

Operating instructions

— Piston Compressor

- MOBILBOY 241/24 AC
- MOBILBOY 261/24 AC
- MOBILBOY 301/50 AC
- MOBILBOY 421/50 AC
- MOBILBOY 421/100 AC



MOBILBOY 241/24 AC



MOBILBOY 421/50 AC

MOBILBOY

Imprint

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Indications regarding the Copyright

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1 Introduction

You have made a good choice by purchasing the AIR-CRAFT compressor.

Read the operating instructions carefully before commissioning.

These are an important part of the compressor and must be kept in the vicinity of the compressor and accessible to every user.

It provides information on the proper commissioning, the intended use and the safe and efficient operation and maintenance of the compressor.

The operating manual informs you about the proper commissioning, the intended use as well as the safe and efficient operation and maintenance of the compressor. In addition, observe the local accident prevention regulations and general safety regulations for the area of application of the compressor.

Illustrations in these operating instructions are for basic understanding and may differ from the actual design.

1.1 Copyright

The contents of this instruction manual are protected by copyright.

Their use is permitted within the scope of the use of the compressor. Any other use is not permitted without the written consent of the manufacturer.

Passing on and copying of this document, exploitation and communication of its contents are prohibited unless expressly permitted. Violations will result in liability for damages.

We register trademark, patent and design rights to protect our products, insofar as this is possible in individual cases. We oppose emphatically any infringement of our intellectual property.

1.2 Customer service

If you have any questions about your compressor or technical information, please contact your dealer. There you will be happy to help with expert advice and information.

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We are always interested in valuable experience and knowledge gained from using the application, which then could be shared and be valuable to develop our products even further.

1.3 Limitation of liability

All information and notes in these operating instructions were summarised taking the applicable standards and rules, the state-of-the-art and our long-term knowledge and experiences into consideration.

In the following cases the manufacturer is not liable for damage:

- Failure to observe the operating instructions,
- Improper use,
- Use of non-professional and non-expert personnel,
- Unauthorized conversions,
- Technical changes,
- Use of unauthorized spare parts.

The actual scope of delivery may differ from the explanations and illustrations described here for special versions, when using additional order options or due to the latest technical changes.

The obligations agreed in the delivery contract, the general terms and conditions as well as the delivery conditions of the manufacturer and the legal regulations valid at the time of the conclusion of the contract apply.

2 Safety

This section provides an overview of all major safety packages for personal protection and safe and trouble-free operation. Further task-related safety instructions are contained in the individual chapters.

2.1 Symbol explanation

Safety instructions

The safety notes in these operating instructions are highlighted by symbols. The safety notes are introduced by signal words which express the concern of the risk.



DANGER!

This combination of symbol and signal words indicates an imminently dangerous situation which may lead to death or severe injuries if they are not avoided.

WARNING!

This combination of symbol and signal words indicates a possibly dangerous situation which may lead to death or severe injuries if they are not avoided.

CAUTION!

This combination of symbol and signal words indicates a possibly dangerous situation which may lead to minor or light injuries if they are not avoided.

ATTENTION!

This combination of symbol and signal word indicates a possibly dangerous situation that can lead to property and environmental damage if it is not avoided.



NOTE!

This combination of symbol and signal words indicates a possibly dangerous situation which may lead to property and environmental damages if they are not avoided.



Tips and recommendations

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

It is necessary to observe the safety notes written in these operating instructions in order to reduce the risk of personal injuries and damages to property.

2.2 Responsibility of the operator

Of the operator

The operating company is the person who operates den Kompressor for business or commercial reasons by herself, or leaves it to a third party for use or application, and who bears the legal product responsibility for the protection of the user, the staff or for third parties.

Obligations of the operating company

If der Kompressor is used for commercial purposes, the operating company of des Kompressors must comply with the legal working safety regulations. Therefore, the safety notes in this operating manual, as well as the safety, accident prevention and environment protection regulations applying for the area of application of des Kompressors must be met. The following applies in particular:

- The operating company must be informed about the applying industrial safety regulations and further analyse hazards resulting from the special working conditions at the place of use des Kompressors. She must implement these in form of operating manuals for the operation des Kompressors.
- During the entire lifetime of des Kompressors, the operating company must verify whether the operating manuals prepared by her correspond to the current status of the regulations, and must adapt these if necessary.
- The operating company must unambiguously regulate and determine the responsibilities for installation, operation, troubleshooting, maintenance and cleaning.
- The operating company must ensure that all persons who work with the compressor, have read and understood this manual. Furthermore she must instruct the staff in regular intervals and inform them about the hazards.
- The operator must provide the necessary protective equipment to the staff and order the use of the necessary protective equipment in a binding way.

Furthermore the operating company is responsible to keep der Kompressor always in a technically flawless state. Thus, the following applies:

- The operator must ensure that the maintenance intervals described in this manual are kept.
- The operator must have all safety devices checked regularly for their good working order and their integrity.

2.3 Personnel requisition

Qualifications

The various tasks described in this manual place different demands on the qualifications of the people entrusted with these tasks.



WARNING!

Danger due to insufficient qualification of persons!

Insufficiently qualified persons can not assess the risks involved in handling the compressor and expose themselves and others to the risk of serious or fatal injuries.

- All work should only be carried out by qualified persons.
- Keep inadequately qualified persons out of the work area.

For all work, only persons are allowed who are expected to perform this work reliably. Persons whose reactivity is influenced by drugs, alcohol or drugs are not allowed.

This manual identifies the qualifications of the persons listed below for the different tasks:

Operator

The operator is instructed by the operating company about the assigned tasks and possible risks in case of improper behaviour. Any tasks which need to be performed beyond the operation in the standard mode must only be performed by the operator if it is indicated in these instructions and if the operating company expressly commissioned the operator.

Electrical specialist

Due to his professional training, knowledge and experience as well as his knowledge of respective standards and regulations the electrical specialist is able to perform works on the electrical system and to recognize and avoid any possible dangers himself.

The electrical specialist is specially trained for the working environment in which he is working and knows the relevant standards and regulations.

Specialist staff

Due to their professional training, knowledge and experience as well as their knowledge of relevant regulations the specialist staff is able to perform the assigned tasks and to recognize and avoid any possible dangers themselves.

Manufacturer

Certain works may only be performed by specialist personnel of the manufacturer. Other personnel is not authorized to perform these works. Please contact our customer service for the execution of all arising work.

2.4 Personal protective equipment

The personal protective equipment serves to protect persons against impairments of safety and health while working. The staff has to wear personal protective equipment while performing different works on and with the compressor which are indicated in the individual paragraphs of these instructions.

The personal protective equipment is explained in the following paragraph:



Use ear protection

The hearing protection protects the ears against damages of hearing due to noise.



Eye protection

The protective goggles protect the eyes against parts flying off and splashes of liquids.



Breathing protection

The dust mask protects from coarse dust particles.



Protective gloves

The protective gloves protect the hands from sharp-edged components as well as from friction, abrasions or deeper injuries.



Safety boots

The safety boots protect the feet against crushes, falling parts and slipping over on slippery underground.



Protective clothes

The protective clothes are tight clothes of little tensile strength.

2.5 General safety notes

- Observe the guidelines and accident prevention regulations of the professional association for handling compressors and pneumatic tools.
- The compressor must not be modified in its design and must not be used for purposes other than the operations foreseen by the manufacturer.
- The compressor must not be operated in rainy or humid or wet conditions.
- Never operate the compressor near flammable and explosive objects.
- Do not use the compressor without the mounted safety devices. Never remove the safety devices installed on the compressor.
- Do not transport the compressor while it is connected to the power source and the tank is under pressure.
- Keep the working area of the compressor clean and well ventilated.
- Never touch moving parts!
- **Protect yourself from thermal injuries!**
- Keep children and persons not familiar with the compressor away from their working area.
- The compressor must not be used by persons with reduced physical, sensory or mental abilities.
- Never work under the influence of concentration illnesses, fatigue, drugs, alcohol or medication.
- Do not overload the compressor! It works better and safer in the specified performance range.
- Only use original spare parts and accessories to avoid possible dangers and risks of accidents.
- Wear close-fitting work clothing with low tear resistance!
- Immediately eliminate faults that impair safety.
- Before each use, make sure that no parts of the compressor are damaged. Damaged parts must be replaced immediately to avoid sources of danger.
- The compressor should be operated in a well ventilated place.



CAUTION! RISK OF INJURY

- Never direct compressed air at people or animals.
- When releasing the quick coupling, hold the end of the compressed air line firmly to prevent it from being pushed away by the excess pressure.
- Before starting maintenance work, allow the compressor to cool down and let compressed air escape from the tank.

2.6 Verification of operational safety

The pressure tank of the compressor is submitted to inspection. The manufacturer submitted the pressure tank to an inspection according to the EC Directive 2014/29/EG in conjunction with the EC type examination according to article 10 as well as according to EN 286-1. A copy of this type examination certification and/or declaration of conformity is included in the scope of delivery of every compressor.

The operating company must have re-inspected the individual components to be inspected by an expert or by a "qualified person" in the prescribed intervals. The operating regulations for this may differ in the individual EC countries

Regulations for compressed air tanks in Germany

Inspection periods

The given inspection periods are maximum values. They should be verified by the risk/safety assessment of the operating company. No delays are admissible for this. It is only possible to shorten the period.

The product of pressure and volume depends on the inspection periods. For this, the maximum admissible pressure (PS) must be multiplied with the pressure tank volume (V).

Example:

Pressure tank = 50 l ; max. admissible pressure = 10 bar

50 l x 10 bar = 500.

Check	Inspection period	Inspection organisation
Prior to commissioning / positioning	PS xV <=200	Qualified person
	with type examination certificate PS xV <=1000	Qualified person
	PS xV >=200	Approved inspection agency
Exterior inspection **	Every / Every 2nd year	Qualified person
Internal inspection **	Every 5 Years at PS xV <=1000	Qualified person
	*Every 5 Years at PS xV >=1000	Approved inspection agency
Strength test **	Every 10 Years PS xV <=1000	Qualified person
	*Every 10 Years PS xV >=1000	Approved inspection agency

*The operating company must communicate the relevant inspection periods to the responsible authority within 6 months after commissioning the installation (par. 15 BetrSichV).

** External tests can be omitted: a) for pressure tanks according to point 2.2 (letter a), unless they are fire-heated, heated exhaust gas or electrically heated, and b) in the case of simple pressure tanks according to BetrSichV point 2.2 letter d. The deadline of the strength test may be extended to 15 years If it is shown in the external or internal test that the machine can be safely operated. The confirmation must be shown in the documentation of the risk assessment. Table according to BetrSichV (State: 2017-03-29).

2.7 Safety labels on the compressor

Damaged or missing safety labels on the compressor can lead to incorrect handling and material damage. The safety labels attached to the machine must not be removed. Damaged safety labels must be replaced immediately.

Please observe the following points:

The instructions of the safety symbols at the compressor must be observed under all circumstances. Attach new labels immediately if the safety symbols fade out or become damaged during the lifetime of the compressor. The compressor must be put out of operation from the moment when the labels are unable to be recognized and understood at first glance, until new labels are attached. The following safety symbols and application instructions are attached to the compressor:



Fig. 1: Safety labels

2.8 Safety devices

Safety valve

The safety valve is located on the pressure switch or on the armature.

If the nominal pressure of the safety valve is exceeded, it opens and the excess pressure blows off.

After the safety valve has been triggered, the operator must switch off the compressor and request a check by maintenance personnel.

Do not try to adjust or remove the safety valve. Any changes to the setting could cause serious injury cause.

Overload protection

The compressors are equipped with overload protection, which automatically cuts off the power supply in case of overload.

3 Intended Use

The compressor is used to compress clean, dust-free, dry and uncontaminated air. The compressed air produced can then be used for suitable pneumatic tools, suitable pneumatic controls and equipment.

Due to its transportable design, the compressor is suitable for use in both the private and commercial sectors.

The compressors MOBILBOY are piston compressors driven by an electric motor and connected to a compressed air storage tank; they are intended to be sold and operated in the EU region as well as in the geographical region of Europe.

Intended use also includes compliance with all the information in these instructions.

3.1 Reasonably foreseeable misuse

Any use beyond the intended use or use in a different way is considered misuse.

Possible misapplications can be:

- Installation of spare parts and use of accessories and equipment not approved by the manufacturer.
- Use of the compressor outside the performance limits specified in the chapter "Technical data".
- Use of the compressor without appropriate filtering in the food and medical sector, e.g. for filling breathing gas cylinders.
- Service work by untrained or unauthorised personnel.
- Use of the compressor in closed rooms without adequate ventilation.
- Non-observance of the information in these operating instructions or non-observance of the operating instructions for the compressed air tools used.
- Use of the compressor in areas where there are aggressive or flammable substances in the air (the piston compressor is not explosion-proof as standard).
- Operating the compressor without the protective devices provided.
- Failure to observe signs of wear and damage.

Misuse of the compressor can lead to dangerous situations.

Stürmer Maschinen GmbH accepts no liability for constructive and technical modifications to the compressor.

Claims of any kind for damage due to improper use are excluded.

3.2 Residual risks

Even if all safety instructions are observed and the compressor is used according to the instructions, there are still residual risks, which are listed below:


- Heat build-up on components can cause burns and other injuries.
- Hearing damage during prolonged work on the machine if hearing protection is defective.
- Danger from electric current if improper connection cables or mains plugs are used.
- Risk of injury and material damage due to parts flying off or tool attachments breaking off.

4 Technical Data

MOBILBOY AC	241/24	261/24
Maximum volume flow approx.	190 l/min	230 l/min
Filling capacity at 6 bar approx.	120 l/min	140 l/min
High pressure	8 bar	10 bar
Tank capacity	24 l	24 l
Cylinder/Levels	1	1
Speed min ⁻¹	2850	2850
Input power	1,3 kVa	1,5 kVa
Output power	1,1 kW	1,3 kW
Duty type	S1	S1
Weight	24 kg	29 kg
Dimensions (LxWxH) [mm]	600x290x615	600x290x625
Supply voltage	230 V	230 V
Fuse	7 A	10 A
Connecting cable length	1,8 m	1,8 m
Sound pressure level L _{WA}	96 dB(A)	96 dB(A)

MOBILBOY AC	301/50	421/50	421/100
Maximum volume flow	approx. 240 l/min	approx. 420 l/min	approx. 420 l/min
Filling capacity at 6 bar	approx. 150 l	approx. 250 l	approx. 250 l
High pressure	10 bar	10 bar	10 bar
Tank capacity	50 l	50 l	100 l
Cylinder/Levels	1	2	2
Speed min ⁻¹	2850	2850	2850
Input power	1,8 kVa	2,7 kVa	2,7 kVa
Output power	1,5 kW	2,2 kW	2,2 kW
Duty type	S1	S1	S1
Weight	36,5 kg	42 kg	56 kg
Dimensions (LxWxH) [mm]	870x385x690	870x385x700	1060x44x820
Supply voltage	230 V	230 V	230 V
Fuse	10 A	15 A	15 A
Connecting cable length	1,8 m	1,8 m	1,8 m
Sound pressure level L _{WA}	96 dB(A)	97 dB(A)	97 dB(A)

4.1 Type plate

Mobilboy 421/100 AC			
Art.-Nr. Item no.	2004406	Höchstdruck Maximum pressure	10 bar
Füllleistung Delivery volume	250 l/min	Schallpegel Noise	97 dB (A)
Behältervolumen Vessel capacity	100 l	Gewicht Weight	56 kg
Aufnahmeleistung Input power	2,7 kW	Serien-Nr. Serial no.	
Abgabeleistung Output power	2,2 kW	Baujahr Year of manufacture	
Netzanschluss Power connection	230 V / 50 Hz		



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Fig. 2: Type plate MOBILBOY421/100 AC

5 Transport, packaging, storage

5.1 Transport

Delivery

Check the compressor after delivery for visible transport damage. If the compressor shows damage, this must be immediately reported to the transport company or the dealer.

Check whether the compressor is complete and whether the parts included in the scope of delivery are available.

Transport

Improper transport is accident-prone and can cause damage or malfunctions for which we do not grant any liability or guarantee.

Transport the scope of delivery secured against shifting or tilting with a sufficiently dimensioned industrial truck to the installation site.



WARNING!

Severe or fatal injuries may occur if parts of the machine tumble or fall down from the forklift truck, pallet truck or from the transport vehicle. Follow the instructions and information on the transport box.

Note the total weight of the machine. The weight of the machine is indicated in the "Technical data" of the machine. When the machine is unpacked, the weight of the machine can also be read on the rating plate.

Only use transport devices and load suspension gear that can hold the total weight of the machine.



WARNING!

The use of unstable lifting and load suspension equipment that might break under load can cause severe injuries or even death. Check that the lifting and load suspension gear has sufficient load-bearing capacity and that it is in perfect condition.

Observe the accident prevention regulations issued by your Employers Liability Insurance Association or other competent supervisory authority, responsible for your company.

Fasten the loads properly.

General risks during internal transport



WARNING: DANGER OF TIPPING

The device may be lifted unsecured by a maximum of 2cm.

Employees must be outside the danger zone, the reach of loads.

Warn employees and, if necessary, advise employees of the hazard.

Devices may only be transported by authorized and qualified persons. Act responsibly during transport and always consider the consequences. Refrain from daring and risky actions.

Gradients and descents (e.g. driveways, ramps and the like) are particularly dangerous. If such passages are unavoidable, special caution is required.

Before starting the transport check the transport route for possible danger points, unevenness and disturbances as well as for sufficient strength and load capacity.

Danger points, unevenness and disturbance points must be inspected before transport. The removal of danger spots, disturbances and unevenness at the time of transport by other employees leads to considerable dangers.

Careful planning of internal transport is therefore essential.



NOTE!

During transport of the machine the oil may leak. Secure the machine accordingly and take precautions against possible environmental pollution.

The compressor may only be transported standing up and only with the motor switched off.

5.2 Packaging



Use protective gloves!

Take care not to bump any persons or objects during handling, even if the packaging is not particularly heavy. To lift it, reach into the slots in the box with your hands. Put on protective gloves and cut through the strapping of the box with scissors or pliers. Use pliers to remove the metal clips, if any. Open the upper tabs, carefully lift the compressor out and place it on the work surface.

For compressors with a tank of more than 25 litres, this should be done by two persons.

All packaging materials and packaging aids used for the compressor are recyclable and must always be sent for material recycling.

Cardboard packaging components must be shredded and sent to the waste paper collection.

The films are made of polyethylene (PE) and the padded parts of polystyrene (PS). These materials are to be handed in at a reusable material collection point or at the responsible disposal company.

5.3 Storage

Store the compressor thoroughly cleaned in a dry, clean and frost-free environment.

Do not store or transport the compressor unprotected outdoors or in a damp environment.

6 Assembly and setting up

6.1 Assembly



Use protective gloves!

The compressor is already pre-assembled in the delivery condition with the exception of some add-on parts.

Step 1: If necessary, first install the wheels and / or anti-vibration elements (Fig. 3).

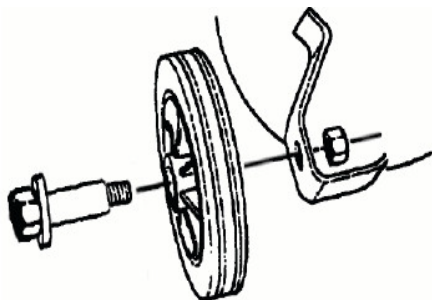


Fig. 3: Wheel assembly

Step 2: Remove the plug from the compressor head and install the intake filter if it is not already installed.

Assembly

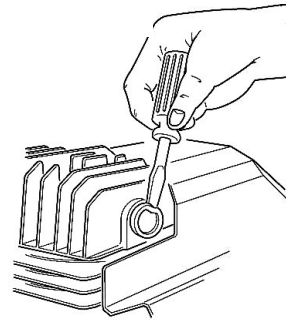


Fig. 4: Remove the compressor head cover for filter assembly

Step 1: Remove the plug from the compressor housing and insert the oil level test rod (if present). Check the oil level. The oil level must be between the maximum and minimum values of the dipstick.

Oil level

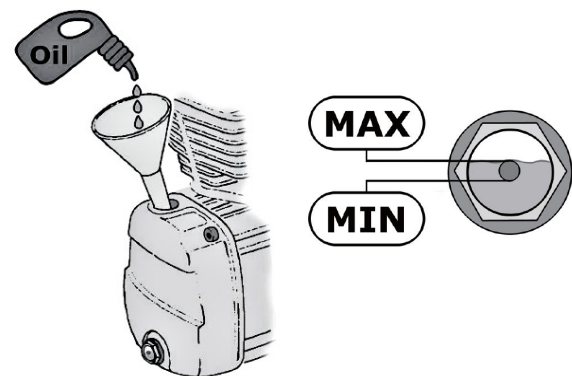


Fig. 5: Oil level indicator



NOTE!

For models without dipstick, check the oil level at the sight glass (Fig. 5). If the oil does not reach the mark, top it up. The oil of the first equipment is 15W-40.

Step 4: Make sure that the mains voltage matches the voltage indicated on the compressor type plate.



ATTENTION!

After the first 50 operating hours, the oil must be changed!

6.2 Setting up

Design the working space around the compressor according to local safety regulations. The working space for operation, maintenance and repair must not be restricted.

The installation site must have sufficient lighting. (see workplace regulations and DIN EN 12464).

Requirements for the site:

- Dry, dust-free,
- Cool, well ventilated, frost protected
- Flat, solid ground

Install the compressor in a location whose size allows the ambient temperature 40 ° C while the compressor is operating. If this is not possible, it is necessary to install one or more extraction systems which extract the warm air. Use the compressor only on firm, level ground.



NOTE!

Always place the compressor at least 50 cm away from any obstacle that could obstruct the air flow and thus the cooling.



ATTENTION!

- Secure the compressor against tipping over, rolling away and slipping.
- Ensure easy accessibility of controls and safety devices.
- Never use the compressor on a roof or in a raised position.

6.3 Electrical connection



DANGER!

Danger to life due to electric current!

There is an immediate danger of electrocution on contact with live components.
Only operate the compressor in a dry environment.



ATTENTION!

1. Operating the compressor on long cable reels or extensions can lead to start-up problems.
2. If the compressor is nevertheless operated on an extension, make sure it has the correct cross-section, at least 2.5 mm².
3. always unroll cable drums completely. Failure to do so may damage the cable drum or even cause a fire.
4. motors need more current for starting than in normal operation. This starting current can trip the normal B-line circuit breakers or normal fuses. To avoid this, the socket from which the compressor is to be operated should be protected by a C or K circuit breaker or a slow-blow fuse.
5. Do not operate the compressor above 5 degrees Celsius. Below this temperature the oil is too viscous. The compressor will run harder and the motor will consume more power.



WARNING!

Do not disconnect the power supply while the engine is running!

Pressure switch does not discharge →
Motor does not manage to start up against pressure.



ATTENTION!

When the power is switched on again

First set the pressure switch to the "OFF" position to relieve the pressure, then switch the power back on. Always switch the unit on and off at the pressure switch only.



NOTE!

Adjustment of the power supply to the guidelines valid in the respective country of use may only be carried out by a qualified electrician!

Triggering characteristics of a circuit breaker

The circuit breakers are provided with different rated currents and tripping characteristics depending on the area of application.

The miniature circuit breakers with B characteristic are used as standard line protection.

The miniature circuit breakers with C characteristic are used in circuits with increased switch-on peaks. This allows the trouble-free use of machines or devices whose motors have high starting currents.

The miniature circuit breakers with K-characteristic are used for protection in circuits with high inrush peaks (industrial applications and other special applications).

The correct choice of whether to use a circuit breaker with C or K characteristic or its installation must be made by a competent electrician on site!

Step 1: Check that the mains voltage corresponds to the voltage rating indicated on the rating plate and that the supply mains is protected by a magnetic heat contactor and has an earth connection.

Step 2: Use only extension cords with three-pin plugs and three-pin receptacles that accept the compressor plug.

Step 3: Make sure the ON/OFF switch is in the "0" or "OFF" position. Then insert the plug into the socket..

7 Description of device



Fig. 6: Description of device

- 01 ON/OFF-Switch (on the pressure switch)
- 02 Pressure reducer
- 03 Compressed air extraction connection behind pressure gauge, working pressure
- 04 Manometer vessel pressure
- 05 Check valve
- 06 Vessel
- 07 Condensate drain plug (drainage)
- 08 Oil drain plug
- 09 Safety valve
- 10 Dipstick / cap Oil filler neck
- 11 Motor protection switch (hidden)
- 12 Air intake filter (hidden)

7.1 Scope of delivery

- Manual for operation and maintenance
- Oil Dipstick
- Wheels, vibration absorbers, intake filter (if not already mounted)
- Technical data sheets

8 Commissioning



ATTENTION!

- The compressor may only be operated within the permissible temperature range of + 5 ° C to + 35 ° C!
- Do not overload the compressor! Operate the compressor only in the power range specified in the technical data.
- It is essential to avoid multiple switching on and off of the compressor at short notice, as this can damage the motor!



WARNING!

Danger!

There is a risk of injury to the operator and other persons if they do not adhere to the following rules.

- The compressor may only be operated by a trained and experienced person.
- Operating the compressor of children or juveniles unfamiliar with it is prohibited.
- The operator may not work while under the influence of alcohol, drugs or medication.
- The operator must not work when he is tired or suffering from concentration-impairing illnesses.
- The compressor may only be operated by one person. Other persons must keep away from the work area during operation.



NOTE!

Before commissioning, the following must be observed.

- The mains voltage must correspond to the voltage specifications on the rating plate.
- The ON / OFF switch must be set to "OFF".
- The safety devices as well as the protective covers must be functional.



ATTENTION!

- The connected air tools must be designed for the outlet pressure of the compressor or operated with pressure reducer.
- Use oil-containing compressed air only for tools that must be operated with oily compressed air.
- For the application of compressed air tools, which may only be operated with oil-free compressed air, an oil filter must be installed upstream.
- Never fill vehicle tires with oily compressed air.

The following personal protective equipment must be worn when working on the compressor:



The explanation of the pictograms can be found in chapter 2.4 "Personal protective equipment".

8.1 Switch on



Fig. 7: Control instruments

- 1 ON-/OFF-Switch
- 2 Pressure switch
- 3 Pressure regulator for output pressure
- 4 Quick coupling for compressed air connection
- 5 Pressure gauge working pressure
- 6 Manometer boiler pressure

Step 1: Check that the ON / OFF switch is OFF.

Step 2: Check the oil level.

Step 3: Connect the mains plug to the mains.

Step 4: Start the device with the ON / OFF switch located on the pressure switch.

Step 5: For the first time, let the compressor run for about 10 minutes with a built-in receptacle with the drain (Pos. 7, Fig. 6) open.

Step 6: Close the drain and check that the compressor is charging the tank and stops at P_{max} (maximum pressure indicated by the pressure gauge (Fig. 7)).

The ON / OFF switch releases the function of the pressure switch. The pressure switch switches the compressor on or off depending on the tank pressure reached. The compressor operates automatically, stops when the maximum pressure is reached and then restarts when the switch-on pressure is reached.

8.2 Adjustment of working pressure



ATTENTION!

The maximum pressure of the connected tool must not be exceeded.

The working pressure setting must be done with the tool connected and running in order to be able to set the actual required working pressure.

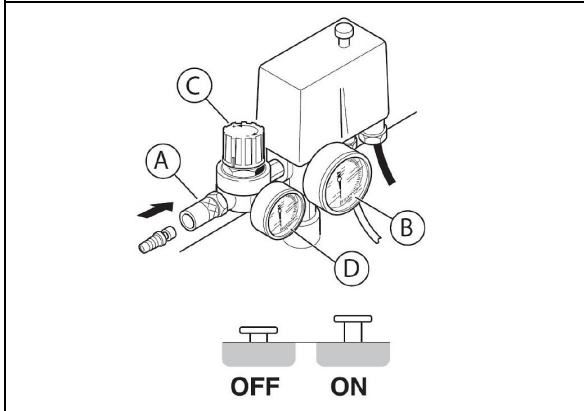


Fig. 8: Setting working pressure

The working pressure is adjusted by means of the pressure reducer (Pos. C, Fig. 8) (lift the rotating cap, set the desired pressure and push the turning cap back down and thereby fix it) and read off the manometer (Pos. D, Fig. 8). The removal takes place via clutch (Pos. A, Fig. 8) ..

It is recommended that the pressure be reset to zero after using the device. When using pneumatic tools, always check the optimum application pressure of the accessory.

If the motor does not turn on and off when using a pneumatic tool, but is running continuously, the capacity of the compressor may be too low. The pressure indicated on the pressure gauge corresponds to the pressure in the main tank. If the pressure in the main tank exceeds the preset maximum value, a safety valve is activated. For this reason, the switch or the safety valve must not be manipulated

8.3 Pressure switch



ATTENTION!

Always switch off the compressor by means of the ON / OFF switch before disconnecting it and always disconnect the compressor from the electrical power supply.

Before pressure adjustment, the pressure switch must be released. The pressure setting is only possible on the mounted pressure switch when the device is under pressure.

Due to thermal interaction (cold, warm) and vibrations of the compressor, it may happen that the setting of the pressure switch changes.

NEMA

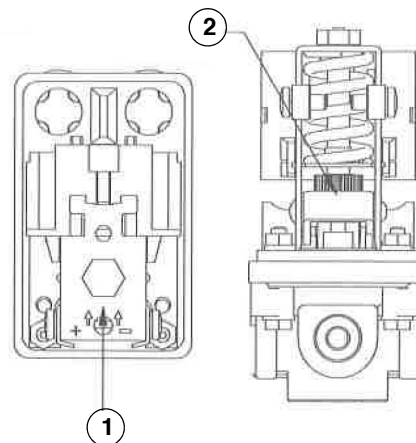


Fig. 9: Pressurr switch NEMA

- 1 Regulating screw
- 2 Regulating nut of the pressure difference

Pressure switch setting:

To increase the pressure, turn the regulating screw (pos. 1, fig. 15) on the top of the pressure switch clockwise. To decrease the pressure, turn it anticlockwise.

Setting the pressure difference (optional)

To increase the distance between cutting in and cutting out, turn the gear wheel under the spring (pos. 2, fig. 15) to the right with a screwdriver.

8.4 Switch off

Step 1: Switch off the compressor with the ON / OFF switch on the pressure switch.

Step 2: Place a container under the condensate drain valve. Open the condensate drain valve to drain the pressure vessel and remove the vessel pressure.



NOTE!

Never pull the plug out of the socket to switch off the compressor!

8.5 Motor protection



ATTENTION!

If the motor protection triggers, allow the compressor to cool completely (at least 20 minutes). Correct the cause of the motor shutdown before restarting.

If the motor protection switch trips a forced shutdown, leave the compressor in this state and wait approx. 20 minutes before restarting the compressor at the ON/OFF switch. If the circuit breaker trips again, turn the ON/OFF switch to OFF, disconnect the compressor from the power supply and contact an authorised service centre.

Possible reasons for the shutdown:

- Long connection cable,
- Coiled connection cable (for example on a cable reel),
- Poor power supply (too many parallel consumers)
- To cold ambient temperature
- Bad cooling
- Too low oil level at the compressor
- Long standstill before recommissioning

9 Maintenance, care and repair



Tips and recommendations

To ensure that the compressor is always in good operating condition, regular care and maintenance work must be carried out.



NOTE!

Observe the check intervals for pressure vessels (see chapter "Checking operational safety").



ATTENTION!

Before starting any maintenance work, switch off the compressor and allow it to cool completely.

- Completely drain the compressed air. The container and the lines must not be under pressure.
- All work on electrical and pneumatic systems may only be carried out by qualified personnel who have been trained for this purpose and are familiar with the associated dangers.
- There is a danger to life in case of contact with live components!
- Always disconnect the mains plug or set the main switch to "0" before starting cleaning and maintenance work.

After care, maintenance and repair work, check that all panels and guards are properly refitted to the compressor and that no tools are left inside or in the working area of the compressor.

In case of damaged guards, notify the dealer or customer service.

9.1 Maintenance and care



ATTENTION!

After care, maintenance and repair, check that all the panels and guards are correctly installed on the compressor and that there are no tools inside or in the compressor working area.

If the safety devices are damaged, contact your dealer or customer service.

After the first warm-up:

With the compressor warmed up, tighten the cap screws with a torque spanner (torque value see Fig. 18).

Daily:

Before starting work, check the compressed air lines for damage.

Once a week:

Step 1: Check all hose connections.

Step 2: Check if dust has accumulated inside the cladding. If necessary, change the place of operation.

Step 3: Check the oil level and top up with oil if necessary. Use only oils of the same type (The oil of the first equipment is 15W-40). Never exceed the max. Capacity. Drain the condensate.

Step 4: Drain the condensation by opening the valve located under the tank (7, Fig. 6 and Fig. 12). Close the valve again, as soon as only pure air, without condensed water emerges. Protective gloves

must be worn for this job. It is recommended to use a flat container to catch the condensation.

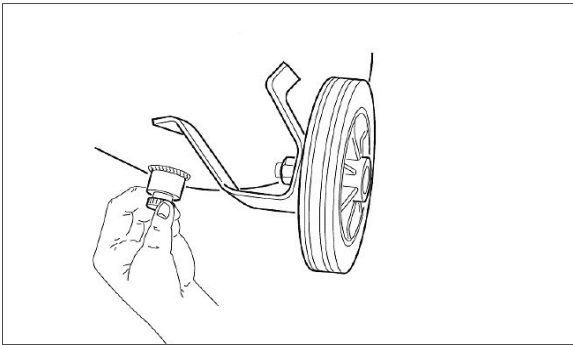


Fig. 10: Drainage

After 50 hours:

Step 1: Clean the suction filter.

Step 2: Remove (carefully) the dust and debris from the compressor with compressed air. Check the compressor for oil leaks.

Every 100 hours :

Step 1: Check if the emergency switch is still working.

Step 2: Thoroughly (carefully) remove the dust and debris with compressed air from the compressor.

Once a month (or more often if the device is heavily used and / or used in a dusty environment):

Step 1: Replace the suction filter (Pos. 12, Fig. 6).

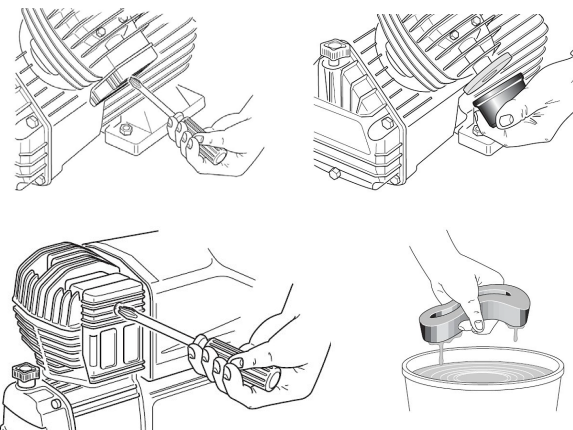


Fig. 11: Air filter replacement

ATTENTION!

Never operate the compressor without the air filter in operation!

Step 2: Thoroughly clean all components that have ribs or fins.

9.2 Oil change

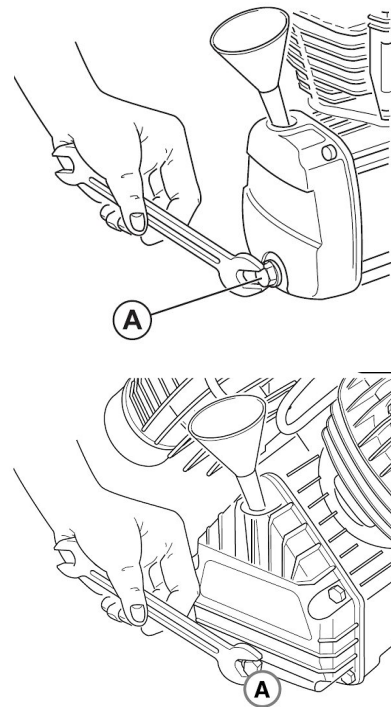


Fig. 12: Oil changes

It is recommended to change the oil after the first 50 hours of operation. After that, an oil change is required every 500 hours.

The compressor must be warm when doing this.

Step 1: Remove the oil filler plug or dipstick, unscrew the oil drain plug (Pos. A, Fig. 14) and collect the used oil in a suitable container.

Step 2: Screw the oil drain plug back in tightly and fill with new oil up to the maximum level. Replace the oil filler plug or dipstick.

NOTE!

The extracted oil must be disposed of separately. Information about this is provided by the lubricant manufacturer.

Oil of the initial equipment: Mineral oil 15W-40.

For filling up, the SAE 15W-40 motor oils are recommended. For example:

- SHELL Rimula D Extra 15W-40
- AGIP Eni i-SigmaUniversal 15W-40
- Mobil Agri Super 15W40

ATTENTION!

Never mix different types of oil together!

9.3 Functional test of the safety valve

The safety valve must be operated regularly to ensure that it functions properly when required.

Monthly check of the safety valve

Version A (safety valve with ring)

Open the safety valve (Fig. 15) by pulling the ring briefly outwards until compressed air escapes, and release it again (the pressure vessel must be under pressure).



Fig. 13: Safety valve, Version A

Version B (Safety valve with collar)

Open the safety valve (Fig. 16) by briefly pulling the clamp outwards until compressed air escapes and then releasing it again (the pressure vessel must be under pressure).

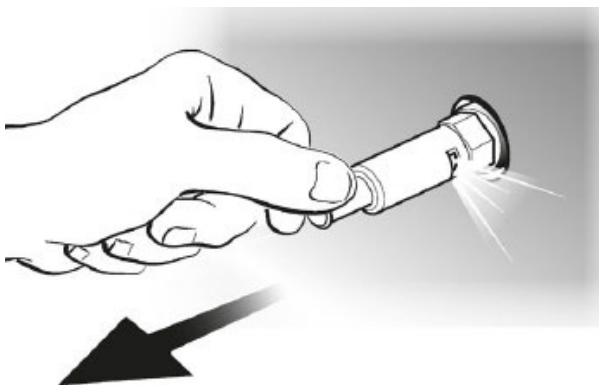


Fig. 14: Safety valve, Version B

Version C (Safety valve with ring nut, fig. 17)

Open the safety valve by turning the ring nut until compressed air escapes and then screw it back on (the pressure vessel must be under pressure).

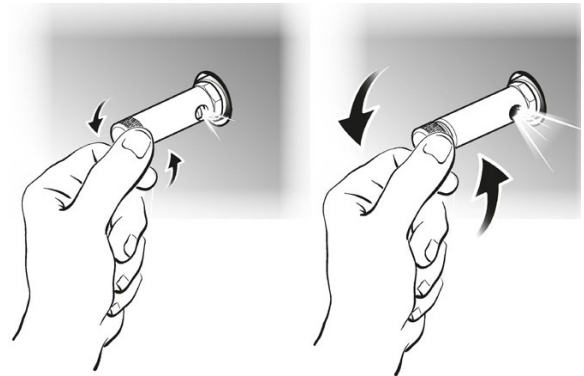


Fig. 15: Safety valve with ring nut

9.4 Repair



DANGER!

Maintenance work may only be carried out by a specialist workshop or by trained specialists. Maintenance work on the electrical equipment may only be carried out by electricians or under the supervision and direction of a qualified electrician.

The company Aircraft Kompressoren assumes no liability and warranty for damage and malfunction as a result of non-compliance with this manual. Use only proper and suitable tools, original spare parts or serial parts expressly approved by Aircraft Compressors for repairs.

Repairs under warranty may only be performed by technicians authorized by the manufacturer.

9.5 Torque

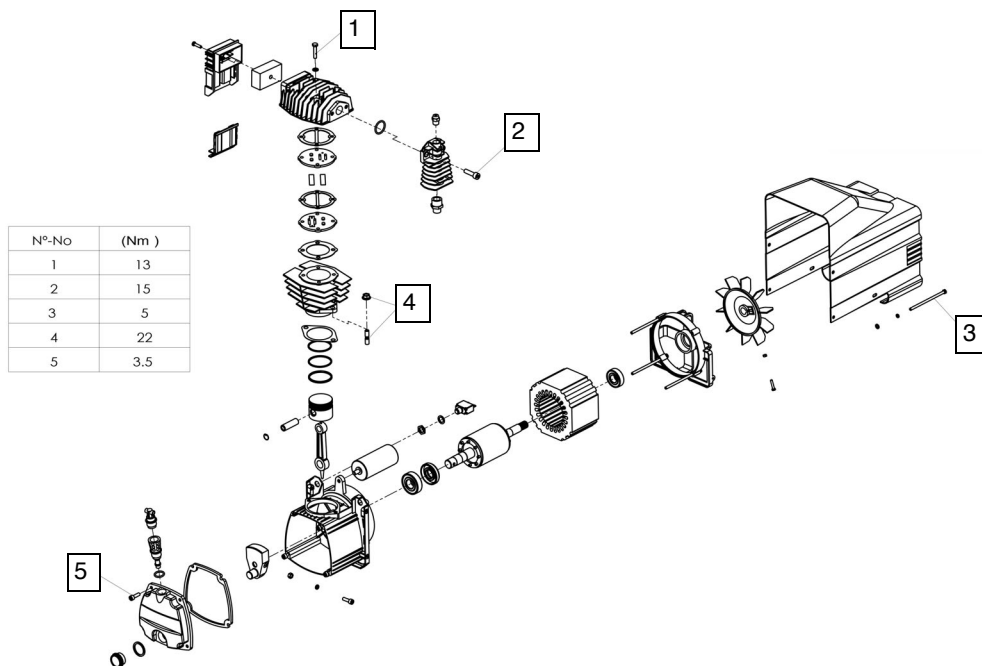


Fig. 16: Torque

10 Troubleshooting

Fault	Possible case	Solution
The pressure drops continuously.	Air leak, check all connections	Find the leak and fix it.
It builds up no pressure in the container.	Drain valve open	Close the tank drain valve.
The compressor does not switch off. The safety valve fades.	The pressure switch fails when stopping the engine. Defective pressure switch.	Contact a service technician.
No pressure builds up in the tank and the pump gets warmer than normal. In-take path is too low.	Head gasket of the compressor or valve plates defective.	Contact a service technician.
While the compressor is running, a leak occurs at the bottom of the compressor.	Failure of the pressure relief valve (located in the pressure switch)	Contact a service technician.
After the compressor is turned off, a leak occurs at the bottom of the compressor.	The check valve (on the tank) is leaking.	If necessary, dismantle and clean the valve insert
The compressor is loud with a metallic sound.	Bearing or loose parts problem	Turn off the compressor and contact a service technician.
The compressor sounds like it starts. (Motor makes buzzing noise.)	The trapped air pressure on the piston makes resistance to the start attempt.	Switch the unit off and on again with the help of the pressure switch. So that the delivery tube is vented.
The compressor sounds like it starts. (Motor makes buzzing noise.)	The capacitor is defective.	Turn off the compressor and contact a specialized service technician.
At a pressure of less than 10 bar, air escapes from the safety valve.	The safety valve is defective.	Replace the safety valve.

11 Disposal, recycling of old equipment

In the interests of the environment, care must be taken to ensure that all components of the machine are disposed of in the proper and approved way.

11.1 Decommission

Disused equipment must be taken out of service immediately in order to avoid later misuse and endangering the environment or people.

- Dispose of all environmentally hazardous fluids from the old device.
- If necessary, disassemble the machine into manageable and usable assemblies and components.

Supply the machine components and operating materials to the appropriate disposal channels.

Disposal via municipal collection points

Disposal of used electrical and electronic equipment (to be used in the countries of the European Union and other European countries with a separate collection system for this equipment).



The symbol on the product or its packaging indicates that this product is not to be treated as normal household waste, but must be returned to a collection point for the recycling of electrical and electronic equipment. By contributing to the correct disposal of this product, you protect the environment and the health of your fellow human beings. Environment and health are endangered by incorrect disposal. Material recycling helps to reduce the consumption of raw materials. For more information about recycling this product, contact your local community, municipal waste management company or the store where you purchased the product

11.2 Disposal of lubricants

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

12 Spare parts



DANGER!

Risk of injury through use wrong spare parts!

The use of incorrect or faulty replacement parts may cause danger to the operator and cause damage and malfunction.

- Only original spare parts from the manufacturer or replacement parts approved by the manufacturer must be used.
- In case of doubt, always contact the manufacturer.



Tips and recommendations

Using non-approved spare parts voids the manufacturer's warranty.

12.1 Spare parts ordering

The spare parts can be obtained from the dealer. Specify the following key data for inquiries or ordering spare parts:

- Device type
- Item number
- Position number
- Construction year
- Amount
- desired shipping method (post, freight, sea, air, express)
- Delivery address

Spare parts orders without above given information can not be considered. If the shipping method is missing, shipping will be at the discretion of the supplier.

Information on the device type, article number and year of manufacture can be found on the type plate, which is attached to the compressor.

Example

The pressure switch of the compressor MOBILBOY 241/24 AC must be ordered. The pressure switch has the number 22 in the spare part drawing 1.

When ordering spare parts, send a copy of the part drawing (1) with the identified part (push button) and the marked part number (22) to the dealer and provide the following information:

- Type of device: **MOBILBOY 241/24 AC**
- Item number: **2004242**
- Drawing number: **1**
- Position number: **22**

12.2 Spare parts drawings MOBILBOY 241/24 AC

The following drawing should help you in the event of service to identify necessary spare parts..

Spare parts drawing 1 MOBILBOY 241/24 AC

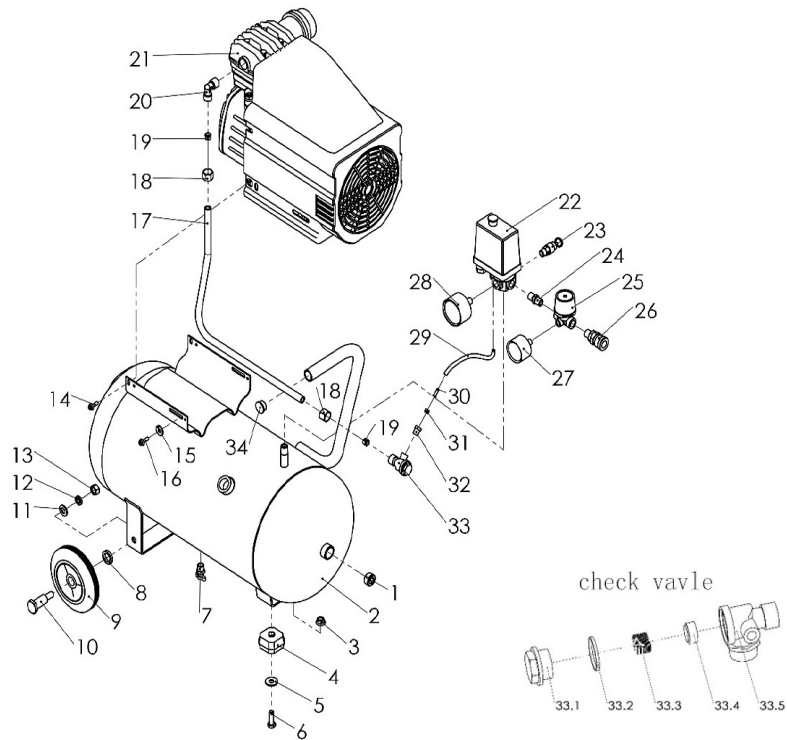


Fig. 17: MOBILBOY 241/24 AC

Spare parts drawing 2: Compressor MOBILBOY 241/24 AC

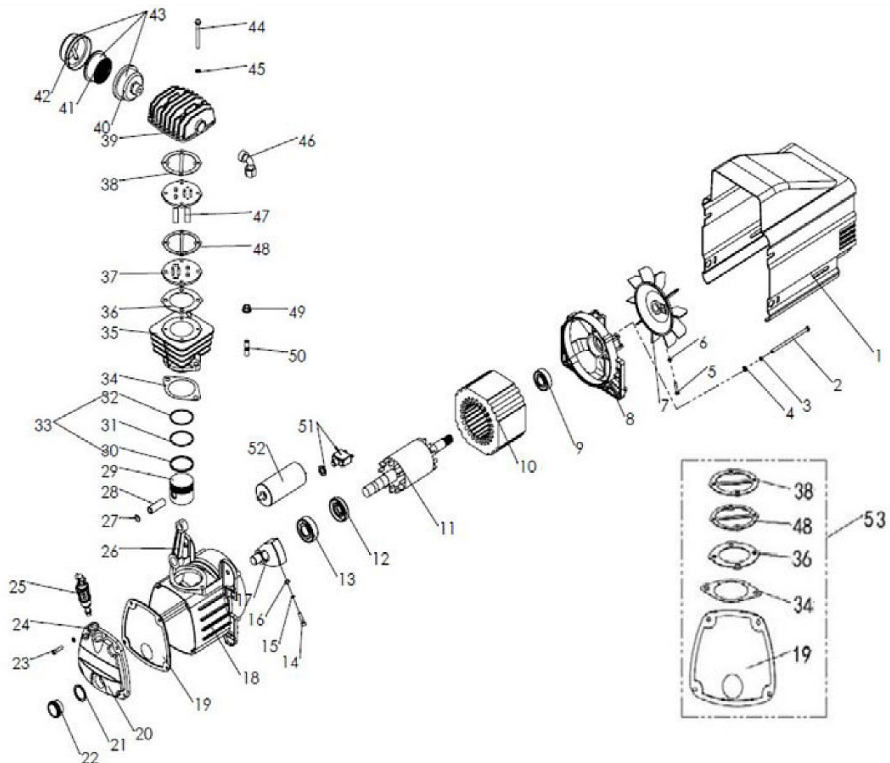


Fig. 18: Compressor MOBILBOY 241/24 AC

12.3 Spare parts drawings MOBILBOY 261/24 AC

Spare parts drawings 1 MOBILBOY 261/24 AC

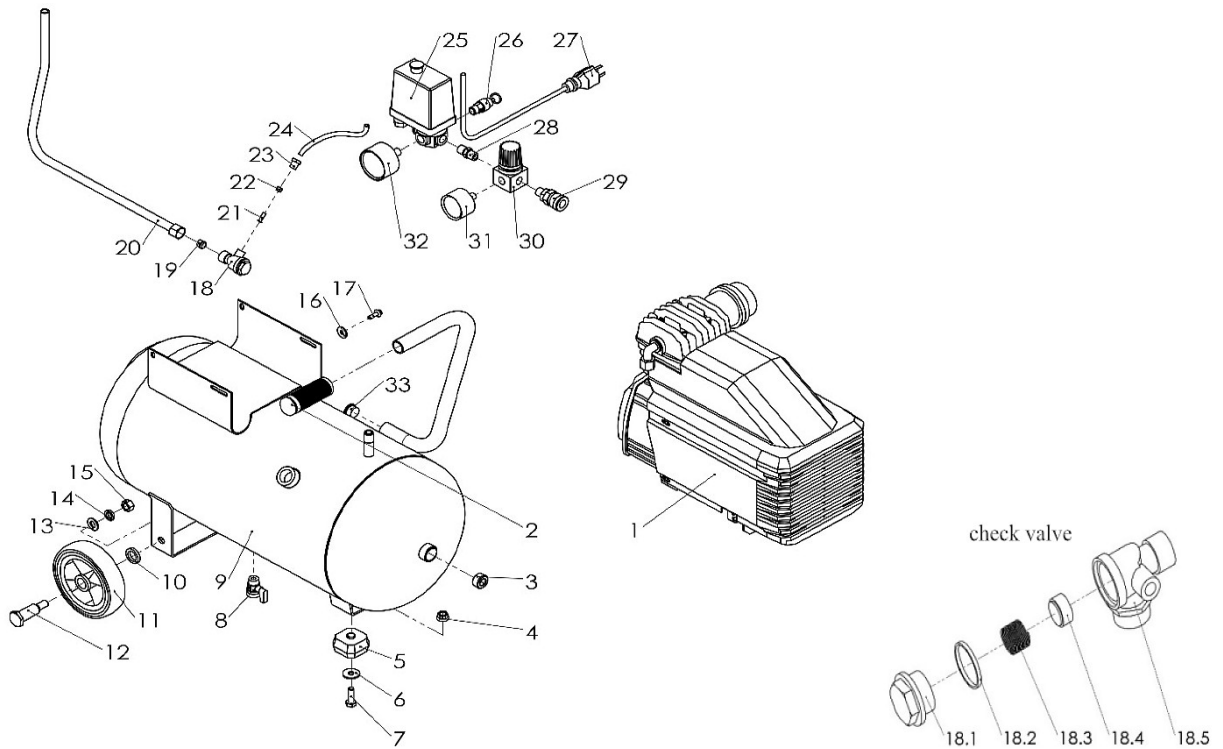


Fig. 19: Spare parts drawing 1 MOBILBOY 261/24 AC

Spare parts drawing 2: Compressor MOBILBOY 261/24 AC

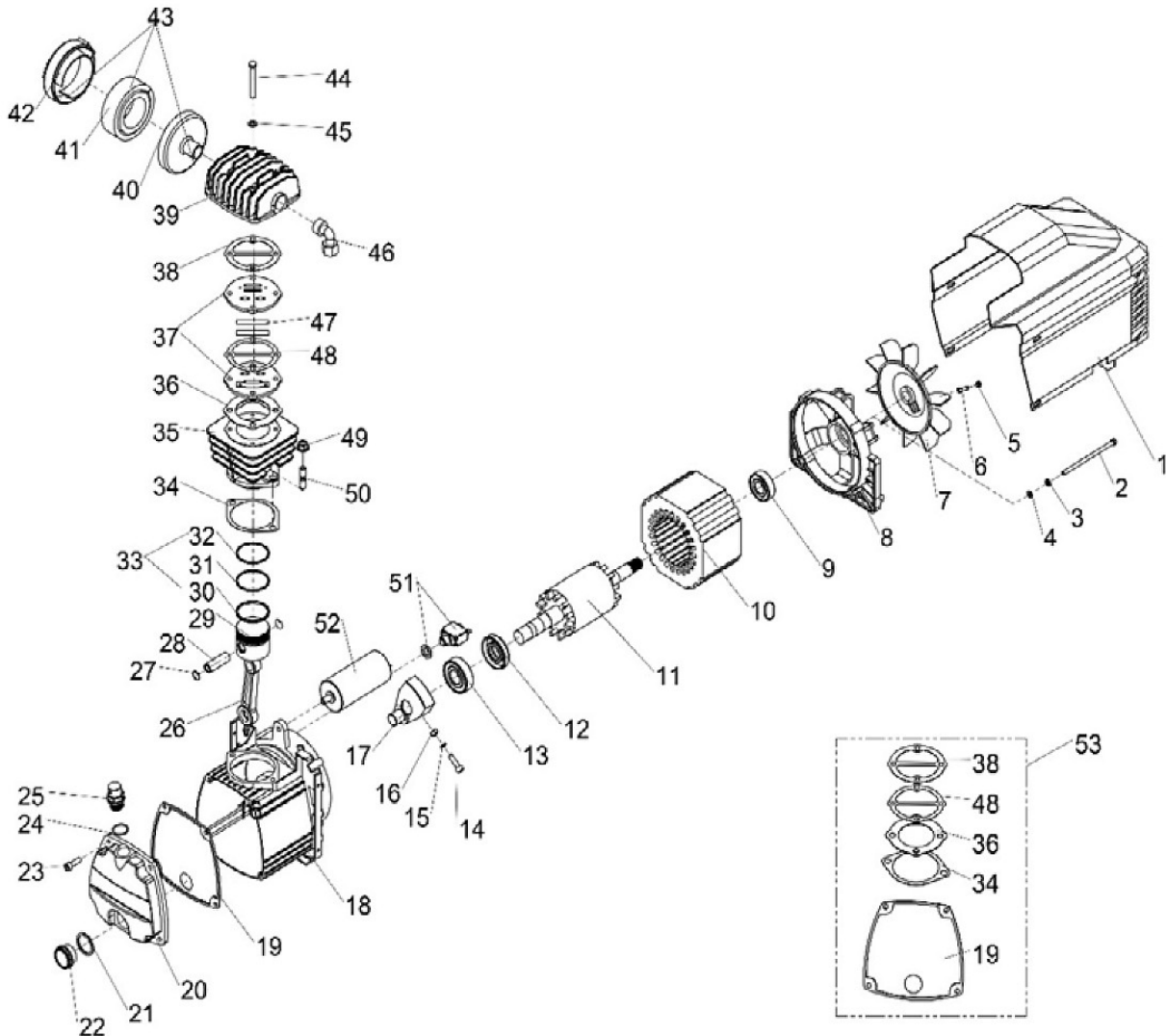


Fig. 20: Spare parts drawing 2 - Compressor MOBILBOY AC 261/24 AC

12.4 Spare parts drawings MOBILBOY 301/50 AC

Spare parts drawing 1 MOBILBOY 301/50 AC

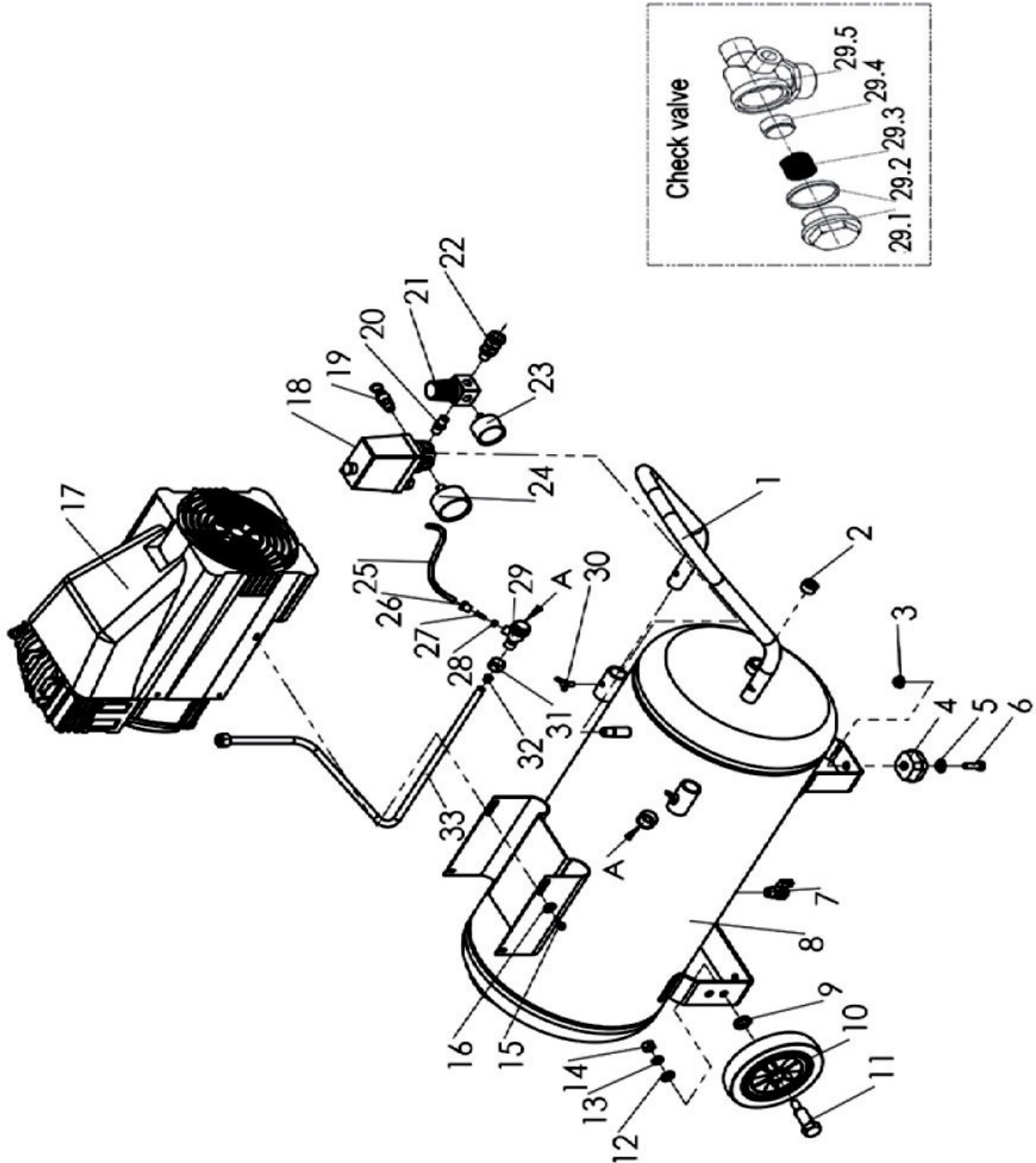


Fig. 21: Spare parts drawing 1 MOBILBOY 301/50 AC

Spare parts drawing 2: Compressor MOBILBOY 301/50 AC

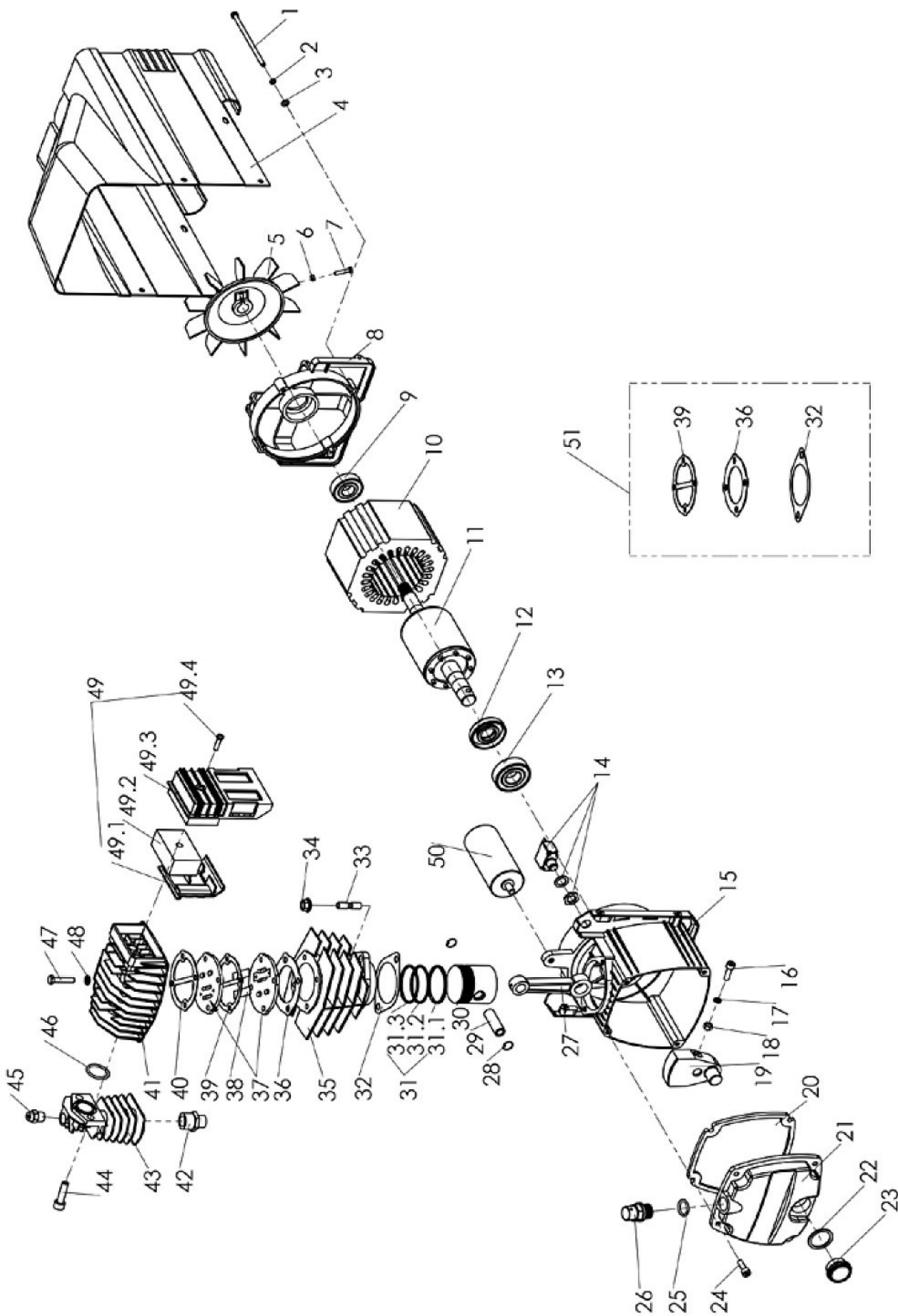


Fig. 22: Spare parts drawing 2 - Compressor MOBILBOY 301/50 AC

12.5 Spare parts drawings MOBILBOY 421/50 AC

Spare parts drawing 1: MOBILBOY 421/50 AC

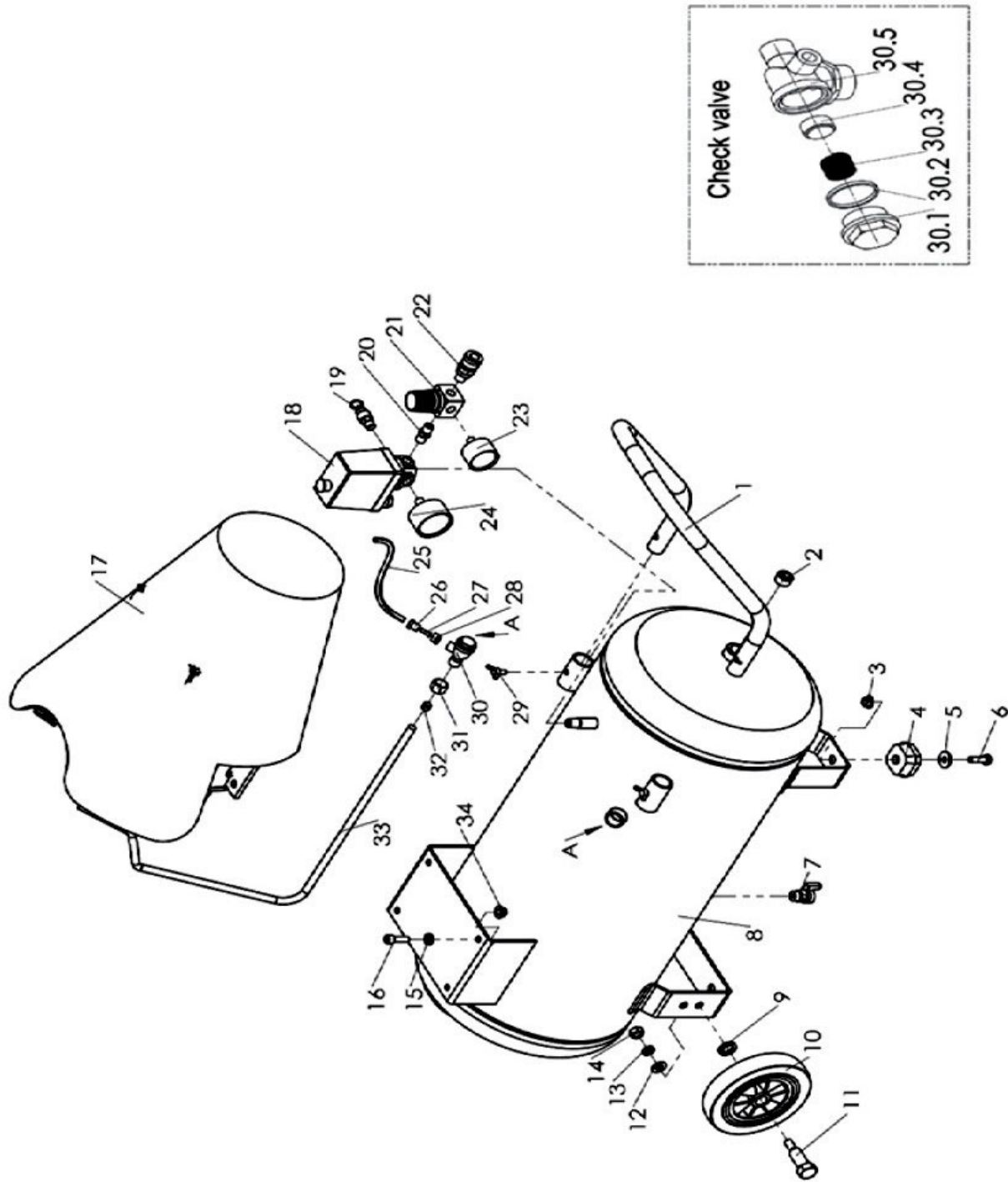


Fig. 23: Spare parts drawing 1 MOBILBOY 421/50 AC

Spare parts drawing 2: Compressor MOBILBOY 421/50 AC

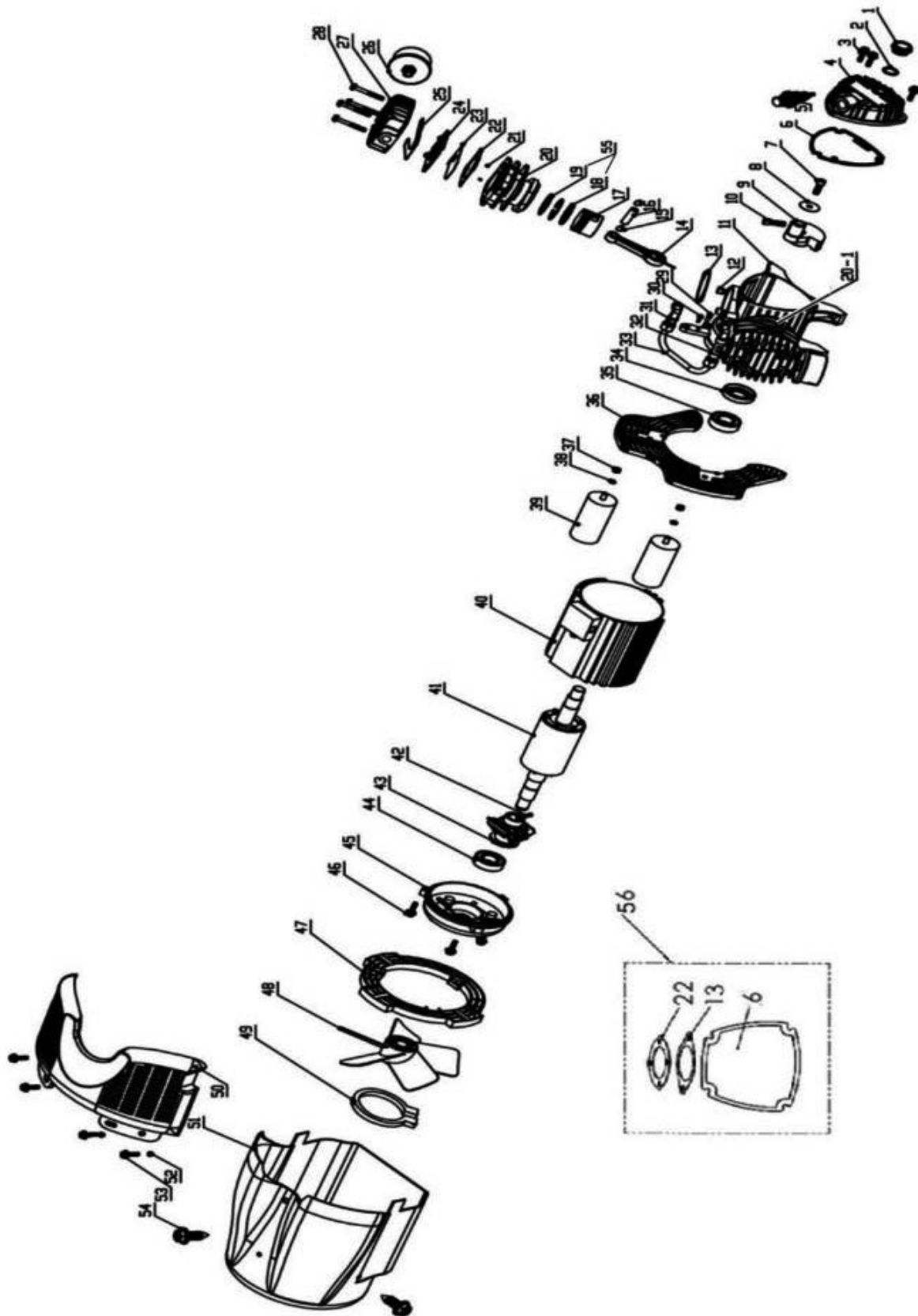


Fig. 24: Spare parts drawing 2 - Compressor MOBILBOY 421/50 AC

12.6 Spare parts drawing MOBILBOY 421/100 AC

Spare parts drawing 1: MOBILBOY 421/100 AC

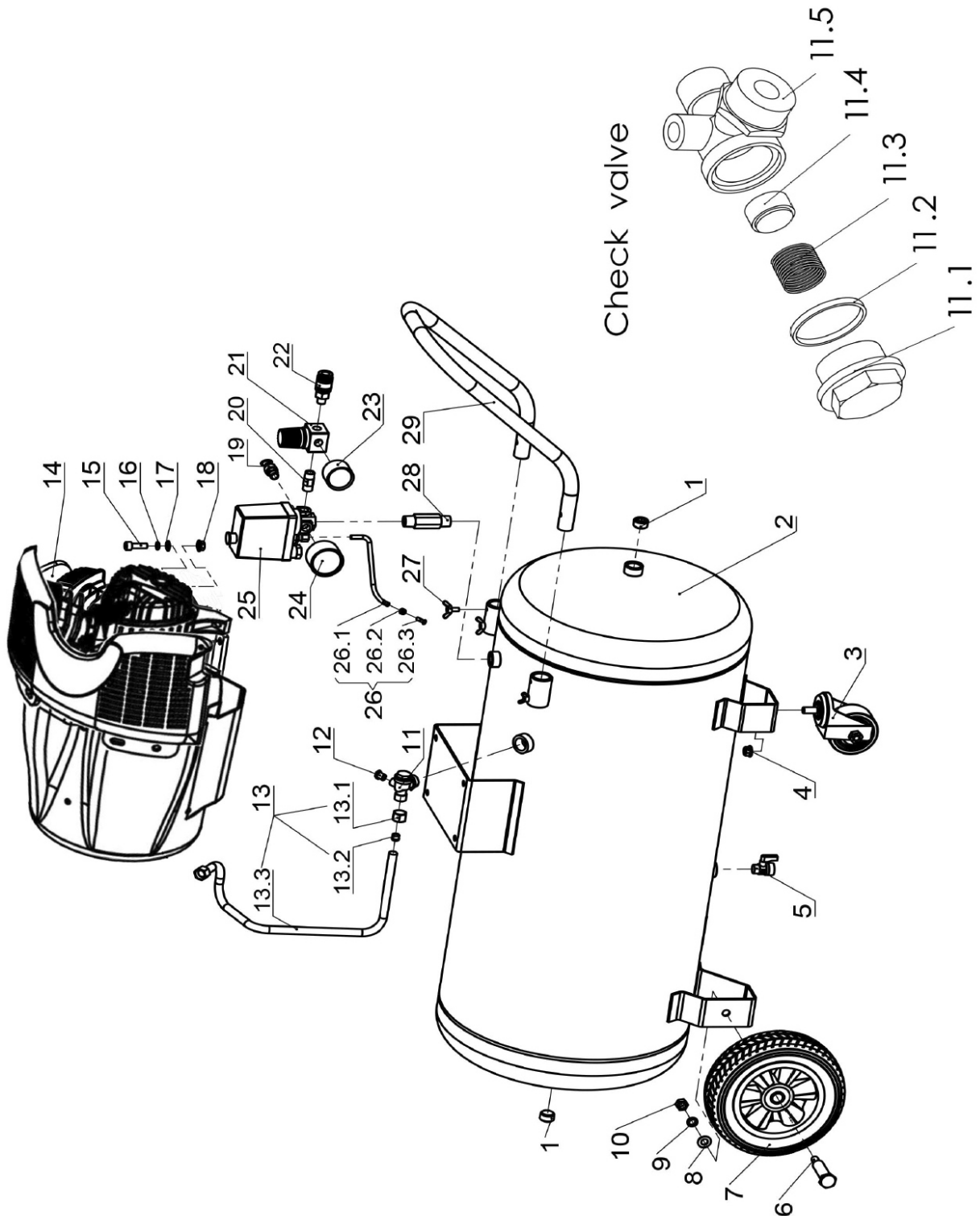


Fig. 25: Spare parts drawing 1: MOBILBOY 421/100 AC

Spare parts drawing 2: Compressor MOBILBOY 421/100 AC

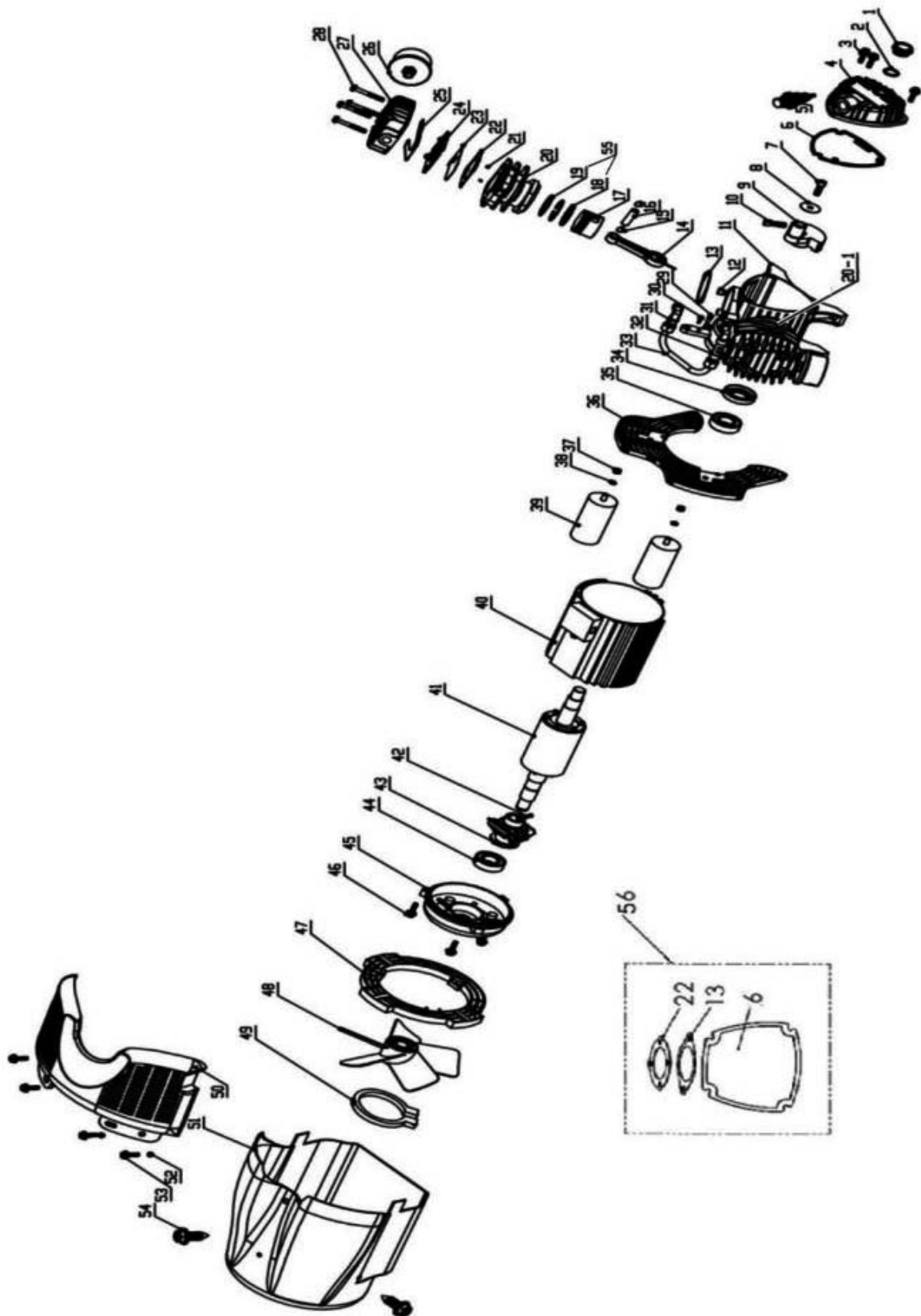
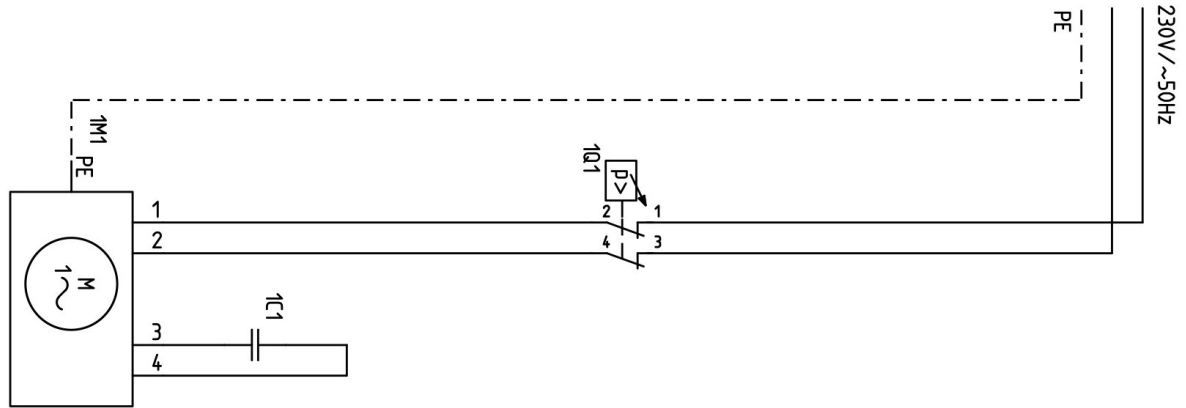


Fig. 26: Spare parts drawing 2: Compressor MOBILBOY 421/100 AC

13 Circuit diagrams MOBILBOY AC Series

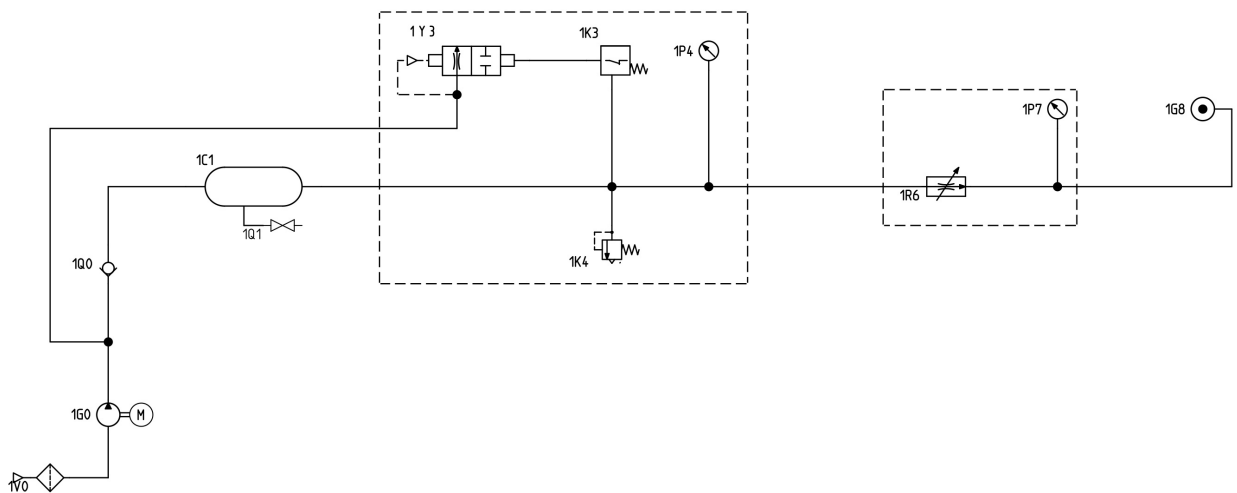
Electrical circuit diagram



- 1C1** Capacitor
- 1M1** Drive motor 2,7 kW | 230 V | 2850 rpm
- 1Q1** Pressure switch 16A | 250 V
- 1F1** Motor protection switch 16A | 250 VAC

Fig. 27: Electrical circuit diagram MOBILBOY AC Series

Pneumatic circuit diagram



- | | |
|------------------------------------|--|
| 1Q0 Check valve | 1K3 Pressure switch |
| 1V0 Air filter | 1P4 Vessel pressure gauge |
| 1G0 Compressor | 1K4 Safety valve |
| 1C1 Pressure vessel | 1R6 Pressure reducer |
| 1Q1 Condensate drain valve | 1P7 Pressure gauge Working pressure |
| 1Y3 Relief valve compressor | 1G8 Compressed air tapping connection |

Fig. 28: Pneumatic circuit diagram MOBILBOY AC Series

14 EC Declaration of Conformity

According to Machinery Directive 2006/42/EG Annex II 1.A

Manufacturer: AIRCRAFT Kompressorenbau und Maschinenhandel GmbH
 Gewerbestraße Ost 6
 A-4921 Hohenzell

hereby declares that the following product (below)

Product groupe: AIRCRAFT® Compressed Air Technology

Type of machine: Compressor

Designation of the machine*:	<input type="checkbox"/> MOBILBOY 241/24 AC	Item number*:	<input type="checkbox"/> 2004242
	<input type="checkbox"/> MOBILBOY 261/24 AC		<input type="checkbox"/> 2004262
	<input type="checkbox"/> MOBILBOY 301/50 AC		<input type="checkbox"/> 2004304
	<input type="checkbox"/> MOBILBOY 421/50 AC		<input type="checkbox"/> 2004404
	<input type="checkbox"/> MOBILBOY 421/100 AC		<input type="checkbox"/> 2004406

Serial number*: _____

Year of manufacture*: 20_____

*Fill in these fields according to the information on the type plate

complies with the relevant fundamental health and safety requirements of the Machinery Directive 2006/42/EC due to its design and construction, as well as in the version placed on the market by us.

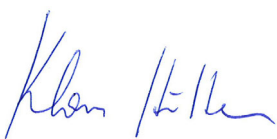
With regard to pressure hazards, the relevant requirements of Directive 2014/68/EU are complied with.

Applicable EU Directives: 2014/30/EU EMC Directive
 2012/19/EU WEEE Directive

The following harmonized standards were applied:

- | | |
|------------------------------|--|
| DIN EN 1012-1:2011-02 | Compressors and Vacuum Pumps - Safety Requirements- Part 1: Compressors |
| ISO 12100:2011-03 | Safety of machinery - General principles for design - Risk assessment and risk reduction. |
| DIN EN 60335-1:2020-08 | Household and similar electrical appliances -Safety - Part 1: General requirements. |
| EN 60335-2-34:2014-10 | Domestic and similar electrical appliances - Part 2-34: Particular requirements for engine compressors. |
| DIN EN IEC 61000-6-1:2019-11 | Electromagnetic compatibility (EMC) - Part 6-1: Generic standards Protection for commercial and industrial environments. |
| DIN EN 61000-6-3:2022-06 | Electromagnetic Compatibility (EMC) - Part 6-3: Generic Standards - Emission standard for residential, commercial and industrial environments. |
| DIN EN IEC 61000-3-2:2019-12 | Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase) |
| DIN EN 61000-3-3:2023-02 | Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection |

Responsible for documentation: Klaus Hütter, Gewerbestraße Ost 6, A-4921 Hohenzell
 Hohenzell, 07.03.2023 Hallstadt, 07.03.2023



Klaus Hütter
 Manager



Kilian Stürmer
 Manager



Notes

