

# Operating Instructions

## — Piston Compressor

— AIRCLASSIC 351/50/10; 351/100/10

— AIRCLASSIC 451/50/10; 451/100/10

— AIRCLASSIC 503/50/10; 503/100/10

— AIRCLASSIC 503/200/10



AIRCLASSIC 351/50/10



AIRCLASSIC 503/200/10

AIRCLASSIC

## Imprint

### Product identification

Piston Compressor	Item number
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AIRCLASSIC 451/50/10	2034045
AIRCLASSIC 451/100/10	2034046
AIRCLASSIC 503/50/10	2034050
AIRCLASSIC 503/100/10	2034051
AIRCLASSIC 503/200/10	2034052

### Manufacturer

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

Phone: 0043 (0) 7752 70 929 - 0  
Fax: 0043 (0) 7752 70 929 - 99  
E-Mail: info@aircraft.at  
Internet: www.aircraft.at

### Sales Germany

AIRCRAFT - Stürmer Maschinen GmbH  
Dr.-Robert-Pfleger-Straße 26  
D-96103 Hallstadt/Bamberg  
Fax: 0049 (0) 951 - 96555-55  
E-Mail: info@aircraft-kompressoren.de  
Internet: www.aircraft-kompressoren.com

### Indications regarding the operating instructions

#### Genuine operating instructions

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## 1 Introduction

You have made a good choice by purchasing the compressor made by AIRCRAFT.

**Please thoroughly read the operating instructions before commissioning.**

It informs you about the proper commissioning, the intended use as well as the safe and efficient operation and maintenance of your compressor.

The operating instructions are part of the compressor. Always keep it at the place of use of the compressor. Furthermore, the local accident prevention regulations and the general safety notes are applicable for the field of application of the compressor.

The illustrations in these operating instructions serve the general comprehension and may deviate from the actual type.

### 1.1 Copyright

The contents of these instructions are copyright. Their application is admissible in the frame of the compressor utilisation. An application beyond the described application is not allowed without written approval of the manufacturer.

For the protection of our products, we shall register trademark, patent and design rights, as this is possible in individual cases. We strongly oppose 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.

#### **Austria:**

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

Phone: 0043 (0) 7752 70 929-0  
Fax: 0043 (0) 7752 70 929-99

Email: info@aircraft.at  
Internet: www.aircraft.at

#### **Germany:**

Stürmer Maschinen GmbH  
Dr.-Robert-Pfleger-Str. 26  
D-96103 Hallstadt

#### **Repair-Service:**

Fax: 0049 (0) 951 96555-111  
Email: service@stuermer-maschinen.de  
Internet: www.aircraft-kompressoren.com

#### **Spare parts ordering:**

Fax: 0049 (0) 951 96555-119  
Email: ersatzteile@stuermer-maschinen.de

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 untrained 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

Safety instructions are indicated by symbols in these operating instructions. The safety instructions are initiated by signal words that express the extent of the hazard.



#### **DANGER!**

This combination of symbol and signal word indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



#### **WARNING!**

This combination of symbol and signal word indicates a potentially hazardous situation which, if not avoided, will result in death or serious injury.



#### **CAUTION!**

This combination of symbol and signal word indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



#### **ATTENTION!**

This combination of symbol and signal word indicates a potentially hazardous situation which, if not avoided, could result in material and environmental damage.



#### **NOTE!**

This combination of symbol and signal word indicates a potentially hazardous situation which, if not avoided, could result in material and environmental damage.

### Tips and recommendations



#### **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 dangerous situations, the safety instructions in this manual must be observed.

## 2.2 Responsibility of the operator

### Operator

The operator is the person who operates the compressor himself for commercial or economic purposes or leaves it to a third party for use or application and bears legal product responsibility during operation for the protection of the user, the personnel or third parties.

### Operator obligations

If the compressor is used in the commercial sector, the operator of the compressor is subject to the legal obligations to work safety. For this reason, the safety instructions in this operating manual and the safety, accident prevention and environmental protection regulations applicable to the area of use of the compressor must be observed. The following applies in particular:

- The operator must inform himself about the applicable occupational health and safety regulations and, in a risk assessment, determine additional hazards that result from the special working conditions at the place of use of the compressor. He must implement these in the form of operating instructions for the operation of the compressor.
- The operator must, during the entire period of use of the compressor, check that the operating instructions he has prepared comply with the current state of the regulations and, if necessary, adjust them.
- The operator must clearly regulate and determine the responsibilities for installation, operation, troubleshooting, maintenance and cleaning.
- The operator must ensure that all persons who handle the compressor have read and understood this manual. In addition, he must train the staff at regular intervals and inform them about the dangers.
- The operator must provide the personnel with the necessary protective equipment and bind the wearing of the required protective equipment.

Furthermore, the operator is responsible for ensuring that the compressor is always in perfect technical condition. Therefore, the following applies:

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

## 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 conception and must not be used for purposes other than those intended by the manufacturer.
- The compressor must not be operated in rainy or humid or wet conditions.
- Never operate the compressor near flammable and explosive materials.
- Do not use the compressor without the safety devices attached. Never remove the safety devices mounted 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 the moving parts.
- **Protect yourself from thermal injuries!**
- Keep children and persons not familiar with the compressor away from the 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 power 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 malfunctions that impair safety.
- Before each use, make sure that no parts of the compressor are damaged. Damaged parts must be replaced immediately to prevent 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 any maintenance work, let the compressor 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 <math>\leq 200</math>	Qualified person
	with type examination certificate PS xV <math>\leq 1000</math>	Qualified person
	PS xV >math>\geq 200</math>	Approved inspection agency
Exterior inspection **	Every / Every 2nd year	Qualified person
Internal inspection **	Every 5 Years at PS xV <math>\leq 1000</math>	Qualified person
	*Every 5 Years at PS xV >math>\geq 1000</math>	Approved inspection agency
Strength test **	Every 10 Years PS xV <math>\leq 1000</math>	Qualified person
	*Every 10 Years PS xV >math>\geq 1000</math>	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 malfunctions and property 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 labels on the compressor must be followed under all circumstances. If the safety labels are faded or damaged during the service life of the machine, new labels must be attached immediately. If the labels are not immediately visible and understandable at first view, the machine must be taken out of operation until the new labels are attached:



Fig. 1: Safety symbols - 1: Mandatory symbols; 2: Warning symbols

## 2.8 Safety devices

### Safety valve

Depending on the model, two different versions of safety valves can be installed..

#### Version A (Safety valve with ring)



Fig. 2: Safety valve, Version A

#### Version B (Safety valve with collar)

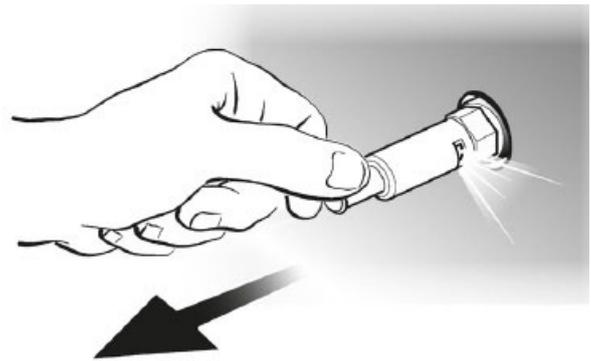


Fig. 3: Safety valve, Version B

The safety valve is located on the pressure switch.

It is set to the maximum permissible pressure in the pressure vessel.

If the maximum permissible pressure is exceeded, the safety valve opens automatically and releases air until the pressure is back within the permissible range.

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



**DANGER!**

The manipulation, blocking or adjustment of the safety valve is strictly prohibited!  
There is a risk of serious or fatal injuries!



**DANGER!**

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

#### Pressure switch

The compressor uses an air pressure switch to control the motor. When the pressure in the air storage tank rises to the maximum rated pressure, the air pressure switch automatically cuts off to cut off power and stop the air compressor, and when the pressure in the storage tank drops below the minimum rated pressure, the air pressure switch automatically closes and restarts the motor to drive the compressor.

### 3 Intended Use

The compressor is used exclusively to generate compressed air and to operate pneumatic tools.

It is not intended for commercial use.

- The compressor may only aspirate and compress clean, dust-free, dry and uncontaminated ambient air.
- The compressor may only be operated within the specified capacity limits.
- Before using air tools, read their operating instructions.
- Observe the information in these operating instructions

Any use going beyond the intended use or other use is considered misuse.

#### Misuse:

- The ambient air of the compressor must not contain any aggressive or flammable substances.
- The compressor must not be used in the food and medical sector, e.g. for filling breathing gas cylinders.
- Compressed air and pneumatic tools must never be directed at people or animals.



#### DANGER!

The piston compressor is not explosion-proof as standard and must not be operated in Ex areas!



#### WARNING!

##### Danger in case of misuse!

Misuse of the compressor can lead to dangerous situations.

- Only operate the compressor in the power range specified in the technical data.
- Never bypass or override the safety devices.
- Only operate the compressor in a technically perfect condition.



#### NOTE!

The improper use of the compressors, unauthorized modifications or changes to the compressors and the disregard of safety regulations or the operating instructions exclude liability of the manufacturer for resulting damage to persons or objects and cause the warranty to lapse!

AIRCLASSIC compressors are piston compressors with an attached compressed air storage tank, which are driven by an electric motor. They are intended for sale and operation in the EU and geographical European area.

### 4 Technical Data

AIRCLASSIC	351/50/10	351/100/10
Suction capacity	approx. 322 l/min	
Filling capacity	at 6 bar approx. 193 l/min	
Maximum pressure	10 bar	10 bar
Pressure vessel capacity	50 l	100 l
Number of cylinders/compressor stages	2/1	2/1
Compressor speed	1500 min <sup>-1</sup>	1500 min <sup>-1</sup>
Drive transmission	Belt	
Weight approx.	55 kg	64 kg
Dimensions (LxWxH) [mm]	870x380x700	1055x440x825
Supply voltage / Mains frequency	230 V / ~ 50Hz	
Phase(s)/ Current type	1 / AC	1 / AC
Motor speed	2850 min <sup>-1</sup>	2850 min <sup>-1</sup>
Input power	2,2 kVA	2,2 kVA
Output power	1,8 kW	1,8 kW
Filter	plastic	
Drive motor: Protection class Duty type	IP54 S1	IP54 S1
Sound pressure level L <sub>WA</sub>	97 dB(A)	97 dB(A)

AIRCLASSIC	451/50/10	451/100/10
Suction capacity	approx. 418 l/min	
Filling capacity	at 6 bar approx. 250 l/min	
Maximum pressure	10 bar	10 bar
Pressure vessel capacity	50 l	100 l
Number of cylinders/compressor stages	2/1	2/1
Compressor speed	1086 min <sup>-1</sup>	1086 min <sup>-1</sup>
Drive transmission	Belt	
Weight approx.	60 kg	66 kg

AIRCLASSIC	451/50/10	451/100/10
Dimensions (LxWxH) [mm]	870x380x760	1055x440x880
Supply voltage / Mains frequency	230 V / ~ 50Hz	
Phase(s)/Current type	1 / AC	1 / AC
Motor speed	2850 min <sup>-1</sup>	2850 min <sup>-1</sup>
Input power	2,8 kVA	2,8 kVA
Output power	2,2 kW	2,2 kW
Filter	plastic	
<b>Drive motor:</b> Protection class Duty type	IP54 S1	IP54 S1
Sound pressure level L <sub>WA</sub>	96 dB(A)	96 dB(A)

AIRCLASSIC	503/50/10	503/100/10
Suction capacity	approx. 481 l/min	
Filling capacity	at 6 bar approx. 288 l/min	
Maximum pressure	10 bar	10 bar
Pressure vessel capacity	50 l	100 l
Number of cylinders/compressor stages	2/1	2/1
Compressor speed	1250 min <sup>-1</sup>	1250 min <sup>-1</sup>
Drive transmission	Belt	
Weight approx.	60kg	66 kg
Dimensions (LxWxH) [mm]	870x380x760	1055x440x880
Supply voltage / Mains frequency	400 V / ~ 50Hz	
Phase(s)/Current type	3 / AC	3 / AC
Motor speed	2850 min <sup>-1</sup>	2850 min <sup>-1</sup>
Input power	3,0 kW	3,0 kW
Output power	2,3 kW	2,3 kW
Filter	plastic	
<b>Drive motor:</b> Protection class Duty type	IP54 S1	IP54 S1
Sound pressure level L <sub>WA</sub>	96 dB(A)	96 dB(A)

AIRCLASSIC	503/200/10
Suction capacity	approx. 481 l/min
Filling capacity	at 6 bar approx. 288 l/min
Maximum pressure	10 bar
Pressure vessel capacity	200 l
Number of cylinders/compressor stages	2/1
Compressor speed	1250
Drive transmission	Belt
Weight approx.	105 kg
Dimensions (LxWxH) [mm]	1405x490x970
Supply voltage / Mains frequency	400 V / ~ 50Hz
Phase(s)/Current type	3 / AC
Motor speed	2850 min <sup>-1</sup>
Input power	3,0 kW
Output power	2,3 kW
Filter	plastic
<b>Drive motor:</b> Protection class Duty type	IP54 S1
Sound pressure level L <sub>WA</sub>	96 dB(A)

#### 4.1 Type plate

Kolbenkompressor Piston compressor		CE	
Typ Type	Airclassic 351/50/10	Serien-Nr. Serial no.	
Artikel-Nr. Item no.	2034035	Baujahr Year of manufacture	
Tankinhalt Tank capacity	50 l	Netzanschluss Power connection	230 V / 50 Hz
Füllleistung Filling capacity	193 l/min	Ansaugleistung Air volume flow intake	322 l/min
Gewicht Weight	55 kg	Schalleistungspegel Sound power level	97 dB
Abgabeleistung Output power	1,8 kW	Aufnahmeleistung Input power	2,2 kW
 www.aircraft.at		Aircraft Kompressorenbau GmbH Gewerbestr. Ost 6, 4921 Hohenzell Österreich / Austria	

Fig. 4: Type plate AIRCLASSIC 351/50/10

## 5 Transport, Packaging, Storage

### 5.1 Transport

#### Delivery

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

Check that the compressor is complete and that the supplied parts are present.

#### 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

### 5.2 Packaging



#### Wear protective gloves!

Be careful not to bump into people or things when handling, even if the packaging is not particularly heavy. Grasp with your hands in the slots in the box to lift. Wear protective gloves and cut the strapping of the box with scissors or pliers. Open the upper tabs, carefully lift the compressor out and set it down on the work surface.

For compressors with a container over 25 liters, this should be done by two people.

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 Commissioning

### 6.1 Set up

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

#### Requirements for the installation site:

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



#### NOTE!

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

#### Motor installation:

Step 1: Install the device as shown in Figure 3:

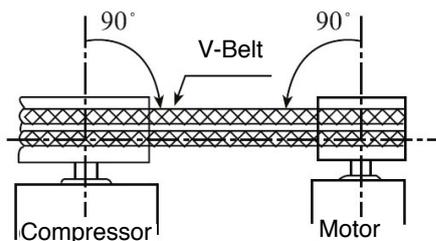


Fig. 5: Motor installation

Step 2: Adjust the belt tension so that the belt yields by about 10 - 15 mm when pressure is applied in the middle (Fig. 4).

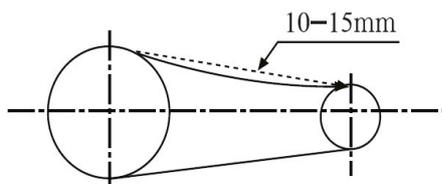


Fig. 6: Belt tension



#### ATTENTION!

- If the belt is too tight, it will be overloaded and the motor shaft can easily wear out. The motor may heat up and consume more power, and the belt may break down due to excessive tension.
- If the belt is too loose, the belt may slip, causing excessive heat generation, severe belt wear, uneven compressor speed and insufficient power.

### 6.2 Before the first use

Before starting the compressor, make sure that the oil level is sufficient.



#### ATTENTION!

The oil level should be at the red point of the sight glass (between MIN and MAX) (Fig. 7). If necessary, fill oil through the filling opening. Initial equipment oil: Mineral oil SAE 30.

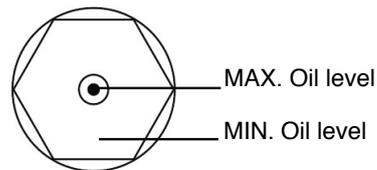


Fig. 7: Öl level



#### ATTENTION!

If the oil level is lower than the lower marking (Fig. 7), the compressor will be damaged. If the oil level is too high, this will lead to increased load on the compressor.



#### ATTENTION!

The oil for the compressor should be of high quality, with an antioxidant content that prevents the oil from thickening due to oxygen concentration, or foaming slightly due to lower carbon content and increasing the ignition point.

### 6.3 Electrical connection



#### DANGER!

##### Danger to life due to electric current!

There is an immediate danger to life through electric shock when in contact with live components.

Only operate the compressor in a dry environment.



#### ATTENTION!

The power supply must meet the following requirements:

- Properly installed power outlet, grounded and tested.
- Protection according to technical data.



#### ATTENTION!

1. Operating the compressor on long cable reels or extensions can lead to start-up problems.
2. Ensure the correct cross-section if the compressor is nevertheless operated on an extension, at least 2.5 mm<sup>2</sup>.
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. The oil is too viscous below this. The compressor will run harder and the motor will consume more power.



#### WARNING!

##### Do not disconnect the power supply while the motor is running!

Pressure switch does not discharge →  
Motor does not 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.



#### ATTENTION!

400V compressors are equipped with a CEE 7 type plug. If necessary, have it replaced only by a qualified electrician.



#### NOTE!

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

- Step 1: Check that the mains voltage corresponds to the voltage indicated on the type plate.
- Step 2: Make sure that the ON/OFF switch is in the "0" or "OFF" position. Then insert the plug into the power outlet
- Step 3: Switch the compressor on briefly at the ON/OFF switch and check the direction of rotation of the motor or fan wheel, especially when using 400 V compressors.



#### ATTENTION!

Make sure that the motor or the fan impeller rotates in the correct direction! (See direction of rotation arrow on the protective grille). **Incorrect direction of rotation can cause considerable damage to the compressor.**

## 7 Description of device

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

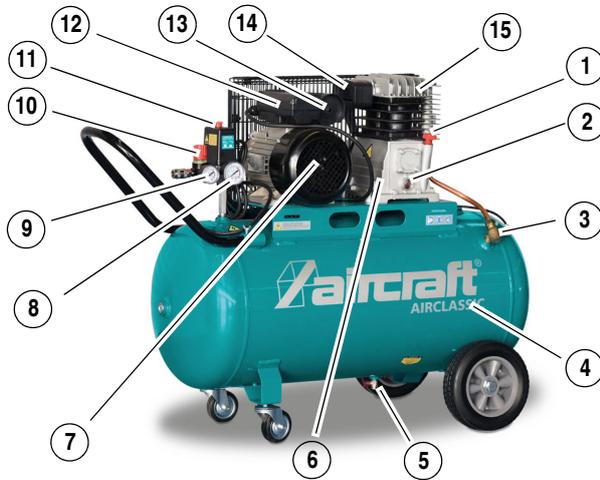


Fig. 8: Description of model 351/100/10

- 01 Oil filler cap
- 02 Sight glass for oil level
- 03 Check valve
- 04 Compressed air tank (boiler)
- 05 Drain valve
- 06 Compressor
- 07 Drive motor (electric motor)
- 08 Pressure gauge (vessel pressure)
- 09 Pressure gauge (working pressure)
- 10 Pressure regulator
- 11 ON/OFF switch (on the pressure switch)
- 12 Electric box
- 13 Motor protection switch
- 14 Air intake filter
- 15 Cylinder

The compressor is equipped with a safety valve that triggers in case of a malfunction of the pressure switch to ensure the safety of the compressor.



### DANGER!

The manipulation, blocking or adjustment of the safety valve is strictly prohibited!  
There is a risk of serious or fatal injuries!

### 7.1 Scope of delivery

- Manual for operation and maintenance
- Oil Dipstick
- Wheels, vibration absorbers,

## 8 Commissioning



### ATTENTION!

Do not overload the compressor! Operate the compressor only in the power range specified in the technical data.



### DANGER!

Check the safety valve for proper operation by pulling the ring outwards to open the safety valve (The Pressure vessel must be under pressure).



### WARNING!

#### Danger!

For the operator and other persons there is a risk of injury if they do not observe the following rules.

- The compressor may only be operated by a trained and qualified person. Other persons must stay away from the working 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!

It is essential to avoid multiple switching on and off of the compressor at short notice, as this can damage the motor!



**Use hearing protection!**



**Use protective gloves!**



**Wear respiratory protection when working with dust or mist!**



**Wear safety boots!**



**Wear protective clothes!**



**ATTENTION!**

- The connected air tools must be designed for the outlet pressure from the compressor or be operated with a pressure reducer.
- Only use oil-containing compressed air for tools that have to be operated with oil-containing compressed air.
- An oil filter must be connected upstream for the use of pneumatic tools which must only be operated with oil-free compressed air.
- Never fill vehicle tyres with oily compressed air.

**8.1 Switch on**



Fig. 9: 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 Pressure gauge (vessel pressure)

- Step 1: Check that the ON/OFF switch is OFF.
- Step 2: Check the oil level.
- Step 3: Check the tension of the belt and check that the pulley can be easily removed by hand.
- Step 4: Connect the mains plug to the power supply.
- Step 5: Start the machine with the ON/OFF switch located on the pressure switch.



**NOTE!**

The compressor starts the motor via a pressure switch. When the pressure in the compressed air tank rises to the maximum nominal pressure, the pressure switch automatically switches off the compressor.

Step 6: To switch off the compressor, turn the ON/OFF switch from position "ON" to position "OFF". Drain the compressed air from the system. In addition, this makes the next start of the compressor easier.



**NOTE!**

Never remove the plug from the socket to switch off the compressor!

**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.

The working pressure is set with the pressure reducer 3 (Fig. 9) (lift the rotating cap, set the desired pressure and push the rotating cap down again to fix it) and read off the pressure gauge 5 (Fig. 9). Removal is carried out via coupling 4 (Fig. 9).

It is recommended to reset the pressure value to zero after using the tool. When using pneumatic tools, always check the optimum application pressure of the accessories.

If, when using a pneumatic tool, the motor does not switch on and off but runs continuously, the capacity of the compressor may be too low.

The pressure indicated on the pressure gauge corresponds to the pressure in the tank. If the pressure in the tank exceeds the preset maximum value, a safety valve is activated. For this reason the switch or safety valve must not be manipulated.

## 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 „Verification of operational safety“).



### DANGER!

#### Danger to life due to electric shock!

Contact with live components may cause mortal danger.

- Always disconnect the power plug before cleaning and maintenance.
- Connections and repairs of the electrical equipment may only be carried out by a qualified electrician.



### ATTENTION!

Before starting maintenance work, switch off the compressor and allow it to cool down completely. Drain the compressed air completely. The container and the lines must not be under pressure.



### Use protective gloves!



### Wear safety boots!



### Wear protective clothes!

### 9.1 Maintenance and care



### DANGER!

All work on electrical and pneumatic systems may only be carried out by qualified personnel who have been trained to do so and are familiar with the risks involved.



### 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 50 operating hours:

1. Check that all screws, especially those on the cylinder head and on the frame, are tight. Retighten the cylinder screws when the compressor has warmed up.
- 2 Check all hose connections.
3. check if dust has accumulated inside the housing. If necessary, change the operating location.
4. Change the oil. The compressor must be warm!

#### Oil change:

Drain the old oil and fill the fresh oil into the filler hole until the level is between the MIN and MAX marks.

Initial equipment oil: Mineral oil SAE 30.

#### Daily:

Drain the condensation water. To do this, place a flat collection container under the drain valve and open the drain valve. Close the valve again as soon as only clean air, without condensation, escapes.

Wear protective gloves for this work.



### ATTENTION!

The condensate produced is oily and must not enter the public sewer system!

#### Once a week:

1. Check the function of the safety valve
2. Check if dust has accumulated inside the casing. If necessary, change the operating location.

#### Every three months:

Check the tension and elasticity of the transmission belt.

#### Every 100 operating hours:

1. Clean the filter. Replace the filter if necessary,

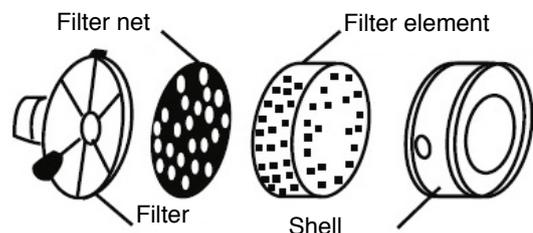


Fig. 10: Filter

2. Check the function of the emergency stop switch
3. Remove the dust and dirt residues on the compressor (carefully) with compressed air

**Attention:** Wear protective goggles!

4. Check the compressor and lines for oil leaks.
5. Check that all screws, especially those on the motor head and on the frame, are tight.

Yearly:

**Oil change:**

Drain the old oil and fill the fresh oil into the filler hole until the level is between the MIN and MAX marks.

Initial equipment oil: Mineral oil SAE 30.



**Use protective goggles!**

### 9.2 Functional test of the safety valve

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

**Version A (safety valve with ring)**

Every 6 months:

Open the safety valve (Fig. 11) by pulling the ring briefly outwards until compressed air escapes, and release it again (the pressure vessel must be under pressure).



Fig. 11: Safety valve, Version A

**Version B (Safety valve with collar)**

Every 6 months:

Open the safety valve (Fig. 12) by briefly pulling the clamp outwards until compressed air escapes and then releasing it again (the pressure vessel must be under pressure).

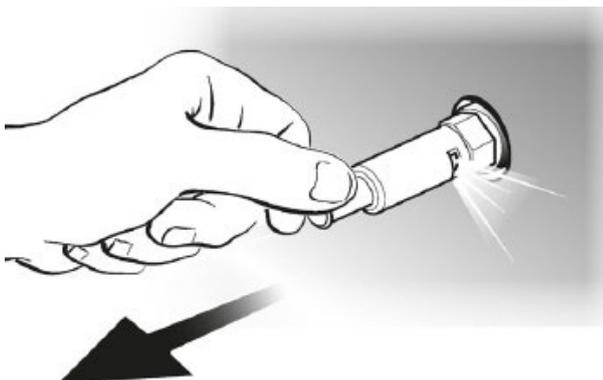


Fig. 12: Safety valve, Version B

### 9.3 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 qualified electricians or under the supervision and direction of a qualified electrician

The company Aircraft Kompressoren does not accept any liability or guarantee for damage and operational disturbances as a result of non-compliance with these operating instructions. Only use faultless and suitable tools, original spare parts or series parts expressly approved by Aircraft Kompressoren for repairs.

Repairs covered by the warranty may only be carried out by technicians authorised by the manufacturer.

## 10 Troubleshooting

Malfunction	Possible cause	Solution
Insufficient air volume - filling volume too small or insufficient pressure.	<ol style="list-style-type: none"> <li>1. The required air volume is higher than the nominal capacity of the compressor.</li> <li>2. Air filter is dirty.</li> <li>3. Carbon or other substances are sticking to the valve block</li> <li>4. Loosening of the valve seat or damage to the filter.</li> <li>5. Wear of the valves or lack of efficiency of the spring.</li> <li>6. Air leaks in the pipes or connections.</li> </ol>	<ol style="list-style-type: none"> <li>1. Use a more powerful compressor.</li> <li>2. Clean or replace the filter.</li> <li>3. Remove dirt and clean the valve block.</li> <li>4. Tighten the valve or replace the filter.</li> <li>5. Replace the valves or springs.</li> <li>6. Check the pipes or connections with soapy water and seal the leaks if necessary.</li> </ol>
Overpressure or triggering of the safety valve.	<ol style="list-style-type: none"> <li>1. The selected output voltage is higher than the nominal voltage.</li> <li>2. Damage of the pressure switch or the relief valve.</li> <li>3. Too low pressure setting or damaged safety valve.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust the voltage setting.</li> <li>2. Replace the pressure switch or relief valve.</li> <li>3. Adjust the pressure setting or replace the relief valve.</li> </ol>
The pressure drops continuously.	Air leakage	Check and seal lines and connections.
Compressed air is mixed with oil / Excessive oil consumption.	<ol style="list-style-type: none"> <li>1. Incorrect assembly of the oil ring.</li> <li>2. Insufficient viscosity of the oil.</li> <li>3. Piston ring or cylinder head bolt is broken.</li> <li>4. Insufficient ventilation.</li> <li>5. Overfilled with oil.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust the oil ring correctly.</li> <li>2. Use the correct type of oil.</li> <li>3. Replace piston ring or cylinder head screw.</li> <li>4. Clean the ventilation openings.</li> <li>5. Reduce oil quantity.</li> </ol>
The pressure in the tank does not build up.	Drain valve open.	Close the drain valve.
Excessive vibrations of the compressor.	<ol style="list-style-type: none"> <li>1. Operating pressure is too high.</li> <li>2. Unstable ground.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduce the operating pressure.</li> <li>2. Secure the underground.</li> </ol>
Too much noise during operation.	<ol style="list-style-type: none"> <li>1. The valve seat is too loose.</li> <li>2. The piston impacts on the cover or cylinder.</li> </ol>	<ol style="list-style-type: none"> <li>1. Tighten the valve.</li> <li>2. Fix the components.</li> </ol>
Overheating of the compressor.	<ol style="list-style-type: none"> <li>1. Operating pressure is too high.</li> <li>2. Ambient temperature too high / Poor ventilation.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduce the operating pressure.</li> <li>2. Move the compressor to a place with good ventilation/low temperature.</li> </ol>
Leakage at the exhaust valve.	<ol style="list-style-type: none"> <li>1. Exhaust valve is defective.</li> <li>2. Check whether the valve is blocked.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace the outlet valve.</li> <li>2. Remove the dirt.</li> </ol>
Motor does not run.	<ol style="list-style-type: none"> <li>1. Faulty cable connection or fuse defect</li> <li>2. Motor is defective</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the cables or change the fuse.</li> <li>2. Repair the motor</li> </ol>
The motor makes noise but does not work.	<ol style="list-style-type: none"> <li>1. Voltage drop due to extension cable.</li> <li>2. Insufficient voltage.</li> <li>3. Motor overload.</li> <li>4. Motor damage.</li> </ol>	<ol style="list-style-type: none"> <li>1. Shorten the extension cable or use a proper power cord.</li> <li>2. Have the mains voltage checked and adjusted by a qualified electrician.</li> <li>3. Release compressed air from the vessel and reduce the load.</li> <li>4. Carry out maintenance.</li> </ol>

## 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.

### 11.2 Disposal of electrical equipment

Electrical equipment contains a large number of recyclable materials and environmentally harmful components.

These components must be disposed of separately and properly. In case of doubt, contact the municipal waste disposal service.

If necessary, use the services of a specialized waste disposal company for processing.

### 11.3 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 or directly from the manufacturer. The contact details are in chapter 1.2 Customer Service. 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 for the compressor AIRCLASSIC 351/50/10 must be ordered. The pressure switch is identified in the spare parts drawing with the position number 22.

When ordering spare parts, send a copy of the spare parts drawing (1) with marked component (pressure switch) and marked position number (22) to the authorized dealer or to the spare parts department and provide the following information:

- Type of device:       **AIRCLASSIC 351/50/10**
- Item number:         **2034035**
- Drawing number:     **1**
- Position number:    **22**

#### The item number of your device:

Piston Compressor	Item number
AIRCLASSIC 351/50/10	2034035
AIRCLASSIC 351/100/10	2034036
AIRCLASSIC 451/50/10	2034045
AIRCLASSIC 451/100/10	2034046
AIRCLASSIC 503/50/10	2034050
AIRCLASSIC 503/100/10	2034051
AIRCLASSIC 503/200/10	2034052

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

## 12.2 Spare parts drawings

### Spare parts drawing 1: AIRCLASSIC 351/50/10, 451/50/10 and 503/50/10

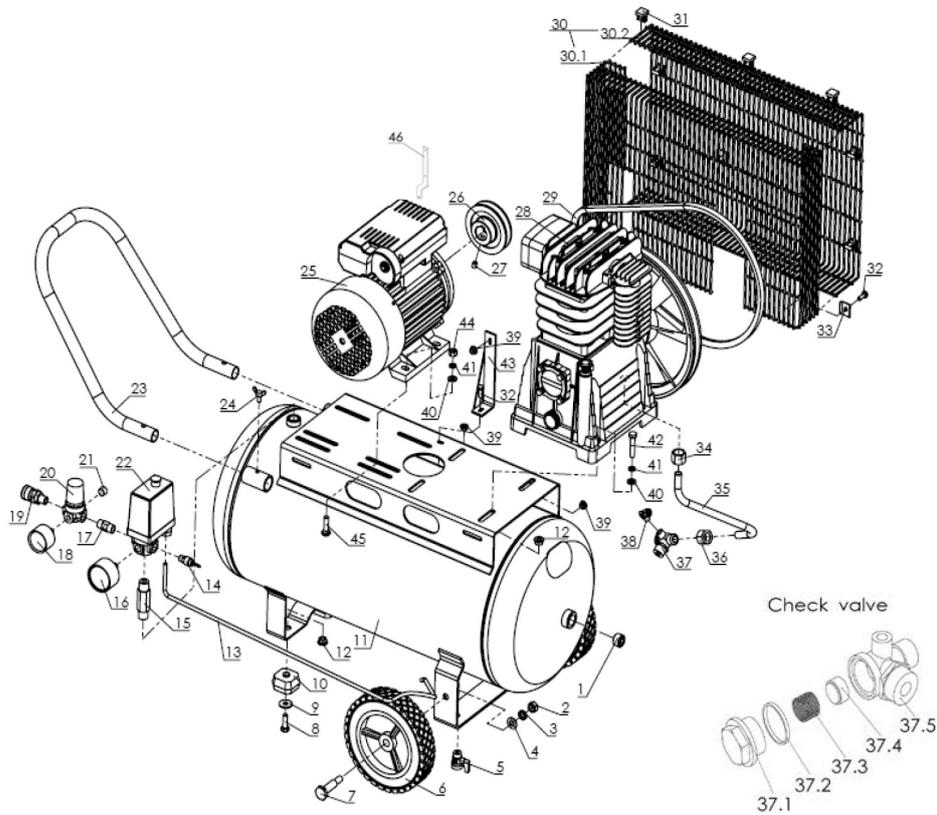


Fig. 13: Spare parts drawing 1 - AIRCLASSIC 351/50/10, 451/50/10 and 503/50/10

### Spare parts drawing 1: AIRCLASSIC 351/100/10, 451/100/10 and 503/100/10

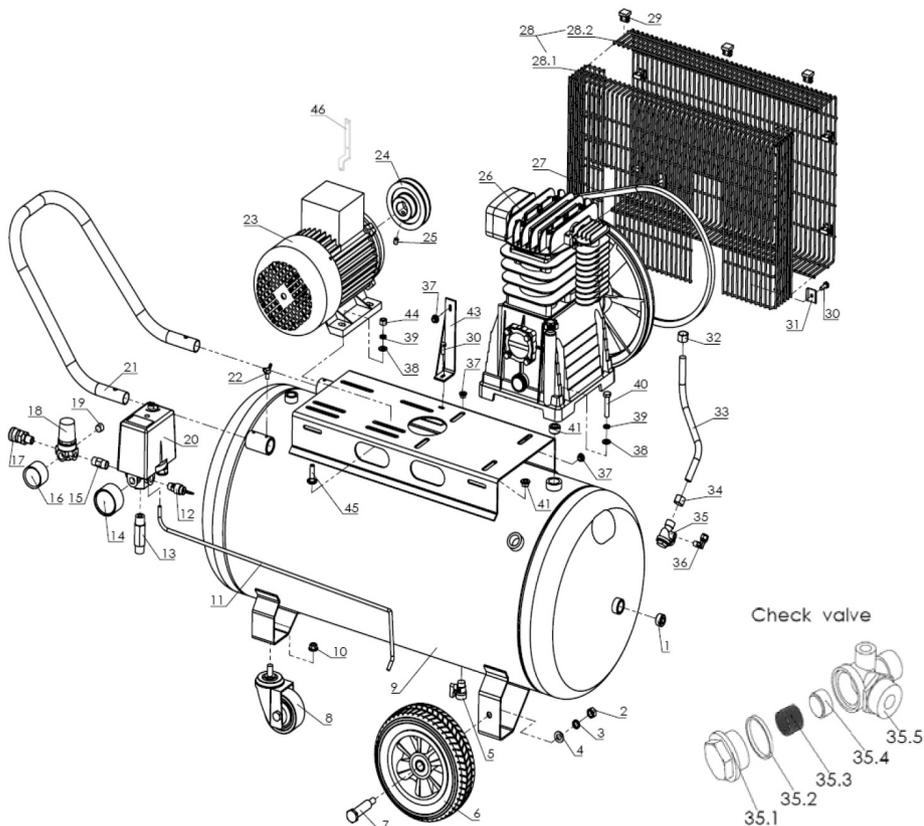


Fig. 14: Spare parts drawing 1 - AIRCLASSIC 351/100/10, 451/100/10 and 503/100/10

Spare parts drawing 1: AIRCLASSIC 503/200/10

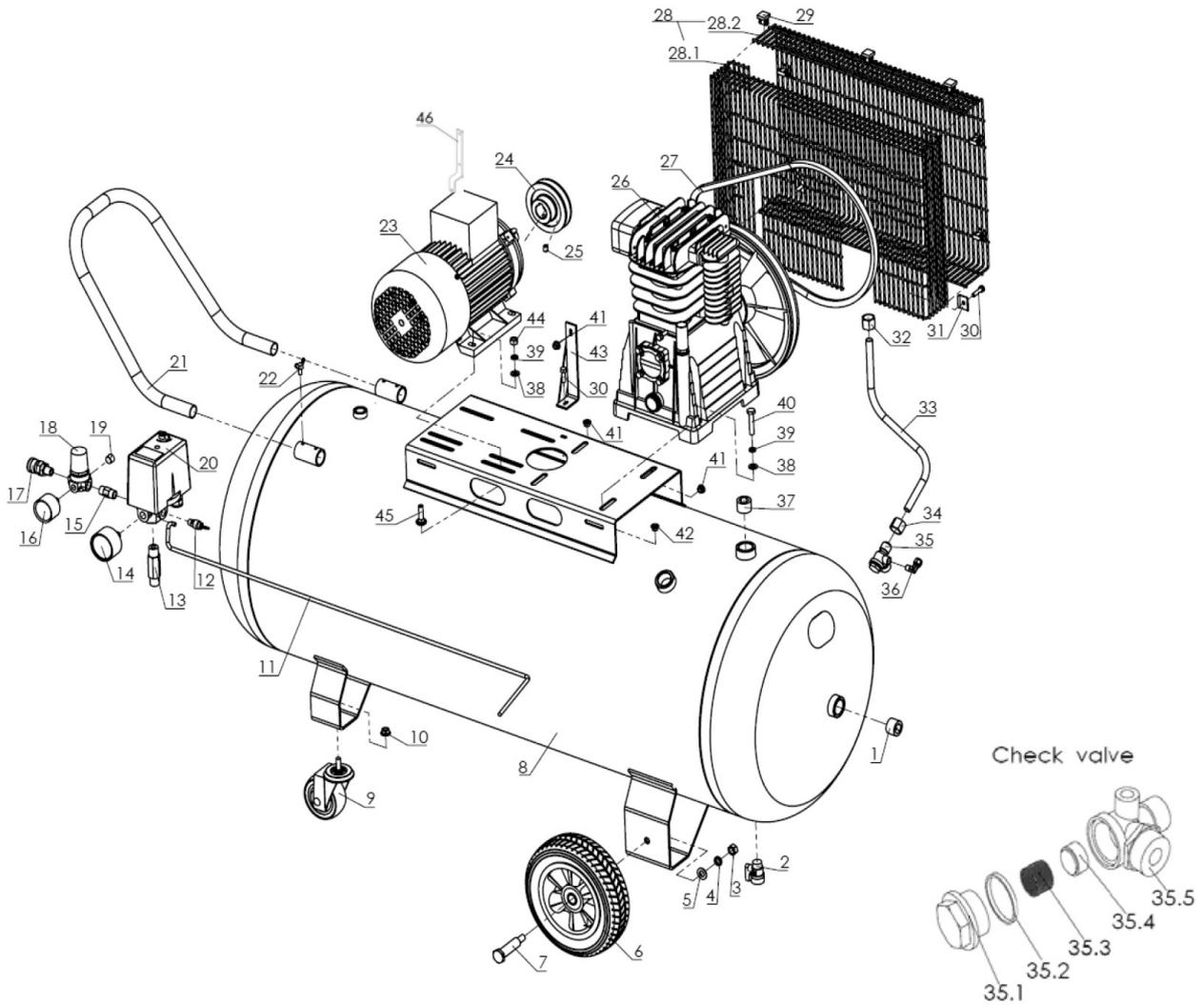


Fig. 15: Spare parts drawing 1- AIRCLASSIC 503/200/10

Spare parts drawing 2: Compressor 3008L for AIRCLASSIC 351/50/10 and 351/100/10

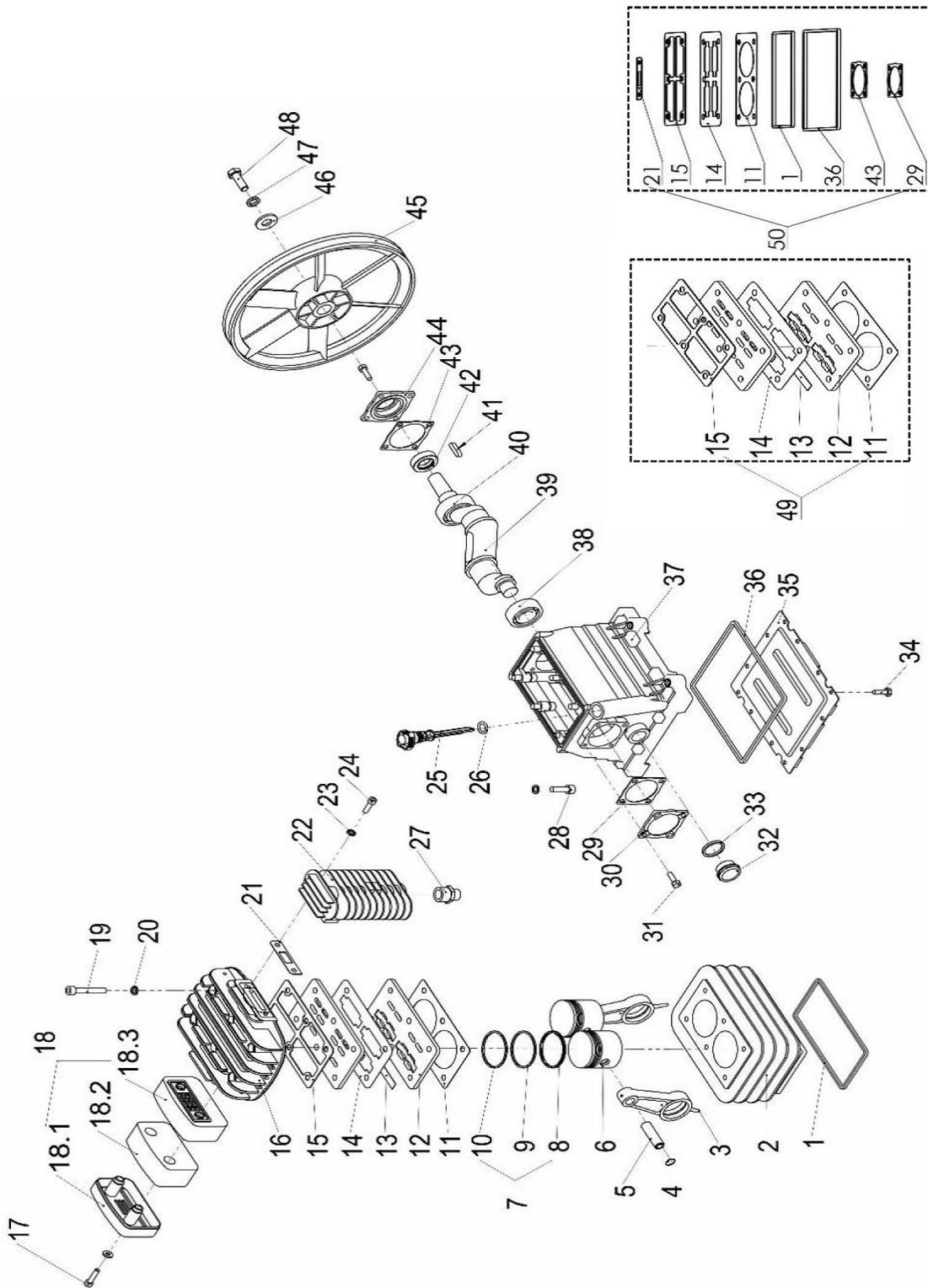


Fig. 16: Spare parts drawing 2: Compressor for AIRCLASSIC 351/50/10 and 351/100/10

Spare parts drawing 2: Compressor 4009N for AIRCLASSIC 451/50/10, 451/100/10, 503/50/10, 503/100/10 and 503/200/10

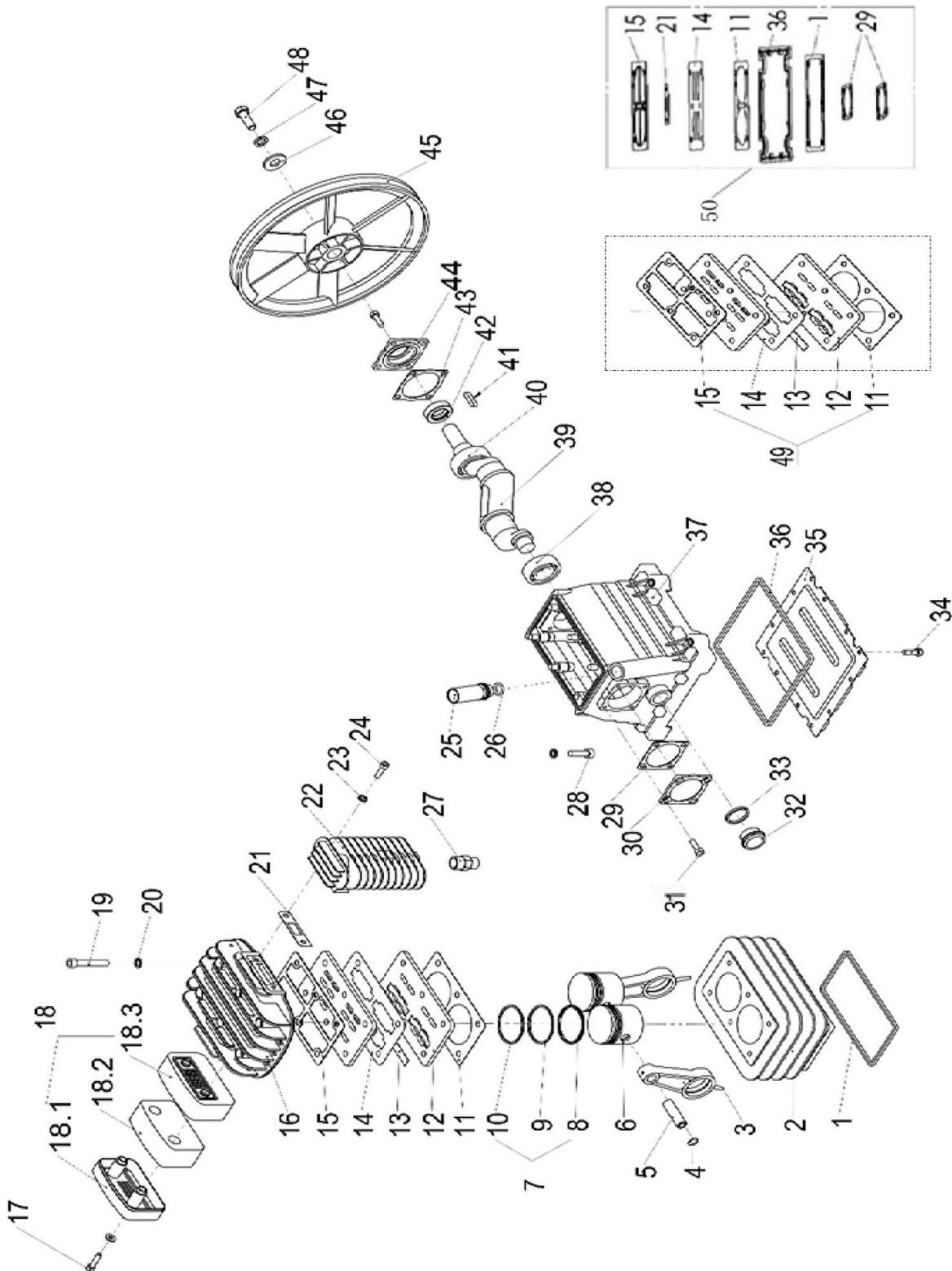
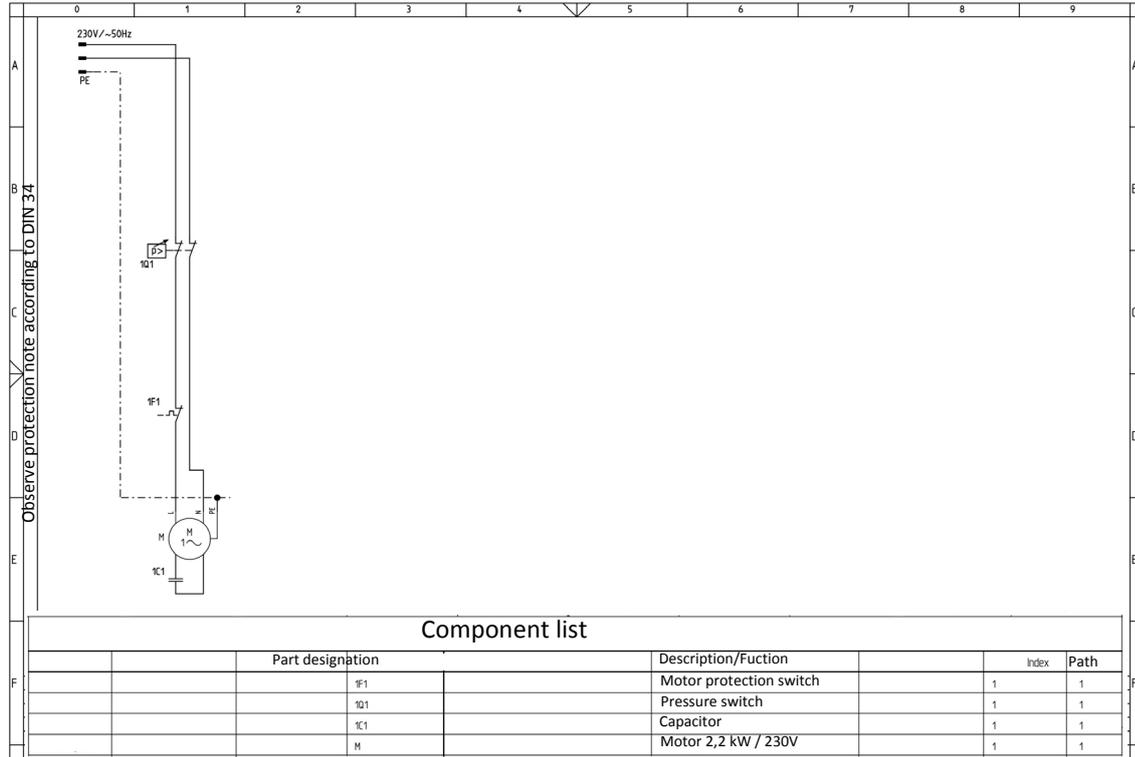


Fig. 17: Spare parts drawing 2: Compressor for AIRCLASSIC 451/50/10, 451/100/10, 503/50/10, 503/100/10 and 503/200/10

### 13 Electrical circuit diagrams

Electrical circuit diagram AIRCLASSIC 351/50/10, 351/100/10, 451/50/10 and 451/100/10 (230V ~50 Hz Models)



Electrical circuit diagram AIRCLASSIC 503/50/10, 503/100/10 and 503/200/10 (400V ~50 Hz Models)

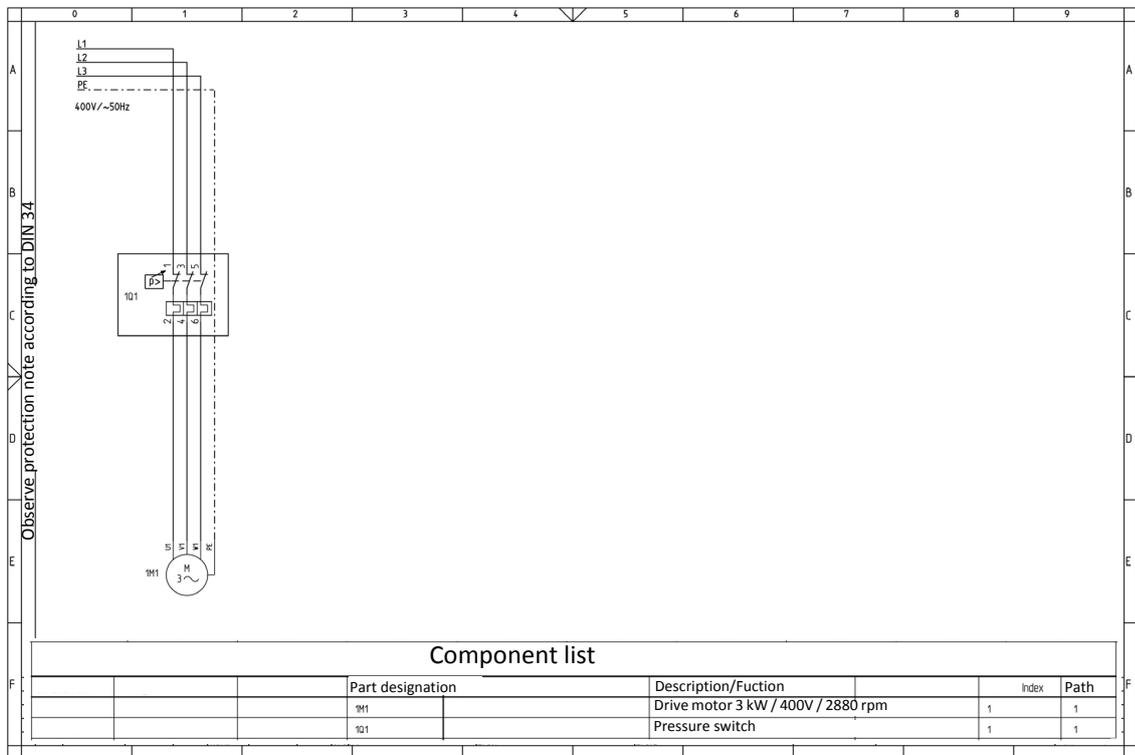
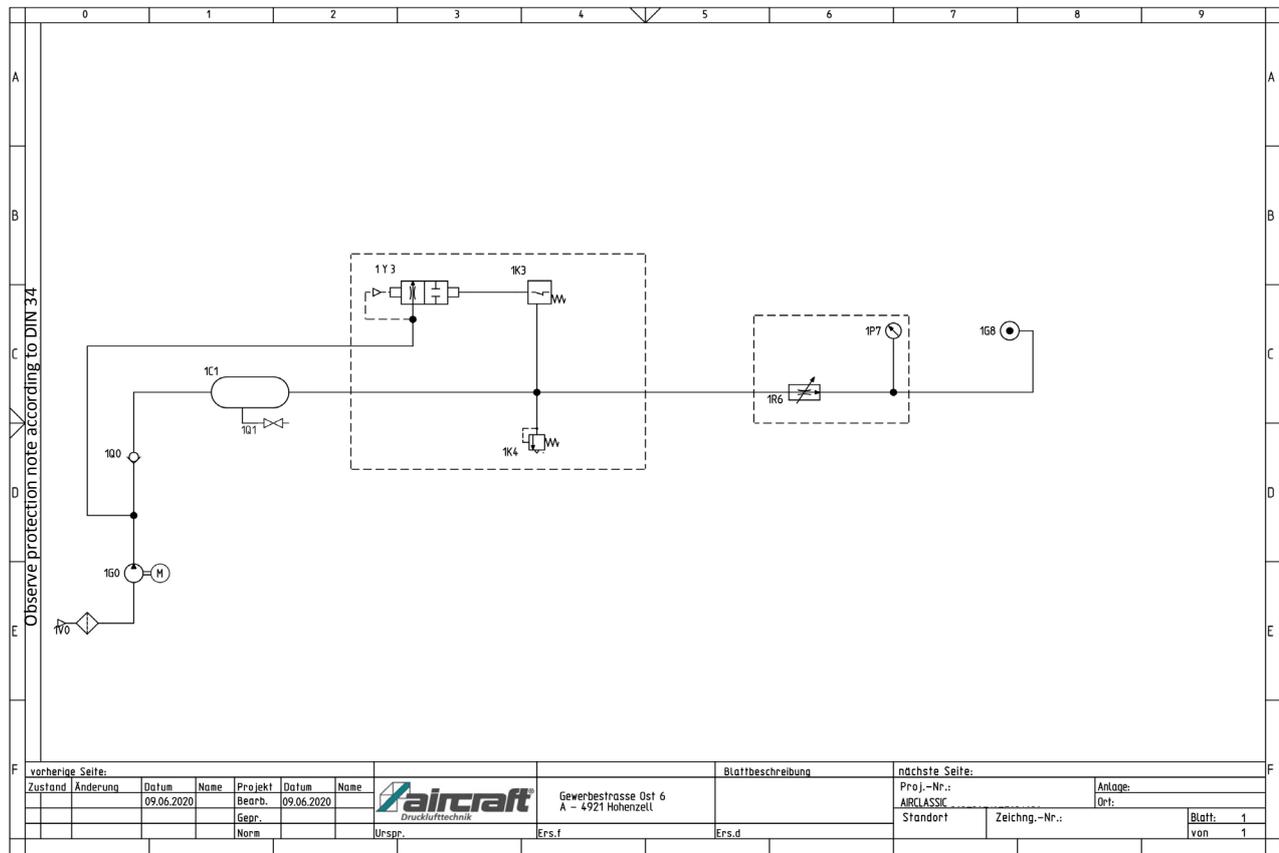


Fig. 18: Electrical circuit diagram AIRCLASSIC AIRCLASSIC 351/50/10, 351/100/10, 451/50/10 and 451/100/10 (top) and electrical circuit diagram AIRCLASSIC 503/50/10, 503/100/10 and 503/200/10 (bottom)

# 14 Pneumatic circuit diagrams

## Pneumatic circuit diagram 1



## Pneumatic circuit diagram 2

Component list						
	Part designation	Description / Function	Index	Path		
	1Q0	Non-return valve	1	0		
	1V0	Air filter	1	0		
	1G0	Compressor	1	0		
	1C1	Pressure vessel	1	1		
	1Q1	Condensate drain valve	1	1		
	1Y3	Relief valve compressor	1	3		
	1K3	Pressure switch	1	3		
	1K4	Safety valve	1	4		
	1R6	Pressure reducer	1	6		
	1P7	Pressure gauge, Working pressure	1	7		
	1G8	Compressed air outlet connection	1	8		

Observe protection note according to DIN 34

vorherige Seite:		Blattbeschreibung		nächste Seite:	
Zustand	Anderung	Datum	Name	Proj.-Nr.:	Anlage:
		09.06.2020		AIRCLASSIC 503_50_10_2034050	
				Standort	Ort:
				Zeichn.-Nr.:	Blatt: 1
					von 1

Fig. 19: Pneumatic circuit diagrams

## 15 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:** Piston Compressor

**Designation of the machine\*:** **Item number:**

<input type="checkbox"/> AIRCLASSIC 351/50/10	2034035
<input type="checkbox"/> AIRCLASSIC 351/100/10	2034036
<input type="checkbox"/> AIRCLASSIC 451/50/10	2034045
<input type="checkbox"/> AIRCLASSIC 451/100/10	2034046
<input type="checkbox"/> AIRCLASSIC 503/50/10	2034050
<input type="checkbox"/> AIRCLASSIC 503/100/10	2034051
<input type="checkbox"/> AIRCLASSIC 503/200/10	2034052

**Serial number\*:** \_\_\_\_\_

**Year of manufacture\*:** 20\_\_\_\_\_

\*fill this 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  
2011/65/EU RoHS 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
DIN EN 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
DIN EN 60335-2-34: 2014-10	Domestic and similar electrical appliances - Part 2-34: Particular requirements for engine compressors
DIN EN 61000-6-1: 2019-11	Electromagnetic compatibility (EMC) - Part 6-1: Generic standards Protection for commercial and industrial environments.
DIN EN 61000-6-3: 2011-09	Electromagnetic Compatibility (EMC) - Part 6-3: Generic Standards - Emission standard for residential, commercial and light-industrial environments
DIN EN 61000-3-2: 2019-12	Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current $\leq 16$ A per phase)
DIN EN 61000-3-3: 2012-07	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 $\leq 16$ A per phase and not subject to conditional connection

**Responsible for documentation:** Klaus Hütter, Gewerbestraße Ost 6, A-4921 Hohenzell  
Hohenzell, 11.09.2020 Hallstadt, 11.09.2020



Klaus Hütter  
Manager



Kilian Stürmer  
Manager



