



# Instruction Manual(Original)

## ■ Oil-Free Scroll Compressor

**ZS2.2 FF - 8**

**ZS2.2 FF - 10**

**ZS3.7 FF - 8**

**ZS3.7 FF - 10**

This instruction manual explains important warnings, precautions and instructions for safe operation. Please read this instruction manual and make sure that you have completely understood its contents before putting the machine into operation. For immediate reference, please keep this instruction manual ready and within reach.

Before use, please complete the chart below for future repair and maintenance work.

Serial No.
Dealer
Purchase date
Date of first operation

# Important information - Safety precautions



## ▣ Important information

Please, read this instruction manual and make sure that you have understood its contents. The operator must be completely familiar with the requirements described in this instruction manual including important warnings, precautions and instructions for operation. The marks and symbols have the following meanings.






Keep this booklet in an appropriate place for quick consultation at any time.

### ● Indications of warnings and precaution measures

 <b>WARNING</b>	Indicates a potentially hazardous situation which, if not avoided, will result in serious injury or loss of life.
 <b>CAUTION</b>	Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury or property damage.

### ● Examples of warnings and precautions

	Indicates「You must be careful」. Brief explanation directly in the sign or next to it. (The example on the left means [Caution – Risk of death by electrocution.])
	Indicates「You absolutely must refrain from doing this」. Brief explanation directly in the sign or next to it.
	Indicates 「You absolutely must do this」. Brief explanation directly in the sign or next to it. ( The example on the left means [Make sure to establish a ground connection.] ).

\* We will assume no responsibility for any injury or damage caused by disregarding warnings, precautions or instructions.












<b>Important</b>	This sign indicates: Please observe these notes and instructions. They are useful to achieve maximum performance and operation lifetime.
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# For safe operation

## ▣ Safety precautions









### WARNINGS

 <p><b>Install in a safe and secure environment.</b></p>	<p><b>Risk of explosion, fire or property damage</b>            Never install a unit in a flammable environment, or in an environment that contains flammable gases (acetylene, propane etc....) as well as corrosive gases (ammonia, acid, ozone gas etc.) Do not use a unit in an environment which contains combustible materials, oil or oil mist. It may cause explosions, fire, property damage or a shortening of the unit's operation lifetime.</p>	 <p><b>Gas compression</b></p>	<p><b>Risk of failure or damage</b>            Never use the unit to compress anything other than air.             Compressing other types of gas can cause explosion, fire or failure.</p>
 <p><b>Caution – transportation and lifting</b></p>	<p><b>Risk of falls or damage</b>            Use a transport carriage with safety precautions when moving a unit. Follow the instructions when lifting a unit.             If not, it may cause a unit to fall down which will lead to damage or injuries.</p>	 <p><b>Avoiding water</b></p>	<p><b>Risk of penetrating water</b>            This compressor is not water-proof. Make sure to install a unit indoors so that water does not splash a unit.             Water can cause compressor failure.</p>
 <p><b>No foreign objects</b></p>	<p><b>Risk of sucking in or ejecting foreign objects</b>            Do not insert your fingers or foreign objects into the compressor air end and motor.             This can cause your fingers or foreign objects to be sucked in and ejected and thus lead to damage and injuries.</p>	 <p><b>High temperature</b></p>	<p><b>Risk of burns</b>            Make sure the unit is cool enough when you touch it.             Touching a compressor while it is running or right after it stopped can cause burns.</p>
 <p><b>Turn off the unit before maintenance work</b></p>	<p><b>Risk of failure and property damage</b>            Make sure to turn off the unit and release the air pressure before starting your maintenance work.            Make sure you disconnect the unit from the main power supply. Doing maintenance work while the unit is running can lead to both failure and injuries.</p>	 <p><b>No modification</b></p>	<p><b>Risk of failure or property damage</b>            Never take any parts off the unit and never make any modifications to it. It can cause injury due to mechanical failure. Besides, it can cause a decrease in performance and lead to a cancellation of the existing warranty.</p>
 <p><b>Breathing air</b></p>	<p><b>Risk of injury</b>            Never use the unit with respiratory equipment or with equipment that is directly connected with human life.             This can cause severe injuries.</p>	 <p><b>Scheduled maintenance</b></p>	<p><b>Risk of failure or property damage</b>            Make sure to conduct the scheduled maintenance work.             If not, it can cause failures or property damage. Besides, it can lead to a decrease in performance.</p>
 <p><b>Proper service</b></p>	<p><b>Risk of damage, failure or a shortened service lifetime</b>            Ask our office or our authorized specialists for service.             Improper maintenance work can cause damage, malfunctions and a shortened operation lifetime.</p>		

# For safe operation

## ▣ Safety precautions













### **WARNINGS**

 <b>Protective measures</b>	<b>Install electrical disconnecting device</b> This unit does not have an electrical disconnecting device. Make sure to install appropriate overcurrent and overload protection switches as well as residual current protective devices.  Otherwise, it can cause electric shock, fire or property damage.	 <b>Protection</b>	<b>Risk of motor damage</b> Please install the correct sizes of breakers / fuses to protect the compressor.  Otherwise, it can cause motor fires or failures.
 <b>Check voltage</b>	<b>Risk of motor damage</b> Make sure the voltage is +/- 5% of the nominal value.  Otherwise, it can cause start-up problems, burns or motor failure.	 <b>Connection cables</b>	<b>Be very careful with the wiring</b> Make sure the connections are correct and the correct cable cross sections are used.  If this is not the case, it can cause a drop in performance, motor failure or a failure of the complete unit. Besides, there is a risk of injury.
 <b>Grounding</b>	<b>Risk of electric shocks</b> Make sure the ground connection has been established.  If this is not the case, it can lead to electric shocks, fire or failure of the unit.	 <b>Ask a qualified electrician</b>	<b>Ask a qualified electrician</b> Ask a qualified electrician to perform the electric wiring job.  Otherwise, it can cause electric shocks or fire.

# For safe operation

## ▣ Safety precautions

### CAUTION









 <b>Unpacking the unit</b>	<p><b>Dangers while unpacking the unit</b> Make sure you follow the instructions when unpacking the unit.</p> <p>Otherwise, it can cause falls, damage, failures or injuries.</p>	 <b>Temperature and humidity</b>	<p><b>Danger of running the unit at abnormal temperatures or high humidity</b> The unit must be transported and stored at temperatures between 2 and 40°C and a humidity of less than 70%.</p> <p>If this is not the case, there is a risk of failures or decline in performance due to overheating, freezing or too much humidity. Besides that, there is a risk of injury.</p>
 <b>Proper ventilation</b>	<p><b>Risk of overheating</b> Ensure adequate ventilation at any time when the unit is in operation.</p> <p>This is an air-cooled unit. If sufficient ventilation cannot be guaranteed, it will lead to less performance or a complete failure due to insufficient cooling. Besides that it can lead to serious burns.</p>	 <b>Dust</b>	<p><b>Risk of sucking in dust</b> Make sure to install the unit in a place which is free of dust.</p> <p>If this is not the case, it can cause cooling problems or failure due to clogged filters.</p>
 <b>Flat floor</b>	<p><b>Risk of failure</b> Install horizontally (horizontal angle should be less than 3 degrees) and on a solid floor. Also make sure to maintain the evenness during transportation and storage.</p>	 <b>No direct sunlight</b>	<p><b>Risk of overheating and damage</b> Installation surroundings should be protected from direct sunlight. Direct sunlight can lead to failures due to overheating. Besides that, parts can also be damaged by sunlight when the unit is not in operation.</p>
 <b>Temperature of intake air</b>	<p><b>Risk of exceeding maximum temperature of intake air</b> Intake air temperature must never exceed 40 °C.</p> <p>If it exceeds 40 °C, it can cause failure. Also make sure not to suck extremely cold air into the unit.</p>	 <b>No dirt at the intake port</b>	<p><b>Danger of dirt being sucked in</b> Make sure that the intake port is free of dirt. Sucked in dirt can lead to damage inside the air end.</p>
 <b>Installation surroundings</b>	<p><b>Risk of difficult conditions for maintenance work</b> Make sure the unit will be installed in a place where maintenance work can be carried out without any problems.</p> <p>An installation in a place that is difficult to access can lead to a decline in performance and to injuries.</p>	 <b>Correct direction of rotation</b>	<p><b>Danger of insufficient cooling</b> Make sure the compressor rotates in the right direction.</p> <p>If this is not the case, it can lead to failure of the unit.</p>
 <b>Compressor speed</b>	<p><b>Risk of failure</b> Make sure to run the unit exclusively within the stated standard speed. The standard speed should not deviate more than 2% from the nominal speed.</p> <p>Running the unit at other speeds can lead to a drop in performance, a shortened operation lifetime of the air end or failure.</p>	 <b>Belt tension</b>	<p><b>Risk of failure</b> Make sure that the belts are tightened properly.</p> <p>If they are too tight or too loose, it can lead to a decline in performance or failure of the unit.</p>

# For safe operation

## ▣ Safety precautions

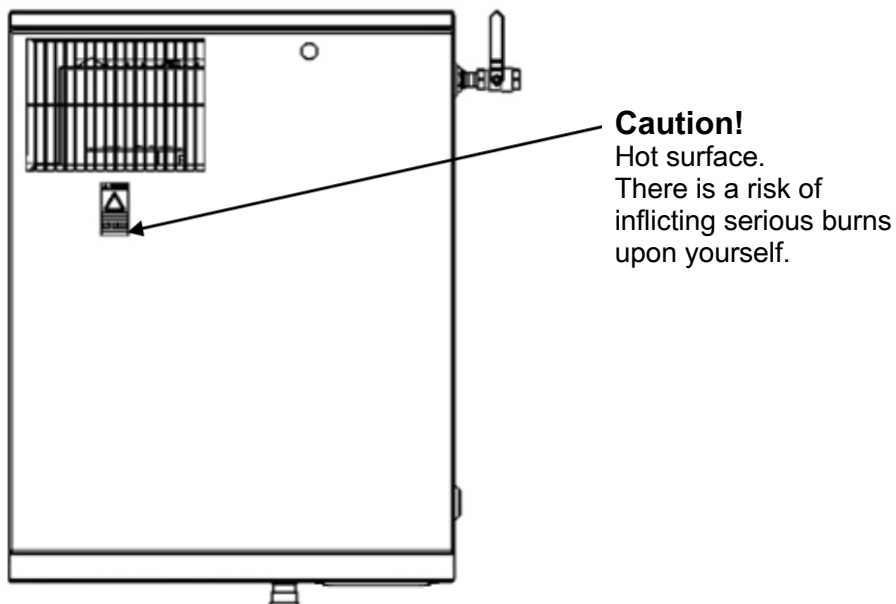
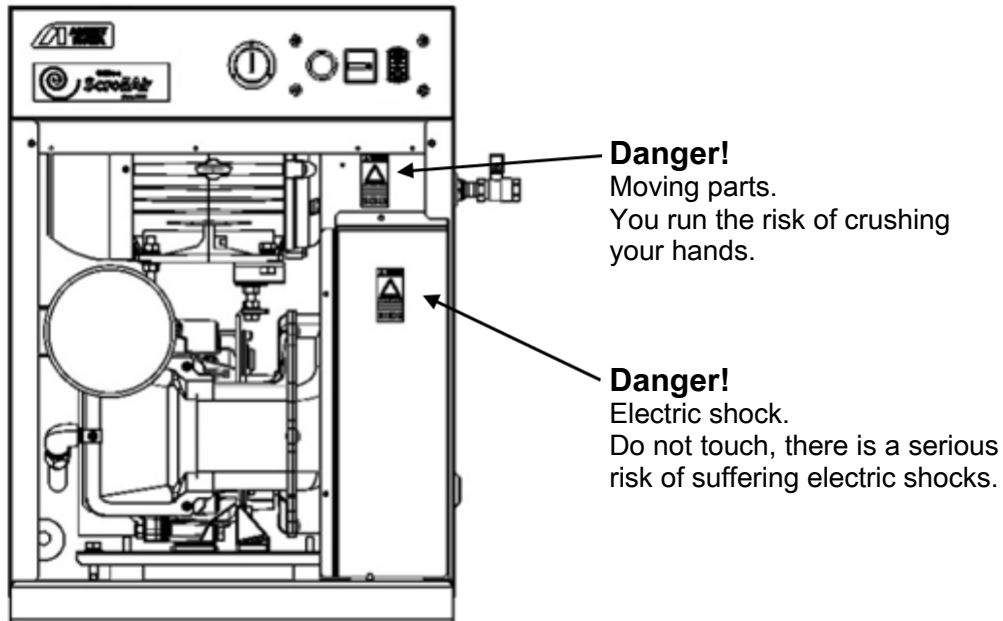


### CAUTION

 <b>Proper installation</b>	<p><b>Risk of excessive vibrations or the unit falling down</b>            Make sure that the unit is installed properly.</p> <p>If this is not the case, there is a danger of the unit falling down, which can lead to a decline in performance or failures.</p>	 <b>Maximum pressure</b>	<p><b>Risk of failure</b>            Make sure the maximum pressure does not exceed the specified pressure.</p> <p>If this is not the case, there is a risk of a shortened operation lifetime of the air end or of a failure.</p>
 <b>Size of connecting pipes</b>	<p><b>Risk of a decline in performance or failure</b>            Use discharge pipes in the correct size. The recommended minimum inner diameter is 12 mm.</p> <p>Smaller diameters can lead to excess pressure and reduce the performance.</p>	 <b>Impairment of pipes</b>	<p><b>Risk of failure</b>            Make sure the discharge pipe does not touch the unit, otherwise it can lead to excessive vibrations or failure.</p>
 <b>Backflow of condensate drain</b>	<p><b>Risk of failure</b>            Make sure there is no backflow from the drain pipe to the outlet of the unit.</p> <p>Backflow can lead to abnormal noise, a drop in performance or failure of the unit.</p>	 <b>Cooling capacity</b>	<p><b>Risk of failure</b>            Make sure the cooling air flows smoothly and efficiently.</p> <p>If this is not the case, it can lead to excessive heat and a decline in performance or failure of the unit.</p>
 <b>Frequency</b>	<p><b>Risk of failure</b>            Make sure the correct current frequency is applied.</p> <p>If this is not the case, it can lead to failures of the unit.</p>	<b>Motor protection</b>	<p><b>Risk of overcurrent</b></p> <p>This unit does not have internal main fuses / breakers. Make sure that the correct nominal power of the motor protection device EN60204-1 will be followed.</p> <p>If this is not the case, it can lead to motor fires, fires or failure due to an overcurrent.</p>
 <b>Emergency stop</b>	<p><b>Emergency stop</b>            Push the emergency stop button to stop the compressor immediately in case of emergency. After fixing the problem, unlock the button by pulling it out.</p>		

# Where to attach stickers

## ▣ Where to attach warning stickers



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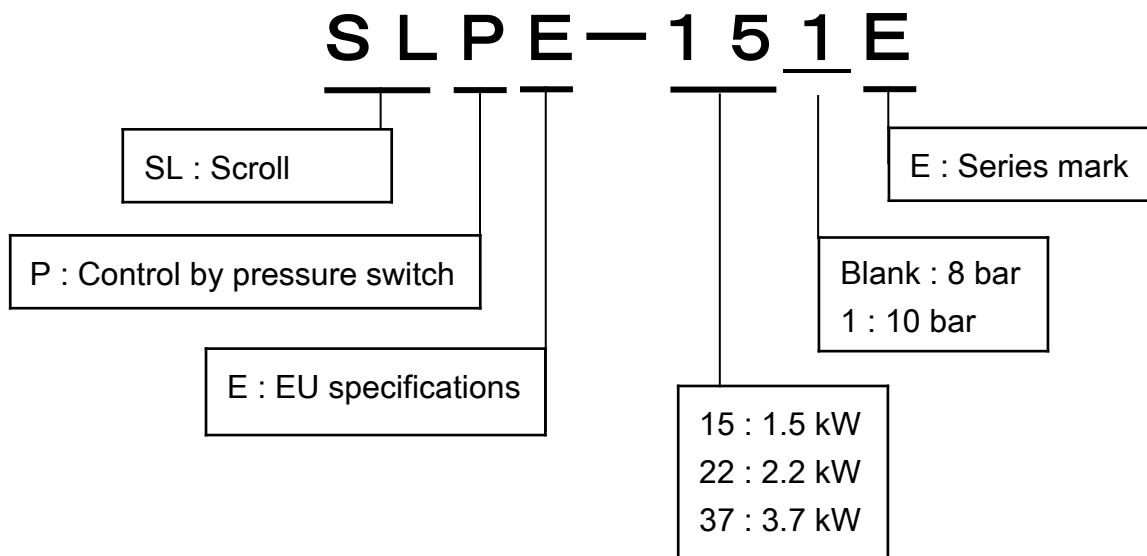


# Before use

## ▣ Check the product

- Check whether model designation and cycle of the product are identical with the product you ordered.

Meaning of the model designation:



- Check whether there are deformations or damage caused by transportation.

- Check if the following accessories have been included.

- Instruction manual 1
- Key 1

# Before use

## ▣ Transportation

### CAUTION

#### Unpacking

Make sure you open the packaging at the correct side and follow the instructions when you unpack the unit.

If this is not the case, the unit can fall down and suffer damage, furthermore it can lead to injuries or a failure of the unit.

#### ● Transportation by forklift

The compressor must be lifted by means of suitable equipment in accordance with local safety regulations.

Check the condition of the compressor before moving it. Lift the compressor using a forklift.

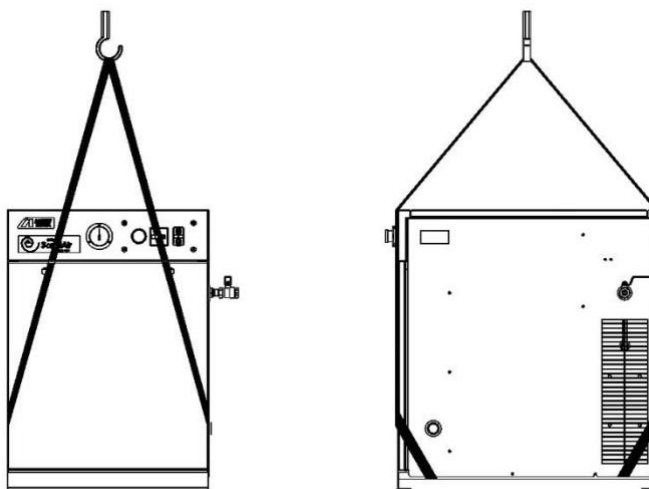
#### ● Transportation by crane

The compressor must be lifted by means of suitable equipment in accordance with local safety regulations.

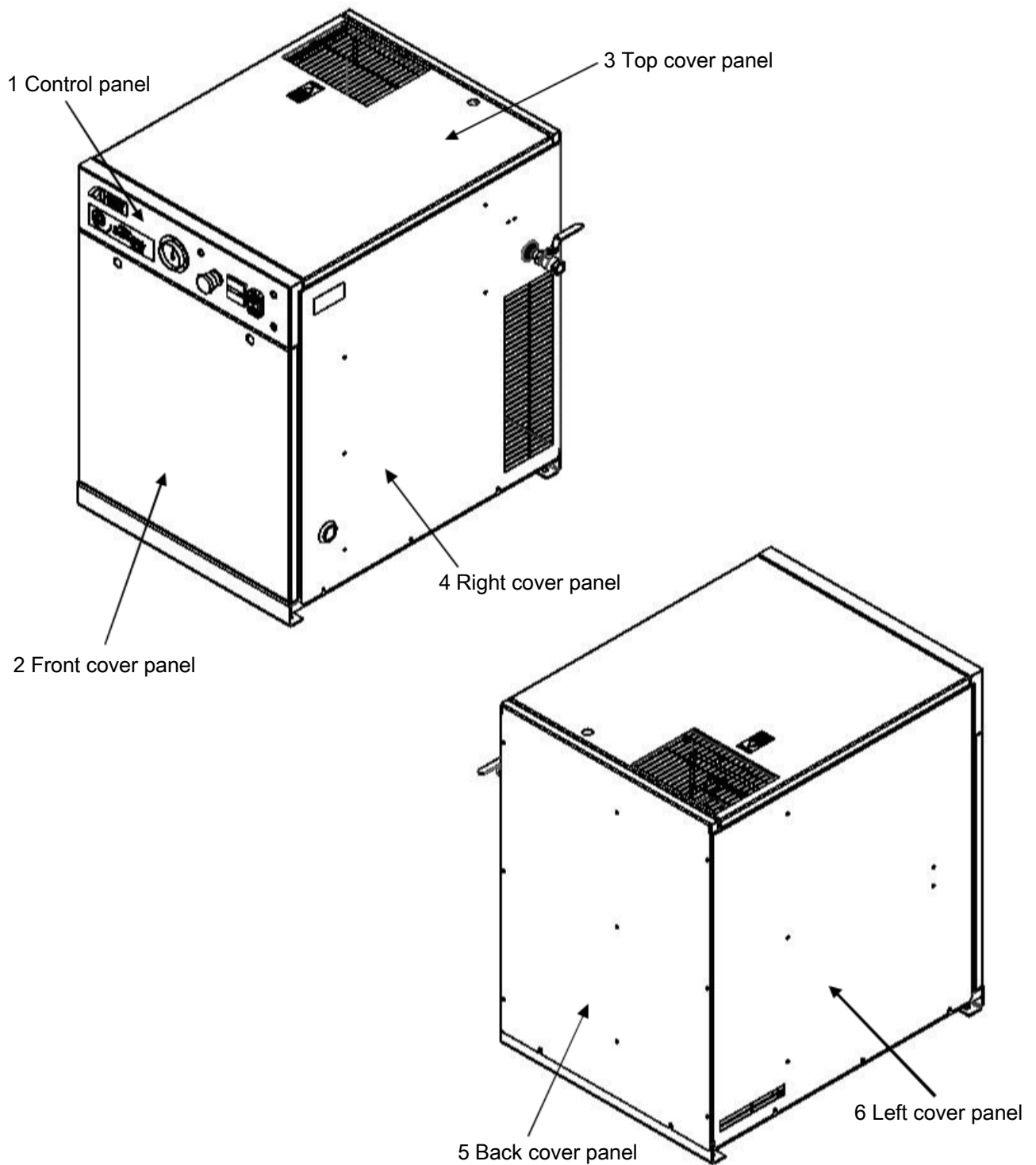
Check the condition of the compressor before moving it.

Lift the compressor with two nylon slings using a crane as illustrated.

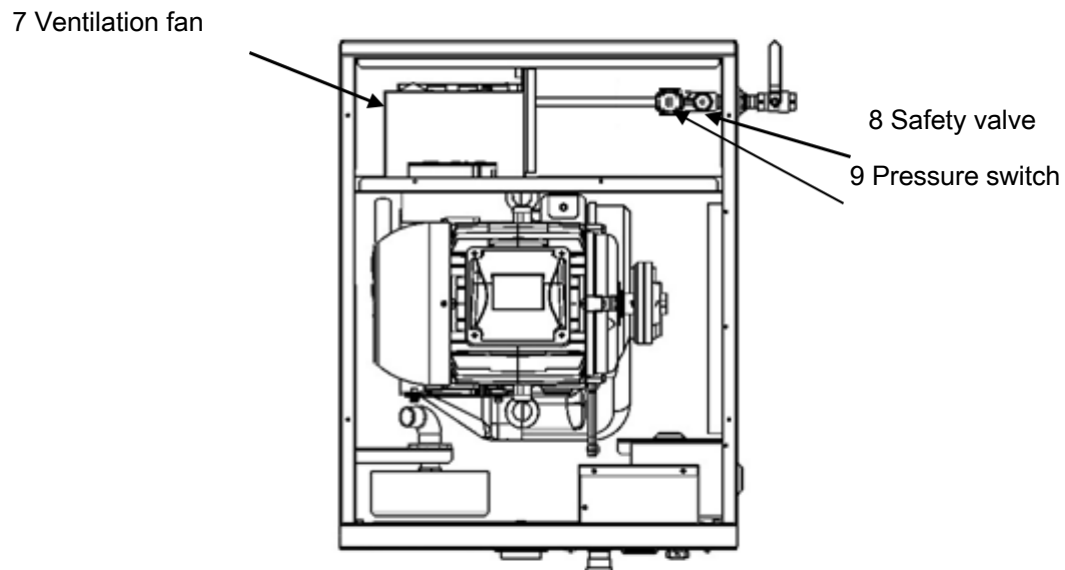
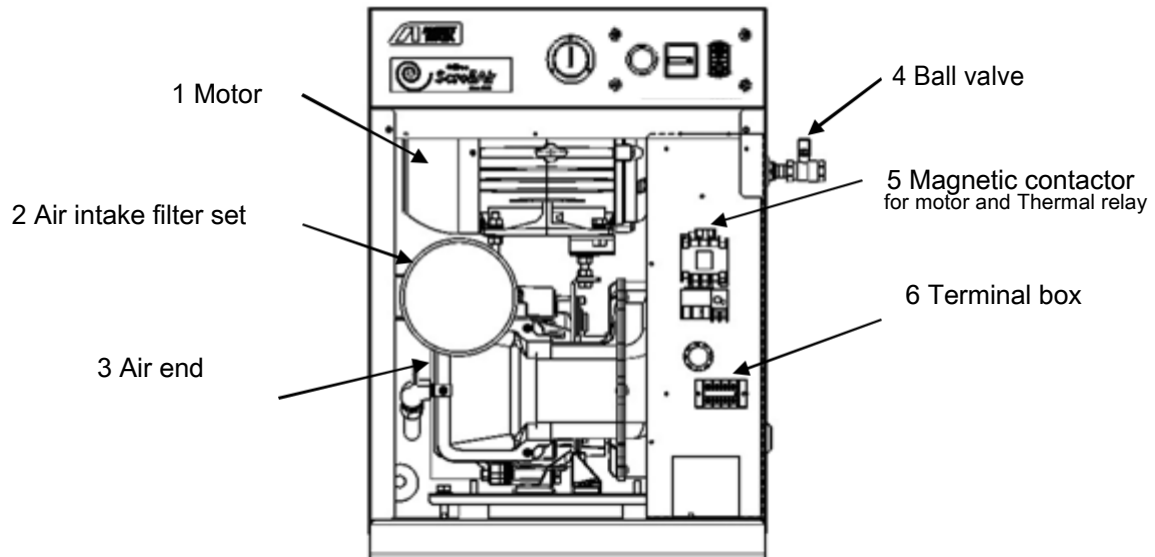
The nylon slings must be suitable for the weight of the compressor.



# Description of the individual components


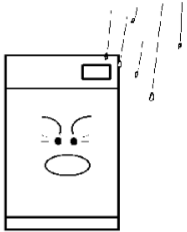
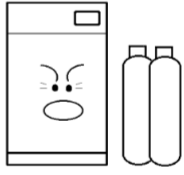
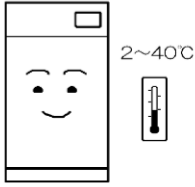
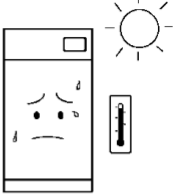




# Description of the individual components



# Installation

## ▣ Precautions during installation

 <b>CAUTION</b>	
<p><b>⊘ WARNING</b></p> <p>Do not use the unit in an area which is exposed to rain, steam or high humidity. High Humidity can cause electric shock or fire. Do not install in an area with corrosive gas (ammonia, acid, salinity, ozone gas, sulphur dioxide).</p> <p>If you do not follow this regulation, it can lead to a shorter operation lifetime.</p>	
<p><b>⊘ WARNING</b></p> <p>Install in an area which is free of explosive, flammable gases or organic solvents.</p> <p>They can cause explosion or fire.</p>	
<p><b>ⓘ Ambient temperature</b></p> <p><small>Use at an ambient temperature of 2 - 40 °C.</small></p> <p>Less than 2 °C will cause failure or freezing. More than 40 °C will cause failure.</p>	
<p><b>⊘ WARNING</b></p> <p>Do not use the unit in direct sunlight.</p> <p>Inside temperature will rise which can lead to malfunctions.</p>	
<p><b>ⓘ CAUTION</b></p> <p>Install this product on a flat floor.</p> <p>If this is not the case, it can cause vibrations, noise or lead to a shortened operation lifetime.</p>	
<p><b>⊘ CAUTION</b></p> <p>Install the unit in an area which is free of dust.</p> <p>Dust can lead to an increase in temperature and wear, resulting in shorter operation lifetime and failure.</p>	

# Installation

## ● Unpacking the unit



### **WARNING**

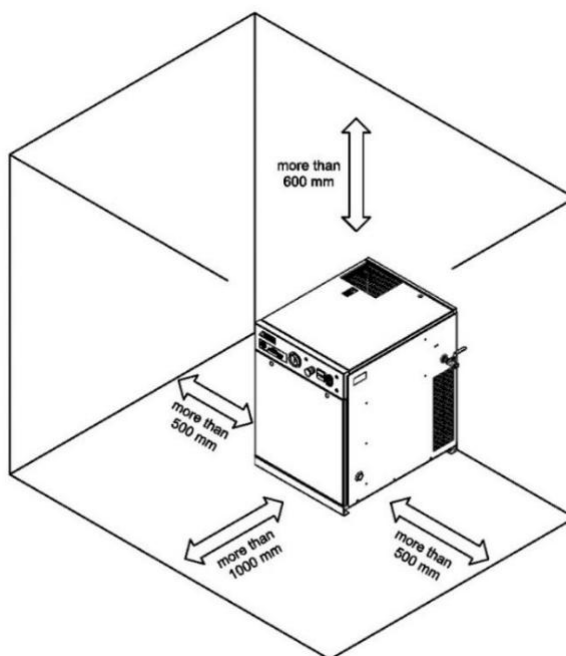
Heavy unit. Do not lift manually.

Make sure that there is enough space around the unit.

Please, handle the unit carefully. When you unpack the unit, watch out so that you do not hurt yourself.

## ● Installation space

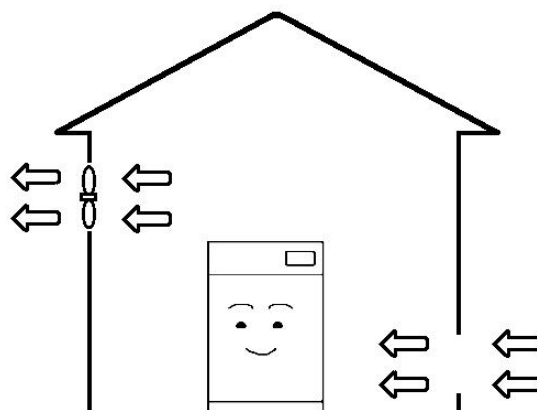
Make sure that there is enough space around the compressor just as illustrated below.



## ● Ventilation

When the unit is used in a totally closed room, install a fan to provide sufficient ventilation

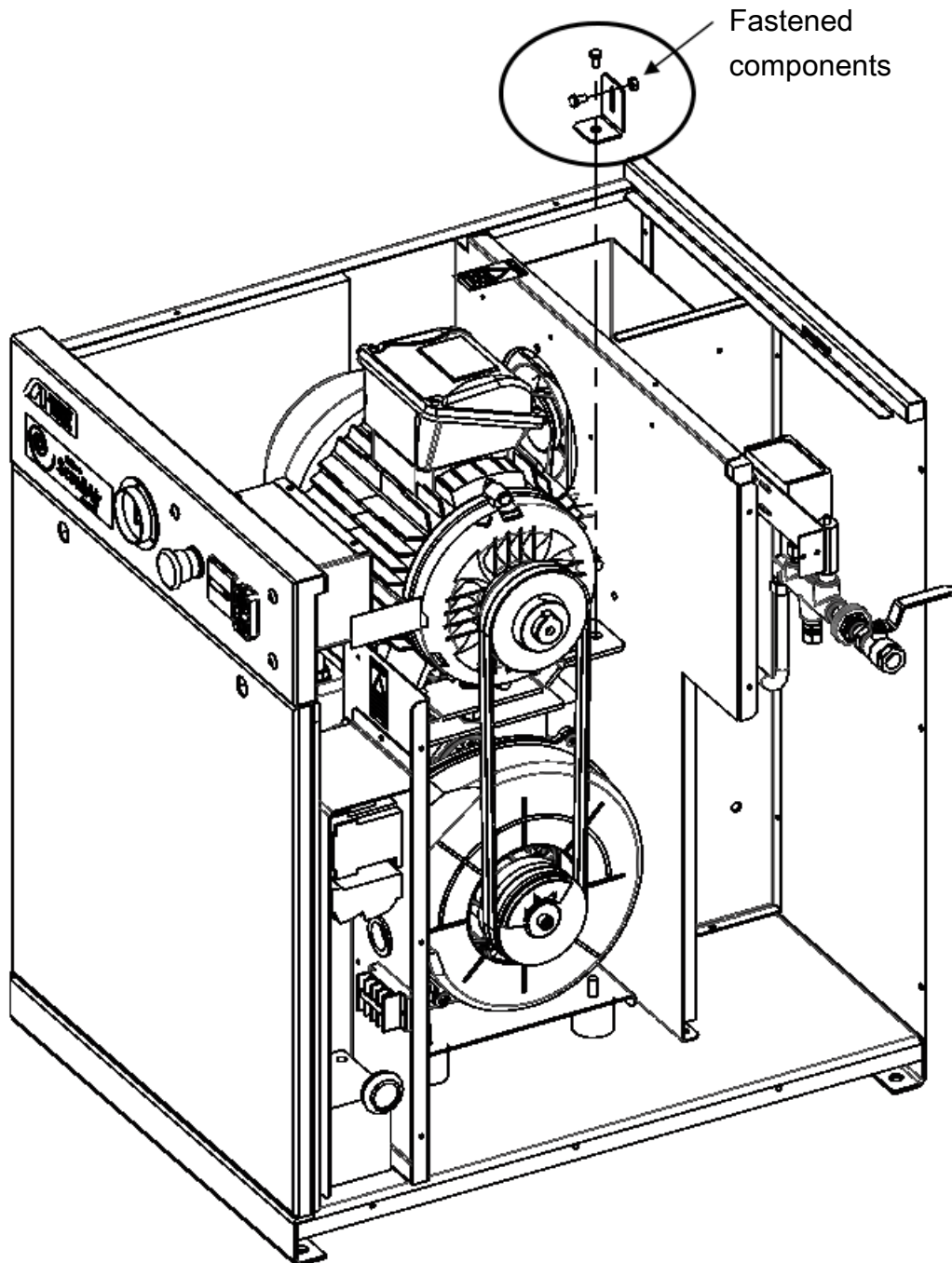
Model	fan air flow volume (m <sup>3</sup> /min)
SLPE-15E /151E	20
SLPE-22E / 221E-M	25
SLPE-22E / 221E-T	25
SLPE-37E / 371E	40



# Installation

## ● Removing the fastened components

Open the front cover panel and remove the yellow marked fixing screws (two pieces) as well as the L-shaped angle bracket (one piece). These parts serve to prevent damage during transportation.



# Installation

## ▣ Piping

- (1) When you determine the diameter of the pressure pipe, please, take into consideration a possible loss of pressure.
- (2) Connect the exit of the compressor with the compressed air line by using a rubber hose and a flexible tube.  
A direct connection to the rigid pipe can transfer the vibrations of the compressor to the compressed air piping.

**CAUTION** When you use a rubber hose, you should use a hose according to ISO 2398

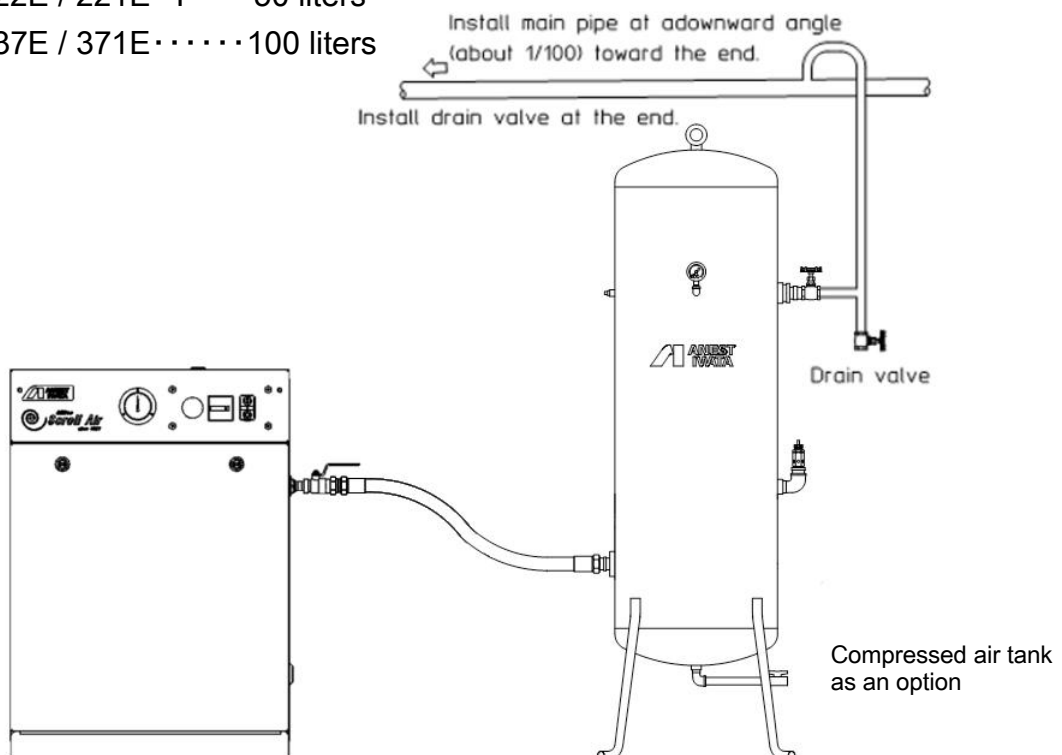


(or an even higher quality) for oil-free compressors. Rubber hoses that are not appropriate for oil-free compressors will crack.

- (3) If there is an incline or an arched section in the compressed air line, a drain valve must be installed at the bottom end.  
Furthermore you have to install a drain valve at the bottom end of the main line.
- (4) Installation of a compressed air tank (Compressed air tank is available as an option.)  
When you purchase a compressed air tank, you have to choose the following minimum capacity.

Install the compressed air tank directly after the compressor.

- SLPE-15E / 151E ..... 50 liters
- SLPE-22E / 221E -M ..... 50 liters
- SLPE-22E / 221E -T ..... 50 liters
- SLPE-37E / 371E ..... 100 liters





# Installation

## □ Wiring

### ● Precautions during wiring

#### **WARNING**

#### **Disconnect the plug of the main power supply**

Make sure you have disconnected the plug of the main power supply before you carry out any maintenance or wiring jobs.

If you fail to do so, there is a risk of heavy electrical shocks and extremely serious injuries.

#### **Ask a qualified electrician**

Ask a qualified electrician to perform the electric wiring job.

If not, it can cause electric shock or fire.

#### **Be careful with the wiring**

Do not extend the electric cable and do not use any electric cable with a diameter that is smaller than the specified diameter.

If you do not pay attention to this, it can cause the motor to burn out and lead to electrical shock or fire due to overheating of the cable.

#### **Install electrical disconnection device**

This unit does not have an electrical disconnection device. Make sure that an appropriate overcurrent protection and a fault-current circuit breaker are installed in a place where the operator can check and reach all relevant parts. Do not install these devices away from the compressor.

If you fail to pay attention to this, there is a danger of electric shocks, fire or object damage.

#### **Mind the power supply**

Make sure that power supply and frequency (50 Hz) correspond to the specifications that are stated on the unit (single phase 230 V / three-phase 400 V).

If this is not the case, it can lead to start-up problems and burnout of the motor.

#### **Be careful with the supply voltage**

Do not put the unit in operation with a primary voltage that is more than 2% below the specified voltage and do not run the unit in places where the voltage will drop by more than 2% when the unit is in operation. Do not run the unit under conditions that will allow the voltage to drop by more than 10% of the specified value while the unit is in operation.

If you do not avoid this, it can lead to start-up problems and burnout of the motor.

#### **Grounding connection**

Make sure the grounding connection has been carried out correctly and professionally.

If this is not the case, it can lead to electric shocks or fire.

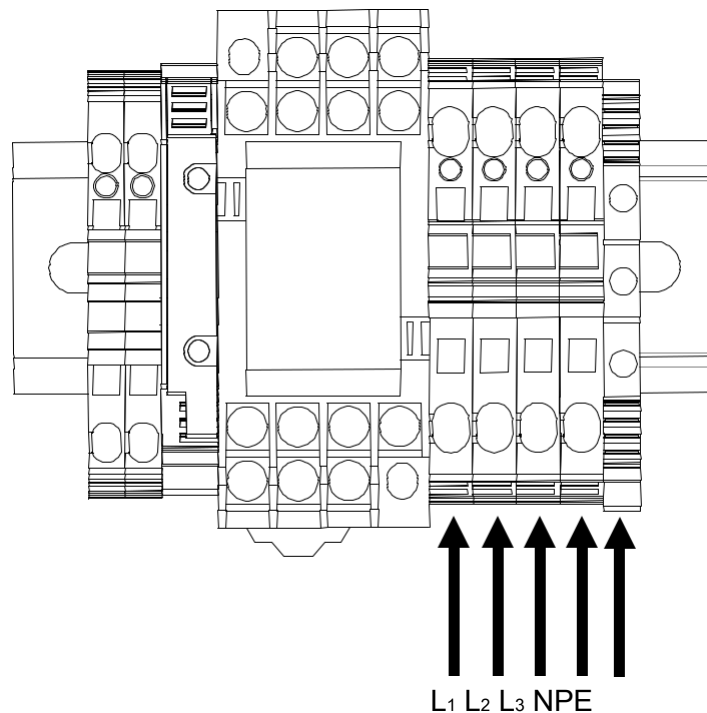
# Installation

- Instructions for wiring (three-phase model)
  - (1) Remove front cover panel.
  - (2) Remove the cover of the control box.
  - (3) Make sure the electric power supply (L1, L2, L3, N) and the grounding have been connected correctly.
- Wiring regulations

Model	Power supply	Cable sizes		Specified breaker / fuse A	Nominal dia. of clamping screw
		Min. size of wires mm <sup>2</sup>	Min. size of ground cable mm <sup>2</sup>		
SLPE-15E SLPE-151E	1-phase AC230 V	1.5	1.5	C16	M4
SLPE-22E-M SLPE-221E-M		2.5	2.5	C20	M4
SLPE-22E-T SLPE-221E-T	3-phase AC400 V	2.5	2.5	C16	M4
SLPE-37E SLPE-371E		2.5	2.5	C16	M4

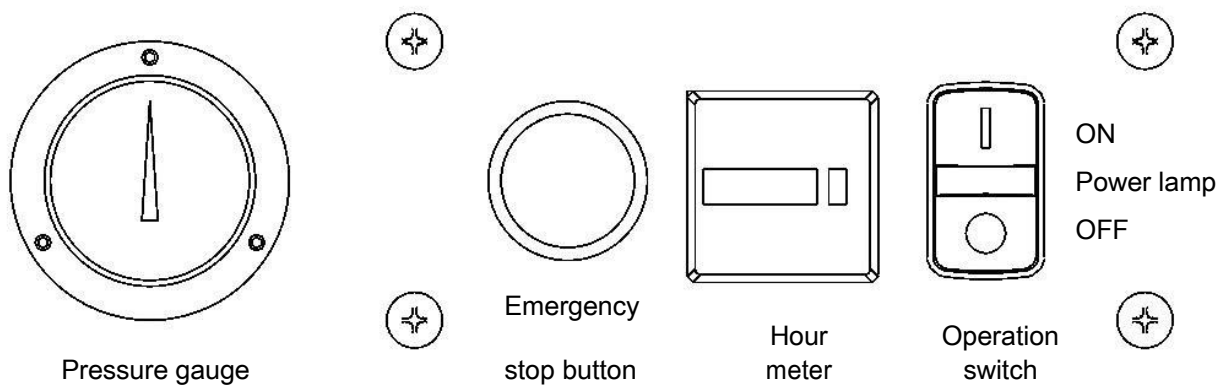
※1. The sizes stated above are valid for lengths of up to 20 m.

※2. We recommend a fault-current circuit breaker for the protection of the motor.



# Control panel

## ▣ Description of the control functions



### ● Pressure gauge

Indication of pressure in the receiver integrated into the unit

### ● Emergency stop button

Push the emergency stop button to stop the compressor immediately in case of emergency. After the problem has been resolved, unlock the button by pulling it out.

### ● Hour meter

Indicates the total of operation hours

### ● Operation switch

• Operation

Push operation switch ON button • Stop

Push operation switch OFF button • Power lamp

The power lamp is illuminated while the unit is in operation.

## ▣ Recovery blackout

If the power supply is cut off while the unit is in operation (with the operating switch “on”), the unit will start to operate again automatically as soon as the power supply will have been restarted.

# Initial operation

## ▣ Initial start-up

### ▣ Preparation

- (1) Check whether the pipes at the compressed air tank etc. have been firmly connected.
- (2) Open the ball valve of the compressor / dryer / tank.
- (3) Connect the compressor to the power source (main switch; plug).



### **CAUTION**

Make sure that the ball valve stays open while the compressor is in operation. If this is not the case, the compressor will continuously go into an on/off mode.

### ▣ Starting the compressor:

If all the above-mentioned prerequisites have been fulfilled, you can start the compressor by pressing the start button. In case the system pressure is below the switch-on pressure, the compressor will switch on. If, however, the system pressure is higher than the switch-on pressure, the compressor will not start until the system pressure will drop below the switch-on pressure.

### ▣ Stopping the compressor:

In order to switch off the compressor you have to press the stop button. Depending on the operating state of the compressor it will stop immediately or after a certain time. Press the emergency stop button for no other reasons but cases of emergency.

### ▣ Emergency stop button:

In case of emergency press the mushroom-shaped emergency stop button. The compressor will stop immediately. The display will then show the error message "Em-St". In order to restart the compressor, you have to eliminate the source of error or danger. After that you have to unlock the emergency stop button and reset the control panel by pressing the reset and enter buttons.

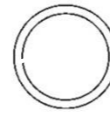
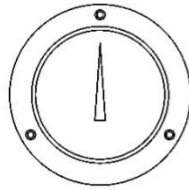
# Initial operation

## Initial start-up

### Ball valve

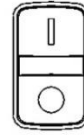
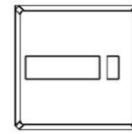
Turn of completely the valve of the air receiver.

Pressure gauge



Emergency stop button

Hour meter



Operation switch

### Operation

Turn on the operation switch and start to run the unit

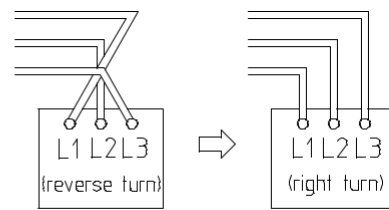
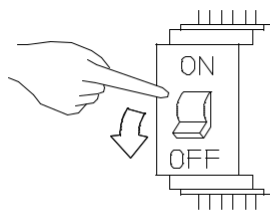


## ATTENTION

If the direction of rotation is incorrect, there is no increase in pressure and abnormal noise is detected.

Immediately press the compressor's emergency stop switch, turn off the main power source and switch two of the three current phases to achieve the correct direction of rotation.

Make sure the main power source is turned off to avoid the risk of electric shock when wiring.



(Change L1 and L3 with each other)

# Initial operation

- Check increase in pressure.

Check whether the compressor starts and the pressure increases.

- Check maximum increase in pressure.

Check whether the compressor reaches the maximum pressure while the ball valve is closed.

Model	max. pressure (bar)
SLPE-15E SLPE-22E-M / T SLPE-37E	8
SLPE-151E SLPE-221E-M / T SLPE-371E	10

- Switch-on pressure

When the compressor has reached its maximum pressure, slowly open the ball valve. Check whether the compressor restarts at minimum pressure.

Model	min. pressure (bar)
SLPE-15E SLPE-22E-M / T SLPE-37E	6.5
SLPE-151E SLPE-221E-M / T SLPE-371E	8

- Stop

Push stop switch to stop the compressor.

# Maintenance

## ▣ Precautions during maintenance work

### **WARNINGS**

#### **Prescribed maintenance work**

Make sure to carry out prescribed maintenance jobs. If this is not the case, it can lead to failures and a decrease in performance. Besides that there is a risk of injury.

#### **Switches and power supply**

Make sure to turn off the switch and to remove the power cord while performing maintenance work. If this is not the case, the unit can start up automatically.

#### **High temperature**

Make sure the unit has cooled down before you touch it.

If you touch a compressor while it is in operation or right after stopping it, you run the risk of inflicting serious burns upon yourself.

#### **Turn off the unit before starting maintenance work**

Make sure to turn off the unit and to release air pressure before you start maintenance work. Make sure you have disconnected the compressor from the power supply.

Carrying out maintenance work while the unit is in operation can lead to both failures and injuries.

#### **Proper maintenance work**

In order to have maintenance work done, please contact our office or our authorized service specialists.

Improper maintenance can lead to damage, failures or a shortened operation lifespan of the unit.

# Maintenance

The following maintenance intervals are based on an ambient temperature of approximately 30 °C. If the ambient temperature is higher, we recommend to shorten the maintenance intervals by 30 % for each increase of 5 °C.

◆ The standard maintenance period does not match our warranty period.

## ▣ Standard maintenance intervals

● For 8 bar models (SLPE-15E / 22E-M/T / 37E)

Components	Inspected	Periodical maintenance				
	Operating hours	Daily	Every 400 h Every 2 months	Every 2,500 h Once a year	Every 10,000 h Every 4 years	Every 20,000 h Every 8 years
	Interval					
Extraordinary noise and vibration	check	○				
Ventilation fan	Must rotate smoothly			○☆		
Intake filter element	clean / replace		○	●		
Intake port	clean		○			
Safety valve	check		○			
V-belt	check tension/replace		○ When performing first check	○	●☆	
Nylon tube	cracks or hardening			○☆	●☆	
Magnetic contactor	check			○☆		
Motor	check			○☆		
Pulley	check				○☆	
Pressure switch	check				○☆	
Pressure gauge	check				○☆	
Aftercooler *	clean				○☆	
Non-return valve *	replace				●☆	
Tip seals *	replace				●☆	
Grease *	re-grease				●☆	
Air end fan * FS-OS fin *	clean				○☆	
Air end replacement *	replace					●☆

\*Please refer to the maintenance manual.

▣inspect ●replace

☆ Difficult to carry out for the customer. Please contact our dealership. FS fixed scroll, OS orbital scroll



# Maintenance

## ● For 10 bar models (SLPE-151E / 221E-M/T / 371E)

Components	Inspected	Periodical maintenance					
	Operating hours	Daily	Every 400 h Every 2 months	Every 2,500 h Once a year	Every 5,000 h Every 2 years	Every 10,000 h Every 4 years	Every 15,000 h Every 6 years
	Interval						
Extraordinary noise and vibration	check	○					
Ventilation fan	Must rotate smoothly			○☆			
Intake filter element	clean / replace		○	●			
Intake port	clean		○				
Safety valve	check		○				
V-belt	Check tension/replace		○ When performing first check	○		●☆	
Nylon tube	cracks or hardening			○☆		●☆	
Magnetic contactor	check			○☆			
Motor	check			○☆			
Pulley	check					○☆	
Pressure switch	check					○☆	
Pressure gauge	check					○☆	
Aftercooler *	clean					○☆	
Non-return valve *	replace					●☆	
Tip seals *	replace				●☆		
Grease *	re-grease				●☆		
Air end fan * FS-OS fin *	clean				○☆		
Air end replacement *	replace						●☆

\*Please refer to the maintenance manual.

□inspect ●replace

FS fixed scroll, OS orbital scroll

☆ Difficult to carry out for the customer. Please contact our dealership.

The air intake filter is a wear and tear part. We recommend to replace it with a new one before the exchange deadline will have been reached.

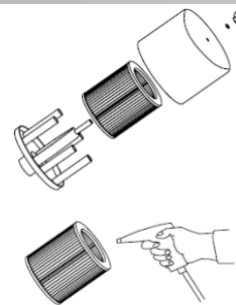
# Maintenance

## ▣ How to carry out maintenance work

Every 400 operating hours or every two months

### ● Intake air filter

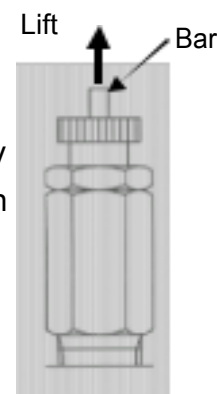
- ① Remove the cover of the intake air filter as shown in the picture.
- ② Remove the filter element as shown in the picture.
- ③ Blow dust and foreign particles out of the filter element by means of a compressed air gun.



If the filter element is extremely dirty, replace it with a new one. If you detect dust on the inside of the cover of the intake air filter, you need to remove it with a compressed air gun. Do not unscrew the intake air filter from the air end. If the connection piece of the intake air filter at the air end is dirty, clean it by means of a soft cloth. Make sure no dust can enter the inside of the air end.

### ● Safety valve

Make sure you always wear safety goggles when you carry out the following activity because air can escape from the safety valve. Lift the bar by hand when the maximum pressure has been reached and make sure the air is released through the safety valve.



Every 2,500 operating hours or once a year

### ● Intake air filter Replace filter element

Clean the connection piece of the intake air filter at the air end and the filter cover. This must be done in addition to the cleaning every 400 operating hours.

### ● Nylon pipe (Air intake, connection, pressure gauge)

Make sure there is no damage.

## ▣ Magnetic contactor

Make sure the unit has been disconnected from the power supply according to DIN VDE 0105. After that remove the inner cover of the electric box. Make sure all screws have been tightened firmly. If any discoloration is visible, you should contact your dealership.

# Maintenance

## ▣ How to carry out maintenance work


- Belt tension

Check if the V-belt makes sliding noises due to low belt tension when starting the unit. If this is the case, the belt tension must be readjusted or the V-belt must be replaced with a new one. If the V-belt tension is lower than stated in the table below, it is necessary to readjust it accordingly. In order to measure the V-belt tension, you need a special tool. Contact your dealership in order to readjust the V-belt tension if it is necessary.

Model	Readjustment minimum frequency Hz	Readjustment target Hz Tolerance ±5	Replacement of belts Hz Tolerance ±5
SLPE-15E / 151E	60	70	80
SLPE-22E / 221E-M	65	75	85
SLPE-22E / 221E-/T			
SLPE-37E / 371E	70	80	90

## ▣ Large maintenance intervals

- After 10,000 operating hours \* 0.8 MPa (8 bar)  
Make sure to carry out maintenance work every 10,000 hours
- After 5,000 operating hours \* 1.0 MPa (10 bar)  
Make sure to carry out maintenance every 5,000 hours

<b>Important</b>	Contact our dealership and ask for additional maintenance jobs.
 <b>CAUTION</b>	If you regularly put the unit into operation after a maintenance interval has expired, we will not accept any responsibility for malfunctions and accidents.

# Problems and remedies

## ▣ Measures to be taken in extraordinary situations

In the cases listed below the situation and its causes need to be examined meticulously and the necessary measures need to be taken. If you do not find the cause and if you cannot take corresponding measures, contact the distributor who sold the unit to you.

In the following chart we show the causes of the problems. If you have problems with the unit, consult this user manual.

※ This sign means that corrective measures cannot be taken by the customer.

Please, contact our dealership.

### ● Compressor does not start.

Problems	Causes	Remedies
The lamp indicating power supply is not illuminated.	Electric supply is not turned on.	Turn on electric supply.
	Electric supply is not connected correctly.	Establish proper connection to power supply.
	Failure of operation switch, emergency switch, lamp, relay, magnetic contactor or failure of wiring.	Check, repair or replace it. ※
The lamp indicating power supply is illuminated, but the unit doesn't start.	Failure of operation switch, emergency switch, relay, magnetic contactor or incorrect wiring.	Check, repair or replace it. ※
	Failure of motor.	Check, repair or replace it. ※
	Voltage is too low.	Check the capacity of the power supply and the size of the supply cable and – if necessary – replace it with a suitable cable.
	Failure of air end.	Check, repair or replace it. ※

### ● Unit is in operation, yet an extraordinary or erroneous circumstance has been found.

Problems	Causes	Remedies
Outlet pressure does not increase.	There is a leak in the air piping.	Check and repair it.
	Air end rotates backwards.	Change the phases.
	Error of pressure switch setting.	Readjust. ※
	Intake filter is clogged.	Clean it and replace it.
Safety valve is triggered.	Failure of safety valve.	Replace it. ※
	Error of pressure switch setting.	Correct the setting. ※
	Failure of pressure switch.	Clean or replace it. ※
The compressor starts and stops continuously or at short intervals.	The ball valve of the compressor is closed.	Open the ball valve of the compressor.
Unusual noise.	Air end rotates backwards.	Change the phases.
	Failure of air end.	Check, repair or replace it. ※
	The V-belt slips.	☆ Readjust the V-belt.
	Motor failure.	Check, repair or replace it. ※
	Cooling fan has contact with other parts.	Check and repair it.
	Screws are loose.	Check and tighten them.

# Technical data

## ▣ 1.5 kW

Compressor designation		SLPE-15E	SLPE-151E	
Compressor	Air end	SL-140EB		
	Installation	indoors		
	Intake	pressure	Atmospheric pressure	
		temperature	2~40°C	
	Operation control	Pressure switch		
	Operating pressure	bar	6.5~8	8~10
	F.A.D. (*1)	L/min	155	119
	Rotation speed (50 Hz)	min <sup>-1</sup>	2260	1850
	Drive method		V-belt	
	Discharge air	°C	Intake temperature + a maximum of 30 °C	
	Air outlet		Rc 3/8" [ball valve]	
	Noise level (*2)(*3)(*4)	dB A	55	56
	Ground vibration	dB A	Less than 45	
Motor	Type	One-phase, totally-enclosed, two-pole, insulation according to class F		
	Rated output	kW	1.5	
	Voltage	V	one-phase AC 230	
	Rated current 50 Hz	A	8.9	
	Starting system		Direct on line with magnetic contactor (DOL)	
Protection	Overcurrent protection	Equipped		
Dimensions weight	Dimensions(L□W□H) (*5)	mm	535□685□745	
	Weight	kg	80	

### Notes

- (1) F.A.D. means average discharge air volume at 8 (10) bar (max. operating pressure) converted into atmospheric pressure. It is not a guaranteed figure.
- (2) Noise level measured at a distance of 1 m according to ISO 1120; tolerance 3 dB (A).
- (3) Noise level does not exceed 70 dB (A).
- (4) Maximum noise level is 64 dB (A) measured on the rear side.
- (5) Dimensions are outer dimensions without protruding parts.

# Technical data

## ▣ 2.2 kW

Compressor designation		SLPE-22E-M	SLPE-221E-M	
M o t o r	Air end	SL-140EB		
	Installation	indoors		
	Intake	pressure	Atmospheric pressure	
		temperature	2~40°C	
	Operation control	Pressure switch		
	Operating pressure	bar	6.5~8	8~10
	F.A.D. (*1)	L/min	243	207
	Rotation speed (50Hz)	min <sup>-1</sup>	3200	2850
	Drive method		V-belt	
	Discharge air	°C	Intake temperature + a maximum of 30 °C	
	Air outlet		Rc 3/8" [ball valve]	
	Noise level (*2)(*3)(*4)	dB A	57	58
	Ground vibration	dB A	Less than 45	
P r o t e c t i o n	Type	One-phase, totally-enclosed, two-pole, insulation according to class F		
	Rated output	kW	2.2	
	Voltage	V	one-phase AC 230	
	Rated current 50Hz	A	14.2	
	Starting system		Direct on line with magnetic contactor (DOL)	
D i m e n s i o n s  w e i g h t	Overcurrent protection		Equipped	
	Dimensions(L□W□H) (*5)	mm	535□685□745	
	Weight	kg	87	

### Notes

- (1) F.A.D. means average discharge air volume at 8 (10) bar (max. operating pressure) converted into atmospheric pressure. It is not a guaranteed figure.
- (2) Noise level measured at a distance of 1 m according to ISO 11201; tolerance 3 dB( A).
- (3) Noise level does not exceed 70 dB (A).
- (4) Maximum noise level is 64 dB (A) measured on the rear side.
- (5) Dimensions are outer dimensions without protruding parts.

# Technical data

## ▣ 2.2 kW

Compressor designation			SLPE-22E-T	SLPE-221E-T
	Air end		SL-140EB	
	Installation		indoors	
	Intake	pressure	Atmospheric pressure	
		temperature	2~40°C	
	Operation control		Pressure switch	
	Operating pressure	bar	6.5~8	8~10
	F.A.D. (*1)	L/min	243	207
	Rotation speed (50 Hz)	min <sup>-1</sup>	3200	2850
	Drive method		V-belt	
	Discharge	air °C	Intake temperature + a maximum of 30 °C	
	Air outlet		Rc 3/8" [ball valve]	
	Noise level	(*2)(*3)(*4) dB A	57	58
	Ground vibration		dB A	
Mot Or	Type		Three-phase, totally-enclosed, two-pole, insulation according to class F	
	Rated output	kW	2.2	
	Voltage	V	three-phase AC 400	
	Rated current 50 Hz	A	4.5	
	Starting system		Direct on line with magnetic contactor (DOL)	
Pro tec t	Overcurrent protection		Equipped	
Dimensions weight	Dimensions(L□W□H) (*5) mm		535□685□745	
	Weight kg		85	

### Notes

- (1) F.A.D. means average discharge air volume at 8 (10) bar max. operating pressure converted into atmospheric pressure. It is not a guaranteed figure.
- (2) Noise level measured at a distance of 1 m according to ISO 11201; tolerance 3 dB (A).
- (3) Noise level does not exceed 70 dB (A).
- (4) Maximum noise level is 64 dB (A) measured on the rear side.
- (5) Dimensions are outer dimensions without protruding parts.

# Technical data

## ▣ 3.7 kW

Compressor designation		SLPE-37E	SLPE-371E	
	Air end	SL-165E	SL-1651E	
	Installation	indoors		
	Intake	pressure	Atmospheric pressure	
		temperature	2~40°C	
	Operation control	Pressure switch		
	Operating pressure	bar	6.5~8	8~10
	F.A.D. (*1)	L/min	404	337
	Rotation speed (50Hz)	min <sup>-1</sup>	3150	
	Drive method		V-belt	
	Discharge	air °C	Intake temperature + a maximum of 30 °C	
	Air outlet		Rc 3/8" [ball valve]	
	Noise level (*2)(*3)(*4)	dB A	59	60
	Ground vibration	dB A	Less than 45	
Mot or	Type	Three-phase, totally-enclosed, 2-pole, insulation according to class F		
	Rated output	kW	4	
	Voltage	V	three-phase AC 400	
	Rated current 50 Hz	A	7.8	
	Starting system		Direct on line with magnetic contactor (DOL)	
Pro tect	Overcurrent protection	Equipped		
Dimensions weight	Dimensions(L□W□H) (*5)	mm	535□685□745	
	Weight	kg	115	

### Notes

- (1) F.A.D. means average discharge air volume at 8 (10) bar max. operating pressure converted into atmospheric pressure. It is not a guaranteed figure.
- (2) Noise level measured at a distance of 1 m according to ISO 11201; tolerance 3 dB (A).
- (3) Noise level does not exceed 70 dB (A).
- (4) Maximum noise level is 64 dB (A) measured on the rear side.
- (5) Dimensions are outer dimensions without protruding parts.



# Appendix

## Outer dimensions

### 1.5 kW

Notice

1. Place and operate the compressor on a level surface.
2. Make sure you place and operate the compressor indoors.
3. This compressor is air-cooled.

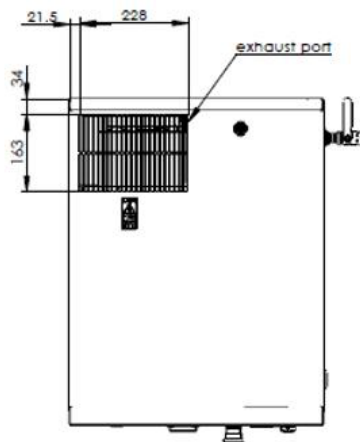
So if you put the compressor into operation in a small room, the room temperature will rise. If the room temperature will exceed 40°C, please start the exhaust duct or ventilating fan.

4. When you decide about the location of the compressor, please consider the space you need for maintenance work and piping. Don't let hot air or dust get into the intake port.

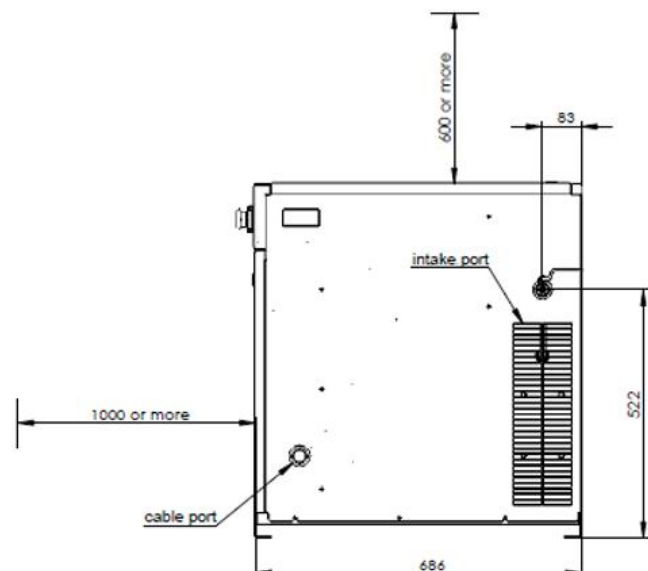
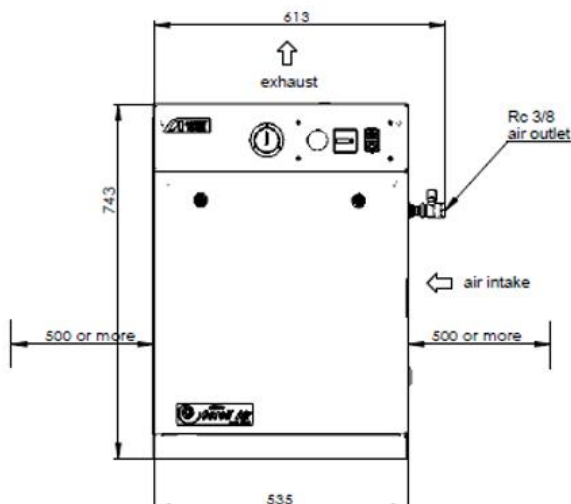
(Front and right side require a minimum distance of 500 mm from a wall. The top of the compressor requires a minimum distance of 600 mm from the ceiling, the back and left side require a minimum distance of 300 mm from a wall). These minimum distances are required, if the compressor cannot be moved from its location.

5. With regard to details about the electric wiring, please refer to the instruction manual.

	SLPE-15E	SLPE-151E
operating pressure	6,5 ~ 8 bar	8 ~ 10 bar
F.A.D.	155 l/min	119 l/min
control	pressure switch	pressure switch
speed	2260 min <sup>-1</sup>	1850 min <sup>-1</sup>
noise level	55 dB (A)	56 dB (A)
power supply	1-phase 230 V	1-phase 230 V
dimensions (LWH)	535x685x745	535x685x745
weight	80 kg	80 kg



- (1) F.A.D. means average discharge air volume at maximum operating pressure converted into atmospheric pressure. It is not a guaranteed figure.
- (2) Noise level measured at a distance of 1 m according to ISO 11201; tolerance 3dB (A).
- (3) Noise level does not exceed 70 dB (A).
- (4) Maximum noise level is 64.0 dB (A) measured on the rear side.
- (5) Dimensions are outer dimensions without protruding parts.



# Appendix

## Outer dimensions

### 2.2 kW

Notice

1. Place and operate the compressor on a level surface.
2. Make sure you place and operate the compressor indoors.
3. This compressor is air-cooled.

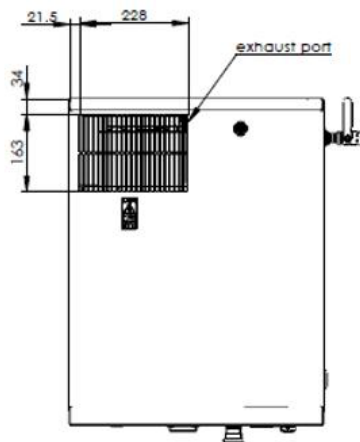
So if you put the compressor into operation in a small room, the room temperature will rise. If the room temperature will exceed 40°C, please start the exhaust duct or ventilating fan.

4. When you decide about the location of the compressor, please consider the space you need for maintenance work and piping. Don't let hot air or dust get into the intake port.

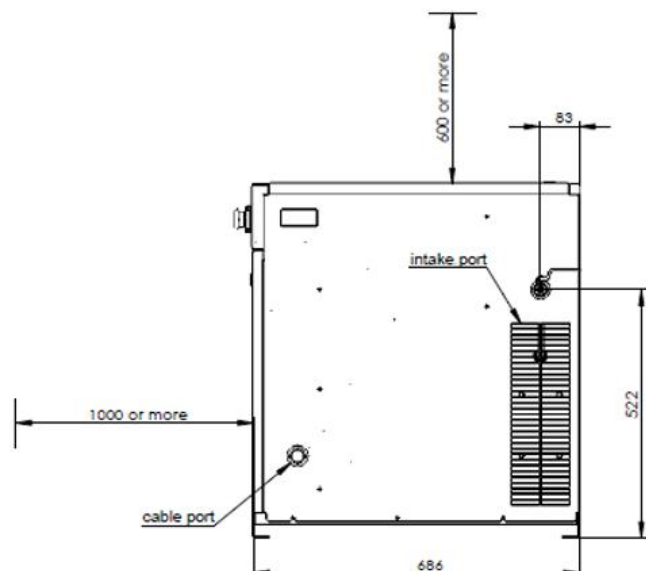
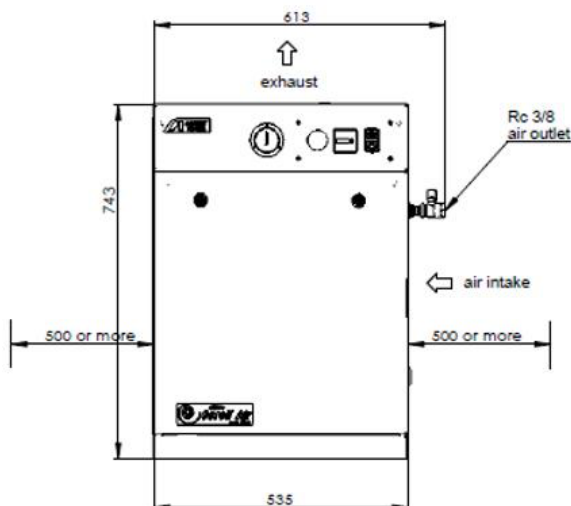
(Front and right side require a minimum distance of 500 mm from a wall. The top of the compressor requires a minimum distance of 600 mm from the ceiling, the back and left side require a minimum distance of 300 mm from a wall). These minimum distances are required, if the compressor cannot be moved from its location.

5. With regard to details about the electric wiring, please refer to the instruction manual.

	SLPE-22E-M	SLPE-221E-M
operating pressure	6,5 ~ 8 bar	8 ~ 10 bar
F.A.D.	243 l/min	207 l/min
control	pressure switch	pressure switch
speed	3200 min <sup>-1</sup>	2850 min <sup>-1</sup>
noise level	57 dB (A)	58 dB (A)
power supply	1-phase 230 V	1-phase 230 V
dimensions (LWH)	535x685x745	535x685x745
weight	87 kg	87 kg



- (1) F.A.D. means average discharge air volume at maximum operating pressure converted into atmospheric pressure. It is not a guaranteed figure.
- (2) Noise level measured at a distance of 1 m according to ISO 11201; tolerance 3dB (A).
- (3) Noise level does not exceed 70 dB (A).
- (4) Maximum noise level is 64.0 dB (A) measured on the rear side.
- (5) Dimensions are outer dimensions without protruding parts.



# Appendix

## Outer dimensions

### 2.2 kW

Notice

1. Place and operate the compressor on a level surface.
2. Make sure you place and operate the compressor indoors.
3. This compressor is air-cooled.

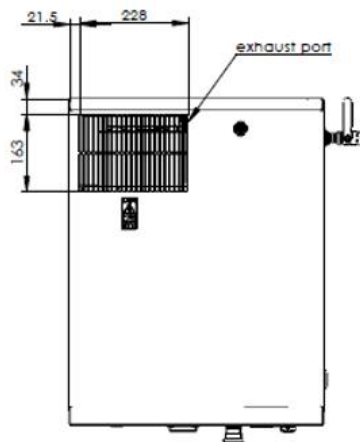
So if you put the compressor into operation in a small room, the room temperature will rise. If the room temperature will exceed 40°C, please start the exhaust duct or ventilating fan.

4. When you decide about the location of the compressor, please consider the space you need for maintenance work and piping. Don't let hot air or dust get into the intake port.

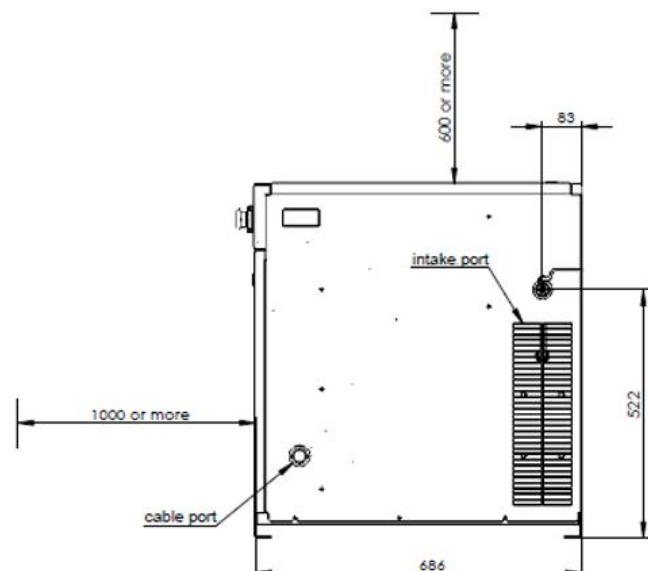
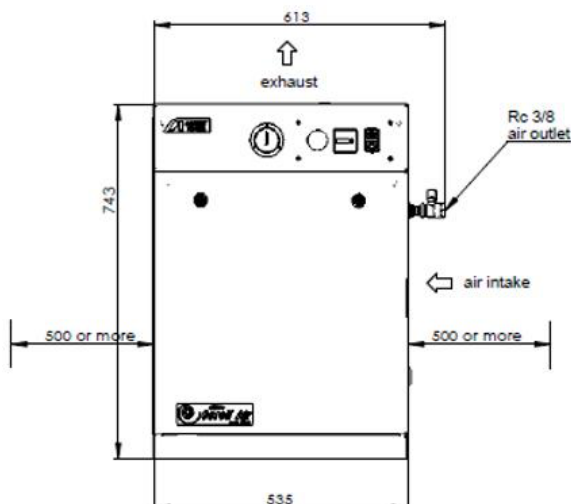
(Front and right side require a minimum distance of 500 mm from a wall. The top of the compressor requires a minimum distance of 600 mm from the ceiling, the back and left side require a minimum distance of 300 mm from a wall). These minimum distances are required, if the compressor cannot be moved from its location.

5. With regard to details about the electric wiring, please refer to the instruction manual.

	SLPE-22E-T	SLPE-221E-T
operating pressure	6,5 ~ 8 bar	8 ~ 10 bar
F.A.D.	243 l/min	207 l/min
control	pressure switch	pressure switch
speed	3200 min <sup>-1</sup>	2850 min <sup>-1</sup>
noise level	57 dB (A)	58 dB (A)
power supply	3-phase 400 V	3-phase 400 V
dimensions (LWH)	535x685x745	535x685x745
weight	85 kg	85 kg



- (1) F.A.D. means average discharge air volume at maximum operating pressure converted into atmospheric pressure. It is not a guaranteed figure.
- (2) Noise level measured at a distance of 1 m according to ISO 11201; tolerance 3dB (A).
- (3) Noise level does not exceed 70 dB (A).
- (4) Maximum noise level is 64.0 dB (A) measured on the rear side.
- (5) Dimensions are outer dimensions without protruding parts.



# Appendix

## Outer dimensions

### 3.7 kW

Notice

1. Place and operate the compressor on a level surface.
2. Make sure you place and operate the compressor indoors.
3. This compressor is air-cooled.

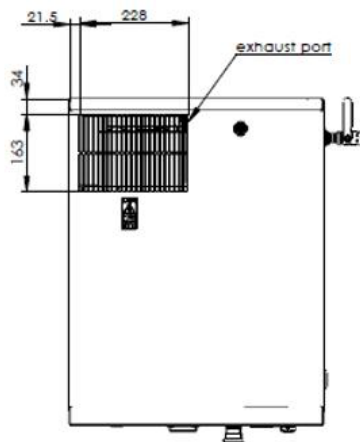
So if you put the compressor into operation in a small room, the room temperature will rise. If the room temperature will exceed 40°C, please start the exhaust duct or ventilating fan.

4. When you decide about the location of the compressor, please consider the space you need for maintenance work and piping. Don't let hot air or dust get into the intake port.

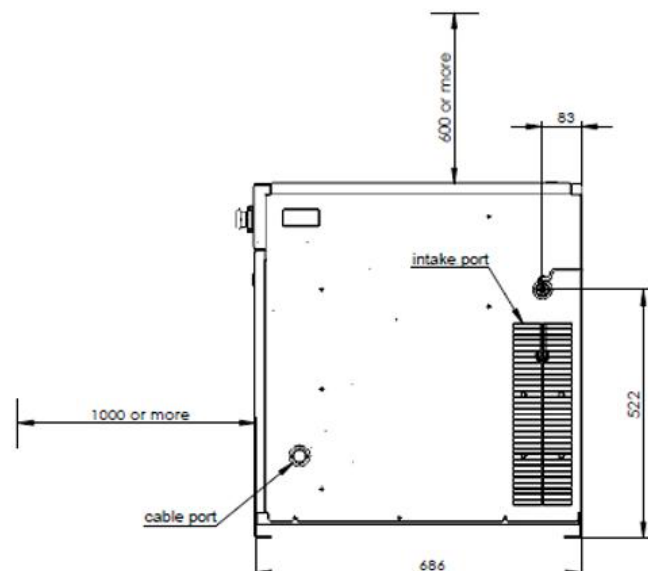
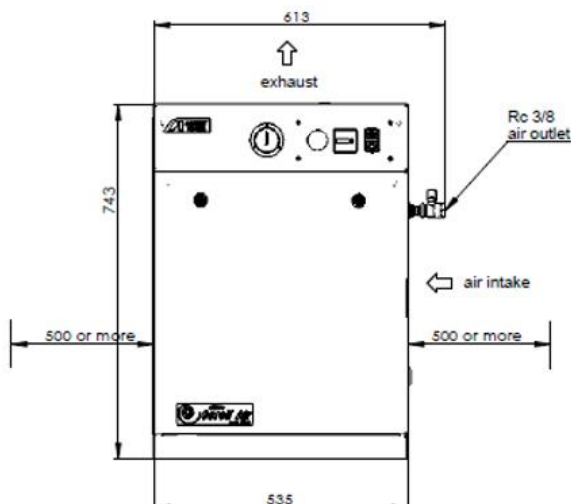
(Front and right side require a minimum distance of 500 mm from a wall. The top of the compressor requires a minimum distance of 600 mm from the ceiling, the back and left side require a minimum distance of 300 mm from a wall). These minimum distances are required, if the compressor cannot be moved from its location.

5. With regard to details about the electric wiring, please refer to the instruction manual.

	SLPE-37E	SLPE-371E
operating pressure	6,5 ~ 8 bar	8 ~ 10 bar
F.A.D.	404 l/min	337 l/min
control	pressure switch	pressure switch
speed	3150 min <sup>-1</sup>	3150 min <sup>-1</sup>
noise level	59 dB (A)	60 dB (A)
power supply	3-phase 400 V	3-phase 400 V
dimensions (LWH)	535x685x745	535x685x745
weight	115 kg	115 kg

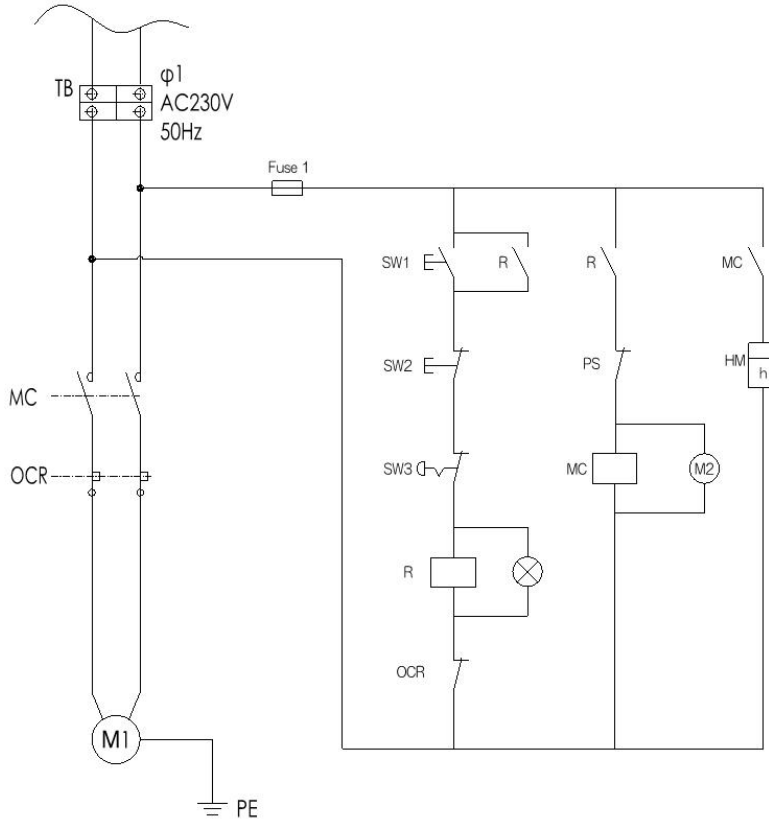


- (1) F.A.D. means average discharge air volume at maximum operating pressure converted into atmospheric pressure. It is not a guaranteed figure.
- (2) Noise level measured at a distance of 1 m according to ISO 11201; tolerance 3dB (A).
- (3) Noise level does not exceed 70 dB (A).
- (4) Maximum noise level is 64.0 dB (A) measured on the rear side.
- (5) Dimensions are outer dimensions without protruding parts.



# Appendix

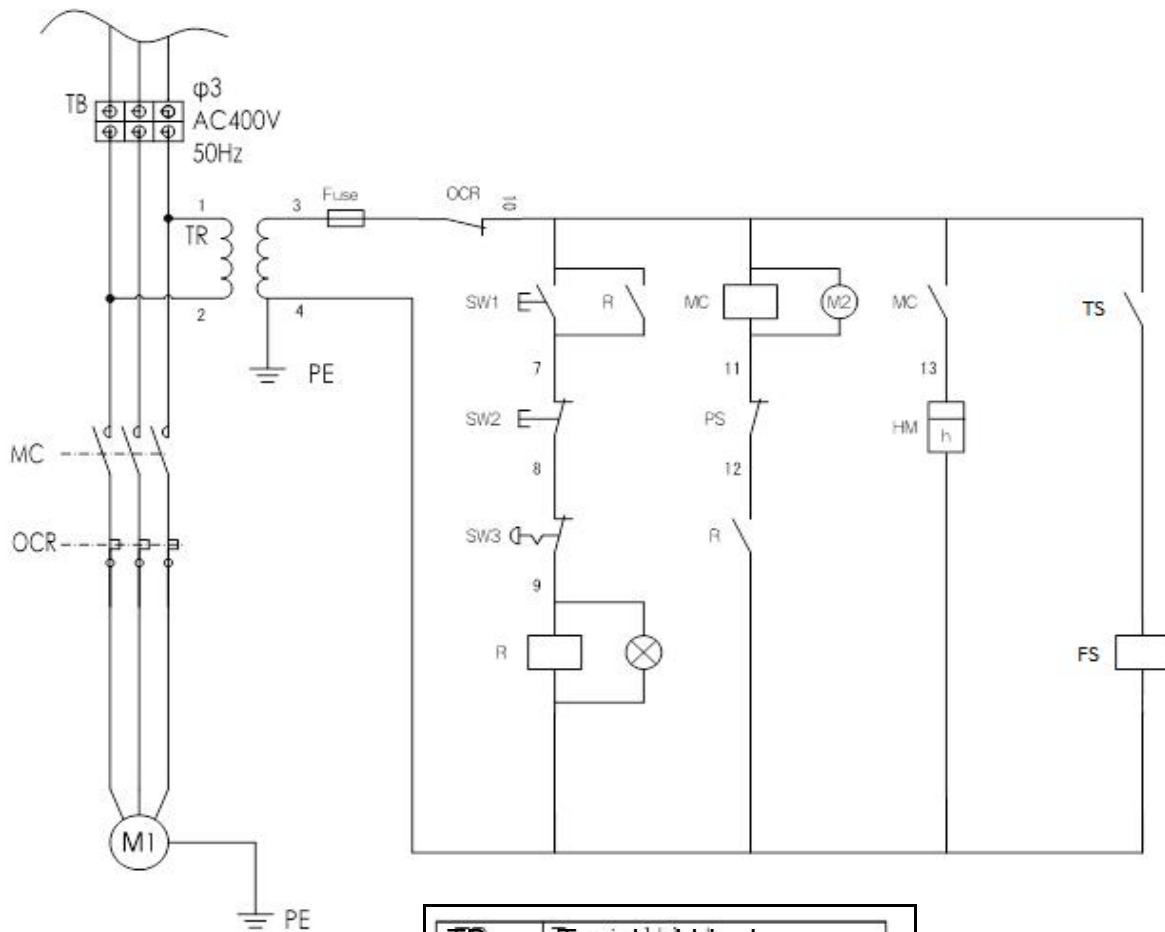
## □ Circuit diagram



TB	TB	Terminal block
SW1	SW1	Operation switch for ON
SW2	SW2	Operation switch for OFF
SW3	SW3	Emergency switch
R	R	Relay
MC	MC	Magnetic conductor
OCR	OCR	Thermal relay
PS	PS	Pressure switch
Fuse	Fuse	Fuse
M1	M1	Motor for compressor
M2	M2	Motor for fan
PE	PE	Earth

# Appendix

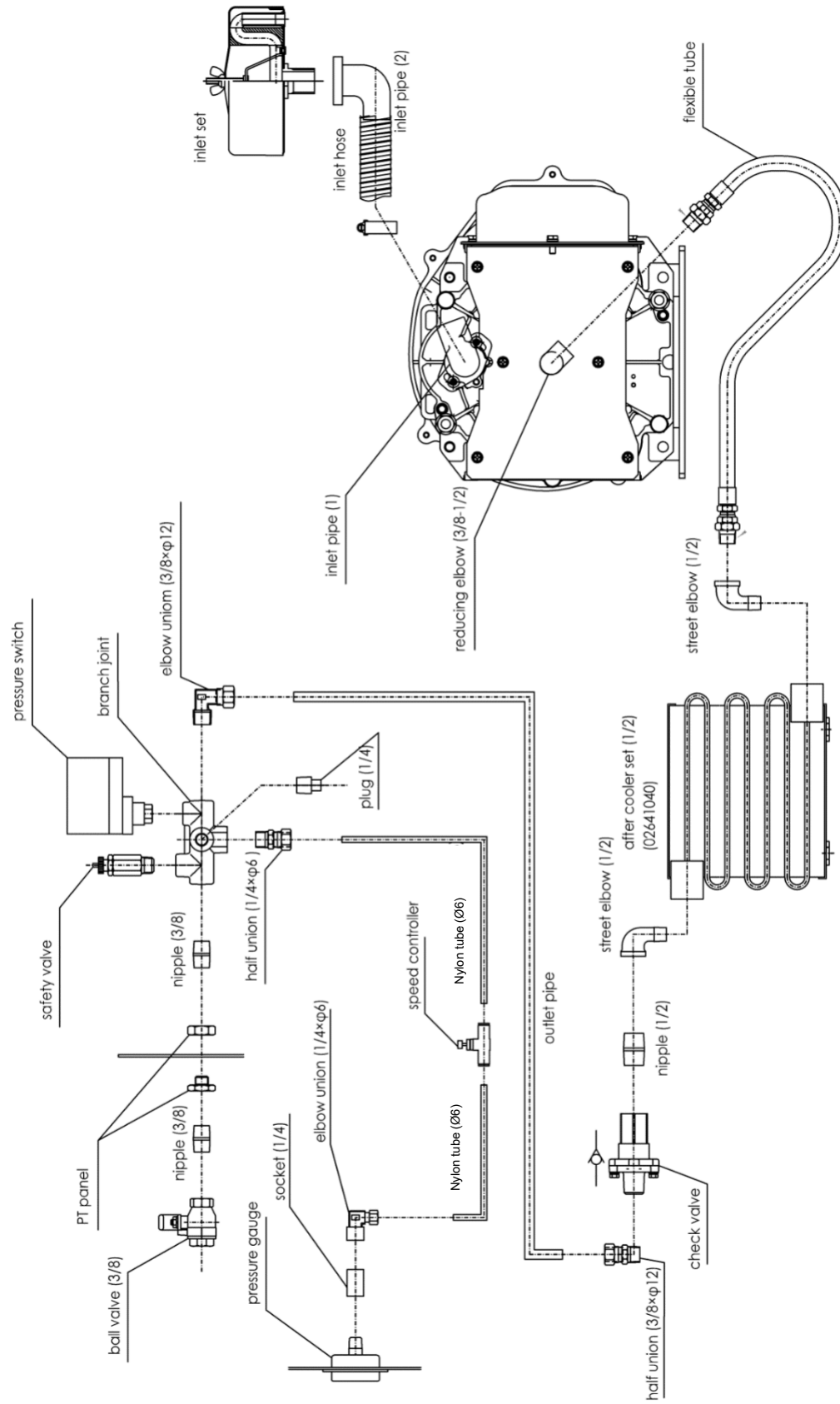
## □ Circuit diagram



TB	Terminal block
SW1	Operation switch for ON
SW2	Operation switch for OFF
SW3	Emergency switch
SW3	Emergency switch
RC	Relay
MC	Magnetic conductor
OCR	Overcurrent relay
TR	Down transformer
PS	Pressure switch
TR	Down transformer
FUSE	Fuse
RS	Pressure switch
M1	Motor for Compressor
Fuse	Fuse for Fan
M1	Motor for compressor
M2	Motor for fan
FS	Heater
PE	Earth
TS	Thermal Switch
FS	Heater

# Appendix

## ▣ Piping diagram



# Warranty

## ▣ Warranty

- The products or spare parts of BERG Kompressoren GmbH are subject to a guarantee of twenty-four (24) months starting from the invoice date or five thousand (5,000) operating hours, depending on which variant applies first, unless otherwise agreed in writing.
- The warranty covers only manufacturing faults and material defects. Any spare part replacement or repair operation is covered only, if it is carried out by our technicians at our service shops unless otherwise stated in writing.
- The warranty does not cover labor cost for removing or reinstalling the product or spare parts. If for practical purposes one of our technicians is sent to the premises, the working hours plus traveling time and expenses will be invoiced according to current prices.
- Our warranty does not cover direct or indirect damage to people or property caused by our equipment. It covers no repair operations carried out by the customer or by a third party, either.
- This warranty is valid only in EU countries.

## ▣ The warranty does not cover

- Damage or breakdown caused by improper use or assembly.
- Damage or breakdown caused by improper installation not in accordance with the written instructions in this user manual.
- Damage or breakdown caused by the use of spare parts that are different from the original or have not been recommended by us.
- Damage or breakdown caused by bad preservation.
- Damage or breakdown caused by non-compliance with the written instructions in this manual.
- Damage or breakdown caused by a deviation from the operating conditions with regard to temperature, dirt or corrosive materials.
- Damage or breakdown caused by corrosion, wear and tear or the use of non-soluble lubricants.
- Damage or breakdown caused by natural disasters, acts of war or other unforeseeable circumstances.
- Components that are subject to wear and tear or consumption.



# Warranty

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## ▣ Loss of warranty

- If the serial number was damaged or removed.
- If damage was caused by improper use or operation or if the equipment was dropped or fell down, if the equipment was subject to thrusts or other unusual or extraordinary operating conditions.
- If the unit was dismantled, modified or repaired without the authorization of BERG Kompressoren GmbH.
- In case of delayed payment or other breaches of contract.



**BERG Kompressoren GmbH**

Medienstraße 35, 47807 Krefeld, Germany  
Tel.: +49 (0) 2151 568 9550

## **EC DECLARATION OF CONFORMITY**

We, BERG Kompressoren GmbH, Medienstraße 35, 47807 Krefeld, Germany,  
declare our sole responsibility that the product,

**Product** : Oil-free scroll compressor

**Model** : ZS2.2 FF - 8  
ZS2.2 FF - 10  
ZS3.7 FF - 8  
ZS3.7 FF - 10

referred to in this declaration conforms with the following directives and  
standards

Machinery Directive 2006/42/EC  
Directive EMC 2004/108/EC  
EN 60204  
EN 1012  
EN 55014-1  
EN 55014-2  
EN 61000-3-2  
EN 61000-3-3

Note:

This declaration becomes invalid if technical or operational modifications are introduced  
without the manufacture's consent.

This is an original EC declaration of conformity issued by BERG Kompressoren GmbH.

- Other copies are considered not valid. -

## **BERG Kompressoren GmbH**

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Krefeld, Germany

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[www.berg-kompressoren.de](http://www.berg-kompressoren.de)



## Commissioning Report/ Warranty Registration for Screw Compressors

Service-partner/ distributor: \_\_\_\_\_

Customer no: \_\_\_\_\_ Customer Name: \_\_\_\_\_

Project/ invoice no: \_\_\_\_\_

Zip code/ City: \_\_\_\_\_ Country: \_\_\_\_\_

### Compressor data:

Type: KOMPBERG® \_\_\_\_\_ kW \_\_\_\_\_ bar \_\_\_\_\_ Serial no: \_\_\_\_\_

Date of commissioning: \_\_\_\_\_ Year of production: \_\_\_\_\_

- Integrated with water separator inside  
 Integrated in Interconnected intelligent control system  
 Integrated with heat exchanger, heat recovery system

Date of installation of compressor: \_\_\_\_\_ Operating hours: \_\_\_\_\_

### Compressor installation conditions:

**Location:**  Open area (hall, tent,..)  Enclosed area (compressor room, container...)  
 Covered outdoor  Not covered outdoor area.  Factory/production

Ship  Lorry/train  Barn  
 Biogas plant  Below ground  Other

**Ventilation:**  Exhaust duct (length: \_\_\_m)  Brackets/valves  Air intake duct  Booster fan

**Ambient conditions:**  Clean  Dusty  Dirty  Humid  Vapors/chemical exposure

### Check operations to be carried out:

#### BEFORE commissioning

- Master switch/Circuit breaker available / installed  
 Tighten all oil hoses/air hoses/pipes  
 Check/tighten all electrical connections  
 Measure belt tension (N/Hz)  
 Electr. HRC fuse as stated in technical specifications: \_\_\_\_\_  
 Flexible discharge hose (air) or compensator installed

Mains supply: \_\_\_ V (measured)

L1: \_\_\_ L2: \_\_\_ L3: \_\_\_

#### BEFORE / DURING test run

- Check oil level  
 Check direction of rotation  
 Maximum pressure bar \_\_\_ checked  
 Restarting pressure bar \_\_\_ checked  
 Check for oil/air leakages

\_\_\_ °C Oil temperature after 30 minutes load cycle

\_\_\_ °C Ambient temperature

Power input in load cycle

L1: \_\_\_\_\_ L2: \_\_\_\_\_ A L3: \_\_\_\_\_ A

#### AFTER test run

- Check for air leakages  
 Check for oil leakages  
 Run-on time setting \_\_\_ sec  
 Belt tension after test run if available

Power input in idle cycle:

L1: \_\_\_\_\_ L2: \_\_\_\_\_ A L3: \_\_\_\_\_ A

**Extended warranty:**  2 years  3 years  4 years  5 years

**Filtration:**  Pre-filter  Fine filter  Active carbon filter.  Cyclone separator

**Special application:**  Nitrogen  Oxygen  Medical use  Other: \_\_\_\_\_

**Dryer:** Type: DRYPBERG® \_\_\_\_\_ kW \_\_\_\_\_ bar \_\_\_\_\_ Serial no: \_\_\_\_\_

Performance test  Dew point monitoring int./ext.  Dew point after 30min test run: \_\_\_\_\_

### Information for customers:

- All handbooks and keys for doors handed to customer  
 All the necessary functions of the compressor/ control explained to customer  
 Customer informed of the weekly necessary visual checks (leakages, oil level, pre-filter...)

Signature of customer (authorized person/engineer): \_\_\_\_\_

Signature of distributor/service partner: \_\_\_\_\_

Date: \_\_\_\_\_

Your signature confirms that the above mentioned BERG Kompressoren GmbH equipment has been properly installed and that your compressor has been handed over and functions correctly!