutes at a time**.
- To switch off the compressor, use **only the ON/OFF switch**. Never switch off the device by pulling the mains plug.
- Before transport, always unplug the power cord and disconnect the pneumatic tools from the compressor.

WARNING!

Danger!

There is a risk of injury for the operator and other persons if the following rules are not observed:

- The compressor may only be operated by a trained and experienced person. Other individuals must stay away from the work area during operation.
- Safety devices and protective covers must be functional.
- Avoid repeatedly switching the compressor on and off in quick succession, as this may cause damage to the motor!

- The connected pneumatic tools must be designed for the compressor's output pressure or operated with a pressure regulator.

Motor Protection

The compressor is equipped with motor protection that automatically interrupts the power supply in the event of overload.
If the motor protection triggers a forced shutdown, disconnect the compressor from the power supply and wait until it has cooled down (approx. 5 to 20 minutes) before pressing the motor protection switch and restarting the compressor.
Eliminate the cause of the overload before switching on again. If the compressor does not start, contact an authorized service center.

7.1 Installation

Arrange the work area around the compressor in accordance with local safety regulations. The space for operation, maintenance, and repair must not be restricted.

Requirements for the installation site:

- Dry and dust-free,
- Cool, well-ventilated, and protected from frost,
- Level, solid surface.

Place the compressor in a location that allows the room temperature to remain at a maximum of **40°C** while the compressor is operating.
Use the compressor only on a solid, level surface. If unavoidable, any slope must not exceed **15°**.

7.2 Electrical Connection

WARNING!

At low temperatures below +5°C, motor start-up is at risk due to increased resistance.
Contact with live parts poses an immediate risk of death from electric shock.

- Work on the electrical system must only be performed by qualified electricians.
- Adaptation of the power supply to the regulations valid in the respective user country must only be performed by a qualified electrician!
- Operate the compressor only in a dry environment.
- The compressor should only be connected directly to a socket. If an extension cable reel is used, the cable cross-section must match the motor's power consumption.
  A minimum cross-section of 2.5 mm² for a 10-meter cable is required. The cable must be completely unrolled from the reel to prevent resistance and voltage drop.
- The power cable must be routed so that it does not interfere or become damaged during operation.

7.3 Switching On

Step 1: Check that the mains voltage matches the voltage specified on the nameplate. Connect the compressor to the power supply.
Step 2: Close the drain valve of the compressor.

Step 3: Connect the compressed air hose to the compressor's compressed air outlet.
Step 4: Start the unit using the ON/OFF switch. It is recommended to let the unit run until the maximum tank pressure is reached and the unit switches off automatically. Only then should the desired pneumatic tools be connected.
Step 5: During the first start-up, allow the compressor to run for about 15 minutes with the drain valve (Fig. 8) open.
Step 6: Close the drain valve and check whether the compressor fills the tank and stops at Pmax (maximum pressure indicated by the gauge).
The ON/OFF switch activates the pressure switch function. The pressure switch turns the compressor on or off depending on the tank pressure reached. The compressor operates automatically, stopping when the maximum pressure is reached and restarting when the cut-in pressure is reached.

7.4 Setting the Working Pressure

The working pressure is set using the **pressure regulator** and can be read on the pressure gauge.
It is recommended to reset the pressure value to zero after using the device. When using pneumatic tools, always check the optimal operating pressure.

7.5 Pressure Switch

Due to thermal changes (hot, cold) and vibrations of the compressor, the pressure switch settings may shift. If necessary, have the pressure switch adjusted by customer service.
Before adjusting the pressure, the pressure switch must be unlocked. The pressure adjustment can only be made on the mounted pressure switch while the unit is pressurized.

7.6 Switching Off

Step 1: Switch off the compressor using the ON/OFF switch on the pressure switch and unplug the power cord from the outlet.
Step 2: Place a collection container under the condensate drain valve. Open the condensate drain valve to drain the air receiver and relieve the tank pressure.
Step 3: Close the condensate drain valve.

8 Maintenance, Care, and Repair

8.1 Maintenance and Care

Daily:

- Before each work shift, check the compressed air lines for damage and replace them if necessary.
- Check that all screws, especially those on the cylinder head and frame, are securely tightened. Tighten the cylinder screws after the compressor has warmed up.
- Check for dust accumulation inside the casing. If necessary, relocate the unit.
- Inspect the compressor for unusual noises and vibrations.

- Drain the condensate. Place a container under the condensate drain screw located on the underside of the air tank and open it. Close the condensate drain screw once only clean air without water exits. Wear protective gloves for this task. Use a shallow container to collect the condensate.

Weekly:

- Thoroughly clean all components such as the cylinder head, motor, and fan.
- Clean the air filter by opening the air filter housing, removing the filter element, and cleaning it thoroughly. Replace worn or dirty filters.

Monthly:

- Check the compressor for possible air leaks.

Quarterly or every 300 operating hours:

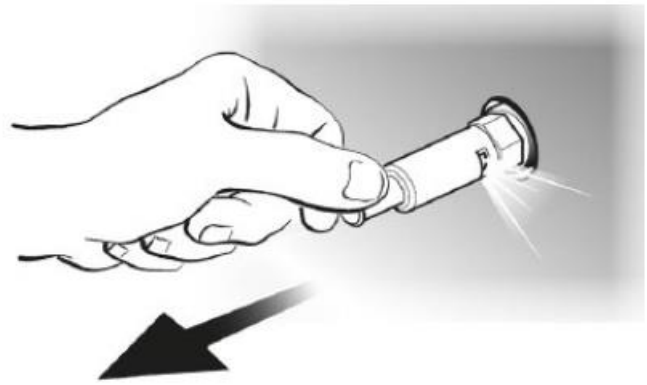
- Inspect the air tank for corrosion or other damage.
- Replace the air filter.

8.2 Safety Valve Function Test

- The safety valve must be actuated regularly (about every 6 months) to ensure proper operation when needed.

Version A (Safety valve with ring):
Open the safety valve (Fig. 12) by briefly pulling the ring outward until compressed air escapes, then release (the tank must be pressurized).

Version B (Safety valve with clamp):
Open the safety valve (Fig. 13) by briefly pulling the clamp outward until compressed air escapes, then release (the tank must be pressurized).



8.3 Repairs

4TEK assumes no liability or warranty for damage or operational malfunctions resulting from non-compliance with this manual. Use only proper and suitable tools for repairs, as well as original spare parts or components explicitly approved by 4TEK.

8.4 Technical Customer Service Information

Repairs covered under warranty may only be carried out by technicians authorized by us. Use only original spare parts.
For inquiries or orders, please always provide the **MODEL DESIGNATION**, **YEAR OF MANUFACTURE**, and **ARTICLE NUMBER** of your compressor. All details can be found on the nameplate attached to the compressor.

9 Troubleshooting Table

Malfunction	Possible Cause	Possible solution
The compressor does not switch on.	-Power plug not inserted. -Cut-out pressure in the tank has been reached	-Check the power plug and insert it if necessary. -Continue using the pneumatic tool. The compressor will start automatically when the tank pressure drops to the cut-in pressure.
Compressed air does not reach the pneumatic tool.	-The pressure regulator is closed. -No pressure in the tank.	-Open the pressure regulator. -Switch on the compressor.
The compressor overheats.	-Clogged air filter. -Compressor is dirty. -Pressure too high. -Compressor operated for too long	-Clean or replace the filter. -Clean the compressor. -Reduce the operating pressure. -Reduce the operating duration. The duty cycle must not exceed 70%
Compressor starts and stops unevenly.	-Leaks in the air system. -Pressure switch differential set too narrow. -Defective compressor valves. -Compressor output insufficient. -Overload protection is activated.	-Check the air system. -Check the pressure switch. -Inspect the valves and replace if necessary. -Use a more powerful compressor. -Allow the compressor to cool for approximately 20 minutes before restarting.
Insufficient output performance and low output pressure.	-Clogged air filter. -Leaks in the air system. -Drain valve is open. -Faulty pressure gauge. -Damaged cylinder head gasket. -Defective pressure switch. -Defective valves. -Damaged piston.	-Clean or replace the filter. -Check the air system and seal any leaks. -Close the drain valve. -Replace the pressure gauge. -Replace the gasket. -Replace the pressure switch. -Inspect the valves and replace if necessary. -Inspect the piston and replace if necessary.
Unusual noises in the compressor.	-Compressor valves are loose or broken. -Low pressure in the check valve.	-Inspect and replace worn or defective valves. -Clean or replace the check valve.
Excessive vibration.	-Motor is loose. -Output pressure too high. -Feet are loose. -Worn parts in the compressor	-Tighten the motor mounting screws. -Reduce the operating pressure. -Check the feet and tighten if necessary. -Inspect the compressor and repair if necessary
Compressor does not build pressure.	-Safety valve is leaking. -Drain valve is open. -Air leak in the compressor. -Air filter is dirty	-Replace the safety valve. -Close the drain valve. -Locate the air leak and seal it. -Clean or replace the filter
Motor has stopped.	-Defective check valve. -Defective valves.	-Replace the check valve. -Inspect the valves and replace if necessary.

10 Disposal and Recycling of Old Equipment

In the interest of environmental protection, ensure that all machine components are disposed of only through the designated and approved channels.

10.1 Decommissioning

Decommission old equipment immediately and properly to prevent later misuse and any risk to the environment or people.

- Dispose of all environmentally hazardous operating materials from the old equipment.
- If necessary, dismantle the equipment into manageable and recyclable assemblies and components.
- Deliver the components and operating materials to the designated disposal channels.

10.2 Disposal of Lubricants

The disposal instructions for the lubricants used are provided by the lubricant manufacturer. If necessary, request the product-specific data sheets.

10.3 Disposal of Electrical Devices

Electrical devices contain a variety of recyclable materials as well as environmentally hazardous components. These components must be separated and disposed of properly. In case of doubt, contact your local waste disposal authority.
For processing, it may be necessary to seek the assistance of a specialized disposal company.

10.4 Disposal via Municipal Collection Points

Disposal of used electrical and electronic devices (applicable in EU countries and other European countries with a separate collection system for these devices).
The symbol on the product or its packaging indicates that this product must not be treated as normal household waste but must be taken to a collection point for recycling of electrical and electronic devices.
By properly disposing of this product, you help protect the environment and human health. Incorrect disposal poses risks to the environment and health. Material recycling helps reduce the consumption of raw materials. For more information about recycling this product, contact your local authorities, waste disposal services, or the store where you purchased the product.

11 Spare Parts

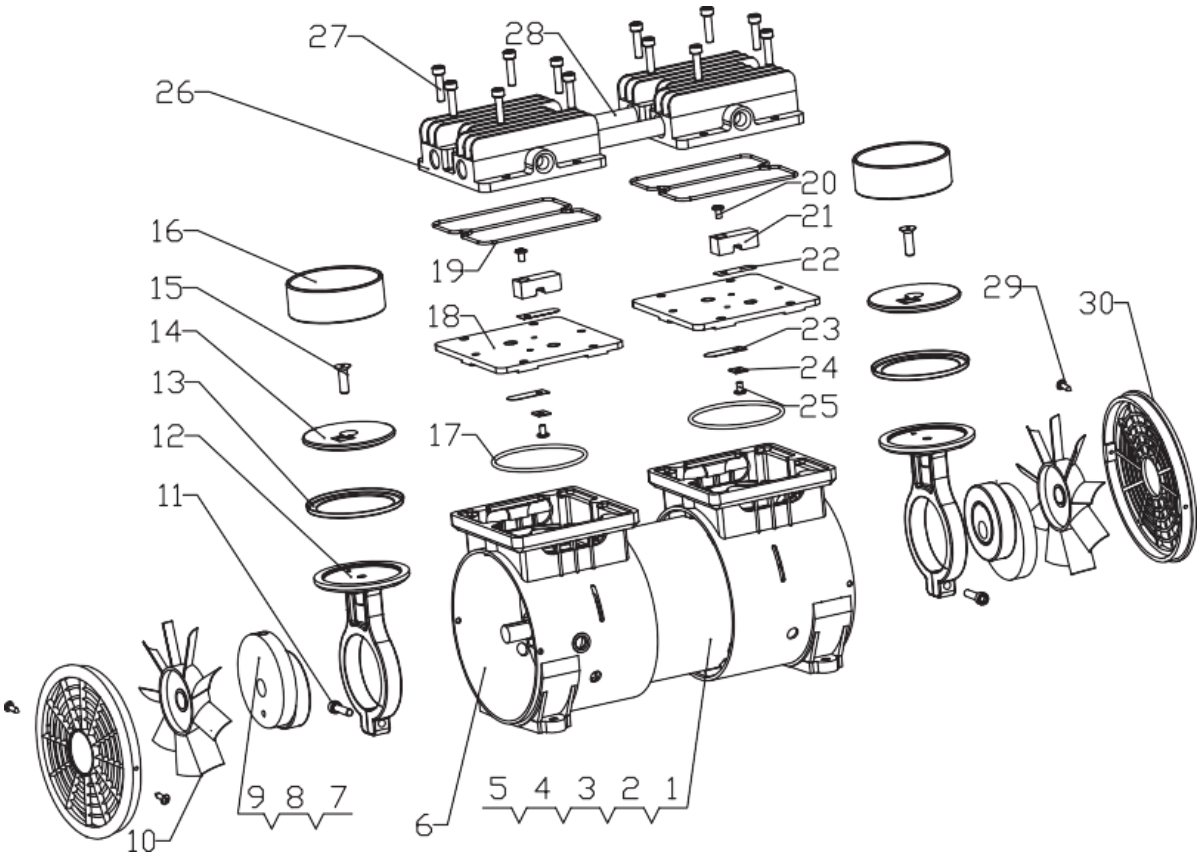
11.1 Ordering Spare Parts

Spare parts can be obtained through the authorized dealer.
Provide the following details for inquiries or spare parts orders:

- Device type
- Article number
- Spare part drawing number
- Position number
- Year of manufacture
- Quantity
- Desired shipping method (Post, Freight, Sea, Air, Express)
- Shipping address

Orders without the above details cannot be processed. The type designation, article number, and year of manufacture can be found on the nameplate attached to the compressor.

11.2 Head Drawing



10	Fan	20	Bolt	30	Cover
9	Bolt	19	Ring	29	Bolt
8	Bearing	18	Valve plate	28	Pipe
7	Crank	17	Ring	27	Bolt
6	Crank case	16	Cylinder	26	Cylinder cover
5	Gasket	15	Bolt	25	Bolt
4	Bolt	14	Platen	24	Gasket
3	Bearing	13	Piston ring	23	Valve sheet
2	Rotator	12	Connecting rod	22	Valve sheet
1	Stator	11	Bolt	21	Limit block

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