Operator Manual

Rotary lobe blower

FBC pr SIGMA CONTROL 2

Number: 902317 03 USE

Manufacturer:

KAESER KOMPRESSOREN SE

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KAESER KOMPRESSOREN

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1 Regarding this Document

1.1 Using this document

This operating or installation manual is part of the machine. It describes the machine as it was at the time of first delivery after manufacture.

- ➢ Keep the operating manual in a safe place throughout the life of the machine.
- ➢ Pass the operating manual on to the next owner/user.
- ➢ Ensure that all amendments received are entered or inserted in the operating manual.
- ➢ Enter details from the machine nameplate and individual items of equipment in the tables in chapter 2.

1.2 Further documents

Included with this Operating Manual are additional documents intended to assist in the safe operation of the machine:

- Manufacturer's Declaration or Declaration of Conformity according to applicable directives.
- User Manual for SIGMA CONTROL 2.

Missing documents can be requested from KAESER.

- ➢ Ensure that all documents are complete and observe the instructions contained within them.
- ➢ Ensure that you provide the data from the nameplate when ordering documents.

1.3 Copyright

This operator manual is copyright protected. Queries regarding use or duplication of the documentation should be referred to KAESER. Correct use of information will be fully supported.

1.4 Symbols and labels

- ➢ Please note the symbols and labels used in this document.

1.4.1 Warnings

Warnings indicate danger potentially resulting in personal injury, if the measures specified are not taken.

Warnings indicate three levels of danger identified by the corresponding signal word:

Signal term	Meaning	Consequences of non-compliance
DANGER	Warns of imminent danger	Will very likely result in death or severe injury
WARNING	Warns of potentially imminent danger	May result in death or severe injury
CAUTION	Warns of a potentially dangerous situation	May result in moderate physical injury

Tab. 1 Danger levels and their definition (personal injury)

Warning notes may precede a chapter. They apply to the entire chapter including all sub-sections.

Example:

⚠ DANGER

The type and source of the imminent danger is shown here!
The possible consequences of ignoring a warning are shown here.
The word "DANGER" indicates that death or severe injury can very likely result from ignoring the warning.

➢ *The measures required to protect yourself from danger are shown here.*

Warning notes referring to a sub-section or the subsequent step are integrated into the procedure and numbered as a step.

Example:

1. **⚠ WARNING** *The type and source of the imminent danger is shown here!*
   The possible consequences of ignoring a warning are shown here.
   The word "WARNING" indicates that death or severe injury may result from ignoring the warning.
   ➢ *The measures required to protect yourself from danger are shown here.*
2. Always read and comply with warning instructions.

1.4.2 Potential damage warnings

Contrary to the warnings shown above, damage warnings do not indicate potential personal injury.

Damage warnings have only one danger level, identified by this signal word:

Signal term	Meaning	Consequences of non-compliance
NOTE	Warns of a potentially dangerous situation	Damage to property is possible

Tab. 2 Danger levels and their definition (damage to property)

Example:

NOTICE

The type and source of the imminent danger is shown here!
Potential effects when ignoring the warning are indicated here.

➢ *The protective measures against the damages are shown here.*

➢ Carefully read and fully comply with warnings against damages.

1.4.3 Other alert notes and their symbols

This symbol indicates particular important information.

Material — Here you will find details on special tools, operating materials or spare parts.

Precondition — Here you will find conditional requirements necessary to carry out the task.

The conditional requirements relevant to safety shown here will help you to avoid dangerous situations.

Option H12 — ➢ This symbol is placed by lists of actions comprising one stage of a task.
Operating instructions with several steps are numbered in the sequence of the operating steps. Information relating to one option only are marked with an option code (e.g., H12 indicates that this section applies only to machines with sound enclosure). Option codes used in this operating manual are explained in chapter 2.2.

Information referring to potential problems are identified by a question mark.

The cause is specified in the help text ...

➢ ... as is a solution.

This symbol refers to important information or measures concerning environmental protection.

Further information — Further subjects are introduced here.

2 Technical Data

2.1 Nameplate

The machine's nameplate contains the model type and important technical information.

The nameplate is attached to the machine frame and on the left-hand side panel of the sound enclosure (Option H12).

The specified value for the full load current has been calculated including the associated lambda factor. This value can be found in chapter 2.11.2 (Option C34).

The information given on the nameplate relates to the standard inlet conditions of 14.7 psi and +68°F.

➢ Enter the data from the nameplate here as a reference:

Characteristic	Value
Rotary lobe blowers	
Material no.	
Serial no.	
Ambient temperature	
Rated power	
Max. gauge working pressure PS	
Rated motor speed	
Full load current	
Full load current, drive motor	
Electrical connection	
Wiring diagram	
Year of manufacture	

Tab. 3 Nameplate

2.2 Option codes

The table contains a list of possible options.

➢ Enter options here as a reference.

Option	Option code	Available?
Operating mode: Gauge pressure	B13	✓
Oil level switch	C5	
Speed monitor	C10	
Unloaded start valve	C11	
Start-up pressure regulating valve	C18	
Under frequency control	C32	
START CONTROL (STC)	C33	

Installed: ✓
Not available: —

Option	Option code	Available?
OMEGA FREQUENCY CONTROL (OFC)	C34	
Oil temperature monitoring	C39	—
Communication module: PROFIBUS DP	C41	
Communication module: Modbus RTU	C42	
Communication module: DEVICENET	C43	
Communication module: Modbus TCP	C44	
Communication module: PROFINET IO	C45	
Check valve	G1	
Intake from pipe	H11	
Sound enclosure	H12	✓
Installed: ✓ Not available: —		

Tab. 4 Option codes

2.3 Weight

The values shown are maximum values. The actual weight of individual machines depends on equipment fitted.

2.3.1 Option C33 START CONTROL (STC)

	Weight [lb]		
Rated power [hp]	FB 441 C pr	FB 621 C pr	FB 791 C pr
40.0	3913	4079	4420
50.0	3957	4123	4464
60.0	4023	4189	4530
75.0	4287	4453	4795
100.0	4409	4575	4916
125.0	4960	5126	5467
150.0	—	5247	5589
175.0	—	5875	—
—	—	—	—

Tab. 5 START CONTROL (STC) weight

2.3.2 Option C34 OMEGA FREQUENCY CONTROL (OFC)

	Weight [lb]		
Rated power [hp]	FB 441 C pr	FB 621 C pr	FB 791 C pr
40.0	4012	4178	4519
50.0	4068	4233	4575
60.0	4134	4299	4641
75.0	4453	4619	4960
100.0	4586	4751	5093
125.0	5126	5291	5633
150.0	—	5445	5787
175.0	—	6074	—
—	—	—	—

Tab. 6 Weight OMEGA FREQUENCY CONTROL (OFC)

2.4 Drive motor

➢ Copy the data from the motor nameplate or service plate into the table:

Feature	Value
Enclosure protection	IP55
Motor bearing re-greasing interval *[h]	2000
Grease requirement, each bearing [g]	

h = operating hours

* The lubricating interval is max. 2000 h, even if a longer interval is indicated on the motor service plate.

Tab. 7 Drive motor

2.5 Recommended oil

The lubricant type to be used depends on the operating conditions.

	OMEGA FLUID	
	SB 220	FGB 220
Description	Synthetic oil	Synthetic oil

	OMEGA FLUID	
	SB 220	FGB 220
Application	Suitable for all applications, except food processing.	Specifically for applications where the compressed air comes into contact with food products.

Tab. 8 Recommended oil

Further information An adhesive label identifying the used lubricating oil is attached to the blower block and the belt guard.

Information on ordering oil is found in chapter 11.2.

2.6 Lubricating oil charge

The block oil chambers are filled with oil at the factory.

Guide value

	Drive-end	Gear-end
Lubricating oil charge [qt]	1.1 ±15%	1.4 ±15%

Tab. 9 Lubricating oil charge

2.7 Temperature

	FB 441 C pr	FB 621 C pr	FB 791 C pr
Maximum block discharge temperature [°F]	320	320	320
Maximum temperature differential [K] *	115	115	115
*Discharge temperature minus inlet temperature			

Tab. 10 Temperature

2.8 Ambient and intake conditions

The following conditions must be maintained:

- No salty atmosphere in the immediate vicinity of the machine.
- The air must be free of chemicals or explosive substances.

	FB 441 C pr	FB 621 C pr	FB 791 C pr
Permissible ambient temperature [°F]	32 – 104	32 – 104	32 – 104
Permissible intake temperature [°F]	5 – 104	5 – 104	5 – 104
Relative humidity [%]	0 – 80	0 – 80	0 – 80

	FB 441 C pr	FB 621 C pr	FB 791 C pr
Maximum altitude AMSL [ft.]	3281	3281	3281

Tab. 11 Ambient and intake conditions

Differing ambient and intake conditions require the recalculation of the performance data, and are permissible only upon agreement by the manufacturer.

2.9 Sound pressure level/sound power level

Operating state LOAD under the following conditions:

- Nominal speed
- Nominal flow rate
- Nominal pressure

Measuring condition according to DIN EN ISO 2151 and basic standard ISO 9614–2:

- Measurement distance: 3 ft
- Tolerance: ±3 dB(A)
- Sound insulated pipeline

Further information

The sound pressure level and sound power level values for your machine are provided in the tables shown in chapter 13.3.

These values refer to the design condition.

2.10 Power Supply

Basic requirements

The machine is designed for an electrical supply according to National Electric Code (NEC), edition 2020, particularly article 670 and NFPA 79, edition 2021, particularly section 4.4. In the absence of any user-specified alternatives, the limits given in these standards must be adhered to. Consult manufacturer for any other specific power supply.

The incoming line within the control panel should be as short as possible.

If external sensors or communication lines are to be connected to the machine, use shielded cables and insert the same through EMC fittings into the control panel.

Three-phase

Do **NOT** operate package on any unsymmetrical power supply. Also do **NOT** operate package on power supplies such as a three phase WYE system with center point not solidly grounded or three-phase (open) delta.

The machine requires a symmetrical three-phase power supply transformer with a WYE configuration output as shown in Figure 1 and Figure 2. In a symmetrical three phase supply the phase angles and voltages are all the same.

Other power supplies are not suitable.

Fig. 1 Three-phase star (wye); 4 wire; center point solidly grounded

Fig. 2 Three-phase star (wye); 3 wire; center point solidly grounded

Further information Please contact an authorized KAESER service representative for options.

The electrical diagram 13.4 contains further specifications for electrical connection.

2.11 Power supply specifications

The following multi-strand copper core wires are given according to 2020 NEC 310.14, 310.15, 310.16 and table 310.16 adjusted for 40°C ambient temperature.

If other local conditions prevail, like for example high temperature, the cross section should be checked and adjusted according to 2020 NEC 110.14(C). 220.3. 310.14. 310.15. 310.16, 310.15(B)(1), table 310.15(C)(1). 430.6. 430.22. 430.24. 670.4(A) and other local codes.

Dual element time delay fuses are selected according to 2020 NEC 240.6. 430.52 and tables 430.52. 430.248 and 430.250.

We strongly suggest using a separate copper conductor for the equipment GROUNDING. 2020 NEC table 250.122 will point out the “minimum size”, however, we recommend a ground conductor the same size as the power leads, if local codes allow.

2.11.1 Option C33 START CONTROL (STC)

Rated power supply: 208V±10% / 3 / 60Hz

Rated power [hp]	40.0	50.0	60.0	75.0	100.0	125.0	150.0	175.0	—
Backup fuse [A]	—	—	—	—	—	—	—	—	—
Supply line [AWG]	—	—	—	—	—	—	—	—	—
Current consumption [A]	—	—	—	—	—	—	—	—	—

Tab. 12 Connection data 208V±10% / 3 / 60Hz

Rated power supply: 230V±10% / 3 / 60Hz

Rated power [hp]	40.0	50.0	60.0	75.0	100.0	125.0	150.0	175.0	—
Backup fuse [A]	—	—	—	—	—	—	—	—	—
Supply line [AWG]	—	—	—	—	—	—	—	—	—

Rated power [hp]	40.0	50.0	60.0	75.0	100.0	125.0	150.0	175.0	—
Current consumption [A]	—	—	—	—	—	—	—	—	—

Tab. 13 Connection data 230V±10% / 3 / 60Hz

Rated power supply: 460V±10% / 3 / 60Hz

Rated power [hp]	40.0	50.0	60.0	75.0	100.0	125.0	150.0	175.0	—
Backup fuse [A]	60.0	80.0	90.0	110.0	150.0	200.0	225.0	250.0	—
Supply line [AWG]	1x 4x4	1x 4x3	1x 4x2	1x 4x1/0	1x 4x3/0	2x 4x2	2x 4x1/0	2x 4x2/0	—
Current consumption [A]	54.1	65.1	80.1	94.1	127.1	160.1	193.1	227.1	—

Tab. 14 Connection data 460V±10% / 3 / 60Hz

Rated power supply: 575V±10% / 3 / 60Hz

Rated power [hp]	40.0	50.0	60.0	75.0	100.0	125.0	150.0	175.0	—
Backup fuse [A]	50.0	60.0	70.0	90.0	125.0	150.0	175.0	200.0	—
Supply line [AWG]	1x 4x6	1x 4x4	1x 4x3	1x 4x2	1x 4x1/0	1x 4x3/0	2x 4x2	2x 4x1	—
Current consumption [A]	43.1	51.2	63.2	74.8	102.2	127.6	151.2	181.2	—

Tab. 15 Connection data 575V±10% / 3 / 60Hz

2.11.2 Option C34 OMEGA FREQUENCY CONTROL (OFC)

Protective conductor requirements

Due to the leakage currents of ≥10 mA caused by the anti-interference capacitors in the frequency converter, a minimum diameter of 8 AWG is required for the protective conductor.

Use one of the following options if the protective conductor for the supply cable is smaller than 8 AWG:

- Multicore cable including protective conductor with a minimum cross-section of 8 AWG,
- a minimum cross-section of 8 AWG for the protective conductor alone,
- a second protective conductor with the same cross-section as the supply line,
- automatic deactivation of the power supply as soon as the protective conductor is interrupted.

Note on the lambda factor:
In addition to their fundamental oscillation, non-sinusoidal variables also contain harmonics for which no fixed phase shift angle ϕ (phi) can be specified. Instead, the power factor λ (lambda) must be used. In electrical engineering, the power factor λ denotes the ratio of the active power value P to the apparent power value S.

In the event of deviating network characteristics and therefore lambda value at the user-end, the full load current and supply cable cross-section may need to be reassessed.

Rated power supply: 460V / 3 / 60Hz

Rated power [hp]	40.0	50.0	60.0	75.0	100.0	125.0	150.0	175.0	—
Backup fuse [A]	60.0	70.0	90.0	100.0	150.0	175.0	225.0	250.0	—
Supply line [AWG]	1x 4x4	1x 4x2	1x 4x2	1x 4x1/0	1x 4x2/0	2x 4x1/0	2x 4x1/0	2x 4x2/0	—
Current consumption [A]	51.3	61.6	74.9	90.6	120.3	148.4	187.6	209.8	—
Power factor [λ] (lambda)	0.900	0.917	0.920	0.920	0.920	0.920	0.886	0.935	—

Tab. 16 Connection data 460V/ 3 / 60Hz

2.12 Options

Technical data for the options available for your machine are given in the following.

2.12.1 Option C5 Oil level monitoring

Feature	Data
Max. voltage [V]	48
Switching current [A]	0.5
Switching capacity [hp]	0.03
Type of contact	Normally closed
Degree of protection	IP67

Tab. 17 Oil level monitoring (Option C5)

Further information The electrical diagram in chapter 13.4 contains details of the power supply.

2.12.2 Option C10 Speed monitor

Sensor

Feature	Data
Rated switching distance Sn [in.]	0.12–0.16
Installation conditions	Not flush
Output function	DC PNP/NPN
Enclosure protection	IP 67
Connection	M12
Working principle	Inductive

Tab. 18 Speed monitor (Option C10)

Sensor

Feature	Data
Rated voltage [V]	110 – 240 AC/DC (50 – 60 Hz) / 27 DC (typ. 24 DC)
Contact load capacity	6 A (250 V AC); B300, R300
Power consumption [VA]	5
Start override [s]	0 – 1000
Ambient temperature [°F]	-4 – +140
Degree of protection - enclosure/terminals	IP 50 / IP 20
Connection	up to 2.5 mm^2 (AWG 14)

Tab. 19 Speed monitor sensor (Option C10)

Further information The electrical diagram in chapter 13.4 contains details of the power supply.

2.12.3 Option C11 Unloaded start valve

Type	AFE 45	AFE 90
Permissible pressure [psi] (a)	0 – 29	0 – 29
Maximum delivery [cfm]	1589	3178
Nominal width (DIN ISO 228–1)	G 4 A	Flange PN 10, DN 150

Tab. 20 Unloaded start valve (Option C11)

2.12.4 Option C18 Unloaded start valve with regulating valve

Type	AFR 45	—
Permissible pressure [psi] (a)	0 – 29	—
Maximum flow rate [cfm]	1589	—
Maximum pressure differential [psi]	13.8	—
Regulating range [psi]	2.9 – 13.8	—
Nominal width (DIN ISO 228–1)	G 4 A	—
Control line connection (DIN ISO 228–1)	R 1/8 A	—

Tab. 21 Unloaded start valve with regulating valve (Option C18)

2.12.5 Option G1 Check valve

Nominal pipe size	Max. pressure and back pressure [psi]
DN 200	21.8
DN 250	17.4

Tab. 22 Check valve (Option G1)

2.12.6 Option H11 Piped inlet

The dimensional drawings in chapter 13.2 include connection dimensions.

2.12.7 Option H12 Fan (sound enclosure)

Feature	Value
Maximum flow rate [cfm]	2148

Tab. 23 Fan flow rate

3 Safety and Responsibility

3.1 Basic instructions

The machine is manufactured to the latest engineering standards and acknowledged safety regulations. Nevertheless, dangers can arise through its operation:

- Danger to life and limb of the operator or third parties,
- Damages to the machine and other material assets.

⚠ Disregard of warning or safety instructions can cause serious injuries!

➢ Read the operating and installation manual carefully and take note of the contents for safe machine operation.

➢ Use this machine only if it is in a technically perfect condition and only for the purpose for which it is intended; observe all safety measures and the instructions in the service manual!

➢ Immediately rectify (have rectified) any faults that could be detrimental to safety!

3.2 Specified use

The machine is designed exclusively for the generation of pressure in a commercial or industrial environment where air (in the following "compressed air") as delivery medium is approved for use. Any other use is considered incorrect. The manufacturer is not liable for any damages that may result from incorrect use. The user alone is liable for any risks incurred.

➢ Comply with the instructions in this operating manual.

➢ Operate the machine only within its performance limits and under the permitted ambient conditions.

➢ Do not use compressed air for breathing purposes unless it is specifically treated.

➢ Do not use compressed air for any application that will bring it into direct contact with food products unless it is specifically treated.

➢ Operate the blower block only with inlet and outlet ports connected.

3.3 Improper use

Improper usage can cause damage to property and/or (severe) injuries.

➢ Only use the machine as intended.

➢ Never direct compressed air at persons or animals.

➢ Use hot cooling air for heating purposes only if there is no risk to the health of humans or animals. If necessary, hot cooling air should be treated by suitable means.

➢ Do not allow the machine to take in toxic, acidic, flammable, or explosive gases or vapors.

➢ Do not operate the machine in areas in which specific requirements with regard to explosion protection are in force.

➢ Intake of solid particles >0.004 inch is not permitted.

3.4 User's responsibilities

3.4.1 Observe statutory and universally accepted regulations

➢ Observe relevant statutory and accepted regulations during installation, operation and maintenance of the machine.

3.4.2 Determining personnel

Suitable personnel are experts who, by virtue of their training, knowledge, and experience, as well as their knowledge of relevant regulations, can assess the work to be done and recognize the possible dangers involved.

Authorized operators possess the following qualifications:

- are of legal age,
- are familiar with and adhere to the safety instructions and sections of the service manual relevant to operation,
- have received adequate training and authorization to operate electrical and compressed air devices.

Authorized installation and maintenance personnel have the following qualifications:

- are of legal age,
- have read, are familiar with and adhere to the safety instructions and sections of the service manual applicable to installation and maintenance,
- are fully familiar with the safety concepts and regulations of electrical and compressed air engineering,
- are able to recognize the possible dangers of electrical and compressed air devices and take appropriate measures to safeguard persons and property,
- have received adequate training in and authorization for the safe installation and maintenance of this machine.

➢ Ensure that personnel entrusted with operation, installation, and maintenance are qualified and authorized to carry out their tasks.

3.5 Dangers

Basic instructions

Information concerning the various forms of danger that can arise during machine operation are found here.

Basic safety instructions are found in this service manual at the beginning of each chapter in the section entitled 'Safety'.

Warning instructions are found before a potentially dangerous task.

3.5.1 Safely dealing with sources of danger

The following describes the various forms of danger that can occur during machine operation.

Electricity

Touching voltage carrying components can result in electric shocks, burns or death.

- ➢ All power supplies must be fitted with lockable power supply disconnecting devices by the user.
- ➢ Allow only qualified and authorized electricians or trained personnel under the supervision of a qualified and authorized electrician to carry out work on electrical equipment according to electrical engineering regulations.
- ➢ Before commissioning or recommissioning the machine, the user must ensure adequate protection against electric shock from direct or indirect contact.
- ➢ Before starting any work on electrical equipment:
  Switch off and lock out the power supply disconnecting device and verify the absence of any voltage.
- ➢ Switch off any external power sources.
  These may be connections to the electric machine heating for example.
- ➢ Use fuses corresponding to machine power.
- ➢ Regularly check that all electrical connections are tight and in proper condition.

Forces of compression

Compressed air is contained energy. Uncontrolled release of this energy can cause serious injury or death. The following information concerns work on components that could be under pressure.

- ➢ Close shut-off valves or otherwise isolate the machine from the distribution network to ensure that no compressed air can flow back into the machine.
- ➢ Depressurize all pressurized components and enclosures.
- ➢ Allow no person or thing to remain near the blow-off valve during machine operation. In the event of operating pressure being exceeded, hot gas is blown off at high velocity and the valve tension rod is blown upward with great force.
- ➢ Do not carry out welding, heat treatment or mechanical modifications on pressurized components, as this influences the components' resistance to pressure.
  The safety of the machine is then no longer ensured.

Compressed air quality

The composition of the compressed air must be suitable for the actual application in order to preclude health and life-threatening dangers.

- ➢ Use appropriate systems for air treatment before using the compressed air from this machine as breathing air and/or for the processing of food products.
- ➢ Use food-grade lubricating oil whenever compressed air is to come into contact with food products.

Spring forces

Springs under tension or compression store energy. Uncontrolled release of this energy can cause serious injury or death.
Safety relief valve and unloaded-start valve are under powerful spring loading.

- ➢ Do not open or dismantle any valves.

Rotating components

Touching the fan wheel (sound enclosure) or the belt drive while the machine is running can result in serious injury.

- ➢ Do not remove separating protective installations when the machine is running.
- ➢ Switch off and lock out the power supply disconnecting device and verify the absence of any voltage.
- ➢ Wear close-fitting clothes and a hair net if necessary.
- ➢ Ensure that all covers and safety guards are in place and secured before restarting.

Temperature

High temperatures are generated during compression. Touching hot components may cause injuries.

- ➢ Avoid contact with hot components.
  These include, for example, blower blocks, silencers, oil and compressed air lines, motors, and machine heaters.
- ➢ Wear protective clothing.
- ➢ If welding is carried out on or near the machine, take adequate measures to prevent sparks or heat from igniting oil vapors or parts of the machine.

Noise

The sound enclosure reduces the machine noise to a tolerable level. This function will be effective only if the sound enclosure is closed.

- ➢ Wear hearing protection if necessary.
  The blowing off of the safety relief valve can be particularly loud.

Operating fluids/materials

The used operating fluids and materials can cause adverse health effects. Suitable safety measures must be taken in order to prevent injuries.

- ➢ Strictly forbid fire, open flame, and smoking.
- ➢ Follow safety regulations when dealing with oils, lubricants, and chemical substances.
- ➢ Avoid contact with skin and eyes.
- ➢ Do not inhale oil mist and vapors.
- ➢ Do not eat or drink while handling lubricants.
- ➢ Keep suitable fire extinguishing agents ready for use.
- ➢ Use only KAESER approved operating materials.

Unsuitable spare parts

Unsuitable spare parts compromise the safety of the machine.

- ➢ Use only spare parts approved by the manufacturer for use in this machine.
- ➢ Use only genuine KAESER replacement parts on pressure bearing parts.

Conversion or modification of the machine

Modifications, additions, or conversions of the machine can result in unpredictable dangers.

➢ Do not convert or modify the machine!

➢ Obtain written approval by the manufacturer prior to any technical modification or expansion of the machine, the controller, or the control programs.

Extending or modifying the compressor station

If dimensioned appropriately, safety relief valves reliably prevent an impermissible rise in pressure. New dangers may arise if you modify or extend the blower air station.

➢ If an air distribution network is to be extended or changed: Check the capacity of the blow-off valves before installing any new machines.

➢ Blow-off valves of insufficient capacity must be replaced by valves with higher capacity.

3.5.2 Safe machine operation

The following is information supporting you in the safe handling of the machine during individual product life phases.

Personal protective equipment

When working on the machine you may be exposed to dangers that can result in accidents with severe adverse health effects.

➢ Wear protective clothing as necessary.

Suitable protective clothing (examples):

- Safety work wear
- Protective gloves
- Safety boots
- Eye protection
- Ear protection

Transporting

The weight and size of the machine require safety measures during its transport to prevent accidents.

➢ Use suitable lifting gear that conforms to local safety regulations.

➢ Allow transportation only by personnel trained in the safe movement of loads.

➢ Attach lifting gear only to suitable lifting points.

➢ Be aware of the center of gravity to avoid potential tipping.

➢ Make sure the danger zone is clear of personnel.

➢ Do not step onto machine components to climb up the machine.

Assembly

➢ Make sure no power is applied when electrical connections are made.

➢ Use only electrical cables that are suitable and approved for the surroundings and electrical loads applied.

➢ Never dismantle compressed air pipes until they are fully vented.

➢ Only use pressure lines that are suitable and approved for the maximum working pressure and the intended medium.

➢ Do not allow connection pipes to be placed under mechanical stress.

- ➢ Do not induce any forces into the machine via the connections, so that the compressive forces must be balanced by bracing.
- ➢ Do not step onto machine components to climb up the machine.

Positioning

A suitable installation location for the machine prevents the potential for accidents and faults.

- ➢ Install the machine in a suitable compressor room.
- ➢ Ensure sufficient and suitable lighting such that the display can be read and work carried out comfortably and safely.
- ➢ Ensure accessibility so that all work on the machine can be carried out without danger or hindrance.
- ➢ If installed outdoors, the machine must be protected from frost, direct sunlight, dust, rain and splashing water.
- ➢ Do not operate in areas in which specific requirements with regard to explosion protection are in force.
- ➢ Ensure adequate ventilation.
- ➢ Place the machine in such a manner that the working conditions in its environment are not impaired.
- ➢ Comply with limit values for ambient temperature and humidity.
- ➢ The intake air must not contain any damaging contaminants,
  Damaging contaminants are for instance: explosive or chemically instable gases and vapors, acid or base forming substances such as ammonia, chlorine or hydrogen sulfide.
- ➢ Do not position the machine in the warm exhaust air flow from other machines.
- ➢ Keep suitable fire extinguishing agents ready for use.

Commissioning, operation and maintenance

During commissioning, operation and maintenance you may be exposed to dangers resulting from, e.g., electricity, pressure and temperature. Careless actions can cause accidents with severe adverse effects for your health.

- ➢ Allow maintenance work to be carried out only by authorized personnel.
- ➢ Wear close-fitting, flame-resistant clothing. Wear protective clothing as necessary.
- ➢ Switch off and lock out the power supply disconnecting device, and verify the absence of voltage.
- ➢ Check that there is no voltage on floating relay contacts.
- ➢ Close shut-off valves or otherwise isolate the machine from the distribution network to ensure that no compressed air can flow back into the machine.
- ➢ Depressurize all pressurized components and enclosures.
- ➢ Allow the machine to cool down.
- ➢ Do not open the sound enclosure while the machine is switched on.
- ➢ Do not open or dismantle any valves.
- ➢ Use only spare parts approved by KAESER for use in this machine.
- ➢ Carry out regular inspections:
  for visible damages,
  of safety installations,
  of the EMERGENCY STOP push button,
  of any components requiring monitoring.

- ➢ Pay particular attention to cleanliness during all maintenance and repair work. Cover components and openings with clean cloths, paper or tape to keep them clean.
- ➢ Do not leave any loose components, tools or cleaning rags on or in the machine.
- ➢ Components removed from the machine can still be dangerous.
  Do not attempt to open or destroy any components taken from the machine.

Decommissioning, storage and disposal

Improper handling of old operating fluids and components represent a danger for the environment.

- ➢ Drain off fluids and dispose of them according to environmental regulations.
  These include, for example, lubricating oil.
- ➢ Dispose of the machine in accordance with local environmental regulations.

3.5.3 Organizational measures

- ➢ Designate personnel and their responsibilities.
- ➢ Give clear instructions on reporting faults and damage to the machine.
- ➢ Give instructions on fire reporting and fire-fighting measures.

3.6 Danger areas

The table gives information on areas dangerous to personnel.

Only authorized personnel may enter these areas.

Function	Danger area	Authorized personnel
Transporting	Within a 10 ft radius of the machine.	Installation personnel for transporting preparation. No personnel during transporting.
	Beneath the lifted machine.	No personnel!
Installation	Within the machine. Within 3 ft radius of the machine and its power supply cables.	Installation personnel
Operation	Within a 3 ft radius of the machine.	Operating personnel
Maintenance	Within the machine. Within a 3 ft radius of the machine.	Maintenance personnel

Tab. 24 Danger areas

3.7 Safety devices

Various safety devices ensure safe working with the machine.

- ➢ Do not change, bypass or disable safety devices.
- ➢ Check safety devices for correct function regularly.
- ➢ Do not remove or obliterate labels and notices.
- ➢ Ensure that labels and notices are clearly legible.

Further information More information on safety devices is contained in chapter 4, section 4.6.

3.8 Working life of safety functions

Pursuant to ISO 13849-1:2015, Category and Performance Level (PL) of the machine's safety functions have been analyzed and assessed:

Safety function	Category	Performance Level
EMERGENCY STOP push button	1	c

Tab. 25 Category and Performance Level

The safety-relevant functions of the safety devices are designed for a working life of 20 years. The working life starts with the original machine commissioning, and is not extended by times during which the machine was not in use.

The following components are affected:

- EMERGENCY STOP push button
- Option C33, START CONTROL (STC):
  Star-delta contactor combination
- Option C34, OMEGA FREQUENCY CONTROL (OFC):
  Frequency converter

1. The functions of the safety devices must be replaced by KAESER SERVICE after a working life of 20 years.
2. Have an authorized KAESER service representative check the reliability of the safety functions.

3.9 Safety signs

The illustration shows the location of the safety signs on the machine. Table 26 lists the various safety signs used and their meanings.

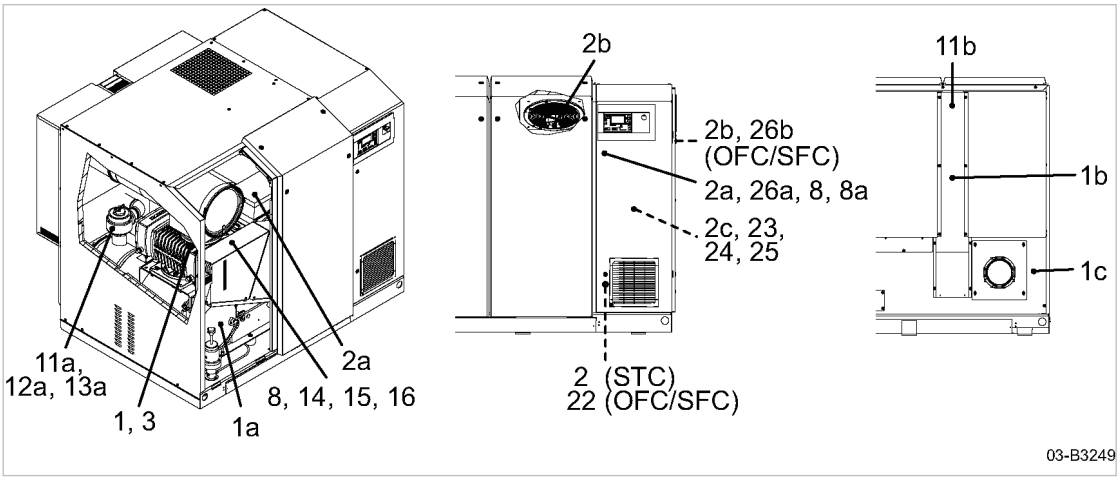


Fig. 3 Location of the safety signs on the machine

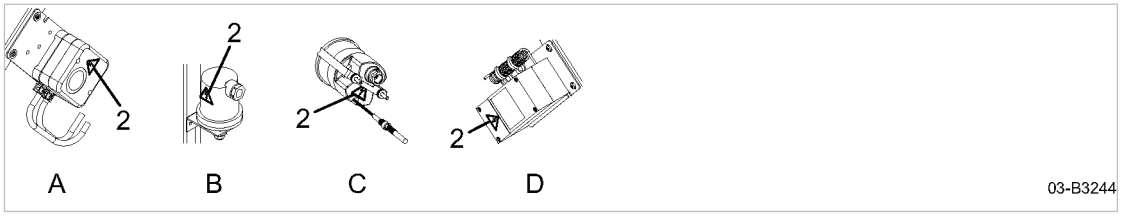


Fig. 4 Safety sign location, electronically actuated components

Ⓐ Filter differential pressure switch
Ⓑ Pressure switch
Ⓒ Temperature display with switching point
Ⓓ Thermostat

Location	Symbol	Meaning
1 1a 1b 1c		Hot surface can cause burns! ➢ Let the machine cool down. ➢ Wear long-sleeved garments (not synthetics such as polyester) and protective gloves.
2 2a 2b 2c		Danger of fatal injury from touching electrically live components! ➢ Switch off and lock out / tag out the power supply disconnecting device and verify the absence of any voltage before opening any machine enclosure or guard.
3		Rotating rotors! Risk of serious lacerations or even severing of extremities (fingers) from rotating components. ➢ Operate the machine only when a connection is made to the inlet port. ➢ Switch off and lock out / tag out the power supply disconnecting device and verify the absence of any voltage before opening any machine enclosure or guard.
8		Personal injury or damage to the machine by incorrect operation! ➢ Read and understand the service manual and all safety signs before switching on this machine.
8a		Machine starts automatically! Severe injury can result from rotating components, electrical voltage, and air pressure. ➢ Switch off and lock out / tag out the power supply disconnecting device and verify the absence of any voltage before opening any machine enclosure or guard.
11a 11b		Hot gas! Burning, from contact with hot gasses. ➢ Do not enter danger zone. ➢ Wear long-sleeved garments (not synthetics such as polyester) and protective gloves.
12a		Serious injury or death can result from loosening or opening component that is under pressure and heavily spring loaded! ➢ Do not open or dismantle the valve. ➢ Contact an authorized KAESER service representative if a fault occurs.

Location	Symbol	Meaning
13a		Serious injury or death can result from loosening or opening component under pressure! ➢ Depressurize all pressurized components and enclosures. ➢ Ensure the machine remains depressurized. ➢ Check that machine is depressurized.
14		Severe injury could result from touching the v-belt drive while it is rotating! ➢ Switch off and lock out / tag out the power supply disconnecting device and check that no voltage is present.
15		Injury and/or contamination can result from breathing compressed air! Contamination of food can result from using untreated compressed air for food processing! ➢ Never breathe untreated compressed air. ➢ Air from this compressor must meet OSHA 29CFR1910.134 and FDA 21CFR178.3570 standards, if used for breathing or food processing. Use proper compressed air treatment.
16		Noise due to opened service panel of the sound enclosure (Option H12)! ➢ Hearing may be damaged. ➢ Wear hearing protection.
22		High protective conductor current! Touching electrically live components can cause serious injury or death. ➢ Switch off and lock out / tag out the power supply disconnecting device and check that no voltage is present. ➢ Wait at least 5 minutes. ➢ Verify the absence of any voltage.
23		Danger of fatal injury from touching electrically live components! ➢ Switch off and lock out / tag out the power supply disconnecting device and verify the absence of any voltage.
24		Risk of electric shock! ➢ If the interrupter has tripped current-carrying components of the controller should be examined and replaced if damaged to reduce the risk of fire or electric shock.
25		Risk of electric shock! ➢ To maintain high current short-circuit, and ground-fault protection, the manufacturer's instructions for setting the interrupter must be followed to reduce the risk of fire or electric shock.
26a 26b		Danger of fatal injury from electrical voltage and charged capacitors! ➢ Before starting any work on the electrical equipment: Switch off the power supply disconnecting device, lock out / tag out the device, verify the absence of any voltage. ➢ Following shutdown of the power supply disconnecting device, wait for 5 minutes before opening the control cabinet/connector box. ➢ Before starting work on the frequency converter or intermediate circuit capacitors, wait for at least 5 minutes.

Tab. 26 Safety signs

3.10 In emergency

3.10.1 Correct fire fighting

Suitable extinguishing agents

- Foam
- Carbon dioxide
- Sand or dirt

Unsuitable or unsafe extinguishing agents

- Strong jet of water

1. Keep calm.
2. Give the alarm.
3. Switch off the power supply disconnecting device, if possible.
4. Move to safety.
   - Warn persons in danger.
   - Help incapacitated persons.
   - Close the doors.
5. Try to extinguish the fire if you have the skill to do so.

3.10.2 Remove lubricating oil from the skin.

➢ Eye contact:
Rinse eyes thoroughly with lukewarm water and seek medical assistance.

➢ Skin contact:
Wash off immediately.

3.11 Environmental protection

➢ Store and dispose of operating materials and replaced parts in accordance with local environmental protection regulations.

➢ Observe national regulations.
This applies particularly to parts contaminated with lubricating oil.

➢ Do not allow lubricating oil to escape to the environment or into the sewage system.

3.12 Warranty

This operator manual contains no independent warranty commitment. Our general terms and conditions of business apply with regard to warranty.

A condition of our warranty is that the machine is used for the purpose for which it is intended under the conditions specified.
Due to the multitude applications for which the machine is suitable the obligation lies with the user to determine its suitability for his specific application.

In addition, we accept no warranty obligation for:

- the use of unsuitable parts or operating materials,
- unauthorized modifications,
- incorrect maintenance,
- incorrect repair.

Correct maintenance and repair includes the use of original spare parts and operating materials.

➢ Obtain confirmation from KAESER that your specific operating conditions are suitable.

4 Design and Function

4.1 Enclosure

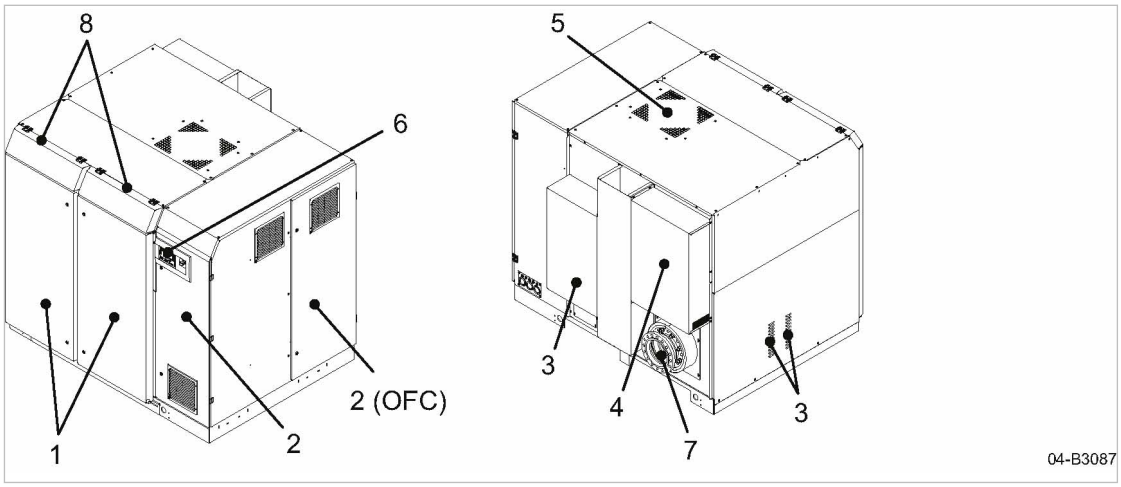


Fig. 5 Enclosure overview

1	Access panels	5	Cooling air outlet
2	Control cabinet door	6	Controller SIGMA CONTROL 2
3	Cooling air inlet	7	Pressure line connection
4	Intake air inlet	8	Flip panels

The drive motor fan draws cooling air through the cooling air inlet 3 into the sound enclosure to cool the drive motor and the machine.

Cooling air flow is supplemented by a fan within the enclosure. The warm air is expelled to the exterior in order to prevent the machine from overheating.

Air to be compressed is drawn in through the intake air inlet 4. This ensures that only air at ambient temperature is compressed.

The enclosure has access panels 1 and flip panels 8 that can be opened.

The control cabinet door 2 can be swung open.

Latches are released by a key supplied with the machine.

The sound enclosure has several functions when it is closed:

- Sound insulation
- Protection against contact with components
- Airflow control

The sound enclosure is NOT suitable for the following uses:

- Persons walking, standing or sitting on the machine.
- Use as a resting place or storage of any kind of load.

4.2 SIGMA CONTROL 2 operating panel

4.2.1 Keys

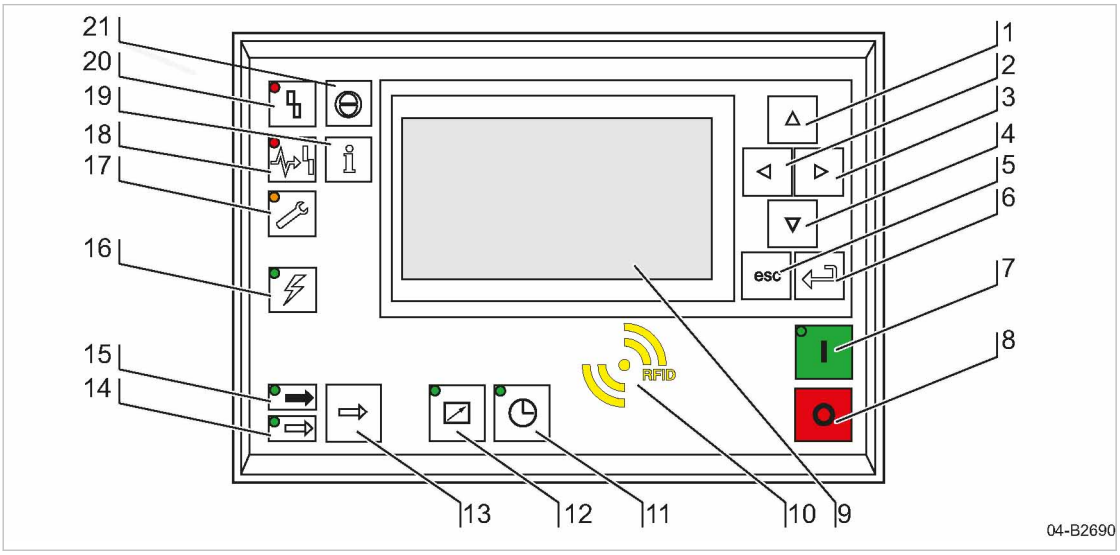


Fig. 6 Indicating and operating elements

Item	Name	Function
1	«Up»	Scrolls up the menu options. Increases a parameter value.
2	«Left»	Jumps to the left. Moves the cursor position to the next left field.
3	«Right»	Jumps to the right. Moves the cursor position to the next right field.
4	«Down»	Scrolls down the menu options. Reduces a parameter value.
5	«Escape»	Returns to the next higher menu option level. Exits the Edit mode without saving.
6	«Enter»	Jumps to the selected menu option. Exits the Edit mode and saves.
7	«ON»	Switches the machine on.
8	«OFF»	Switches the machine off.
10	RFID	RFID sensor field for user log-in with RFID Equipment Card.
11	«Timer control»	Switches timer control on and off.
12	«Remote control»	Switches remote control on and off.
13	«LOAD/IDLE»	Toggles between the LOAD and IDLE operating modes.
19	«Information & Events»	Displays the event memory.
21	«Reset»	Signifies recognition of alarms and warning messages. If permissible: Resets the fault counter (RESET).

Tab. 27 Controls

4.2.2 LEDs

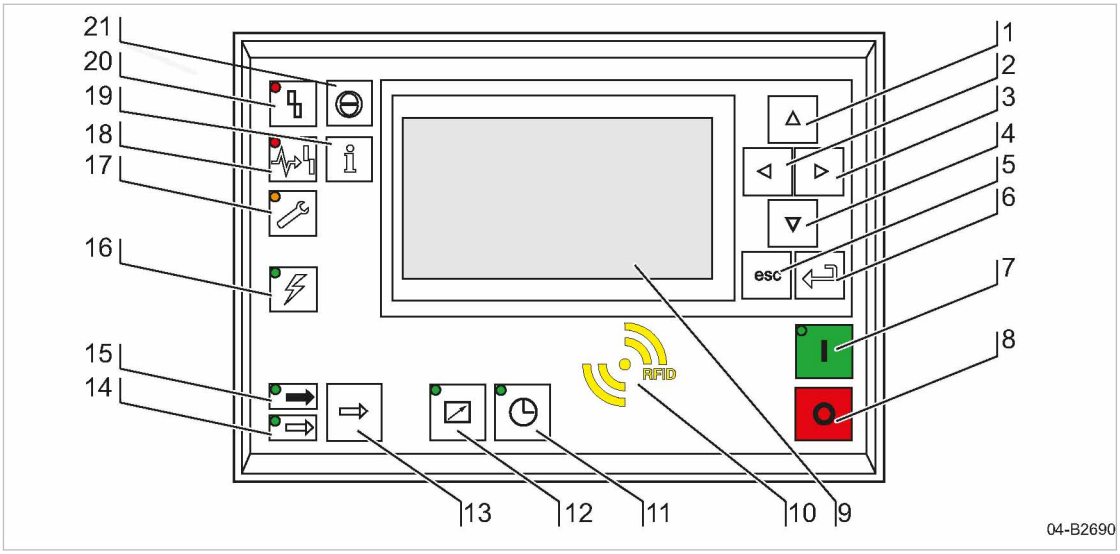


Fig. 7 Indicating and operating elements

Item	Name	Function
7	*ON*	Display illuminates green when the machine switched on.
9	*Display*	Graphic display with 8 lines and 30 characters per line.
11	*Timer control*	Continuous green light when the machine is controlled by the timer.
12	*Remote control*	Continuous green light when the machine is in remote control.
14	*IDLE*	Continuous green light when the machine is running in IDLE. Flashes when the «LOAD/IDLE» toggle key is pressed.
15	*LOAD*	Continuous green light when the machine is running in LOAD.
16	*Controller on*	Continuous green light when voltage is applied to the controller.
17	*Warning*	Flashes in yellow in the following events: ■ Maintenance necessary. ■ Warning message
18	*Communications error*	Continuous red light to indicate a faulty communication connection without machine shut-down.
20	*Fault*	Flashes red to indicate a machine fault. Continuous red light after acknowledgement.

Tab. 28 Display elements

4.2.3 RFID sensor field

RFID is the abbreviation for “**R**adio **F**requency **I**dentification” and enables the identification of persons or objects.
Placing a suitable transponder in front of the RFID sensor field of the controller will automatically activate the communication between transponder and SIGMA CONTROL 2.

A suitable transponder is the RFID Equipment Card. Two of them have been provided with the machine.

Typical application:

- Operators log on at the machine.
  (Manual input of the password not required)

The RFID Equipment Cards are carefully packed in a plastic sleeve.
This plastic sleeve is attached to the rear of the controller in the control cabinet.

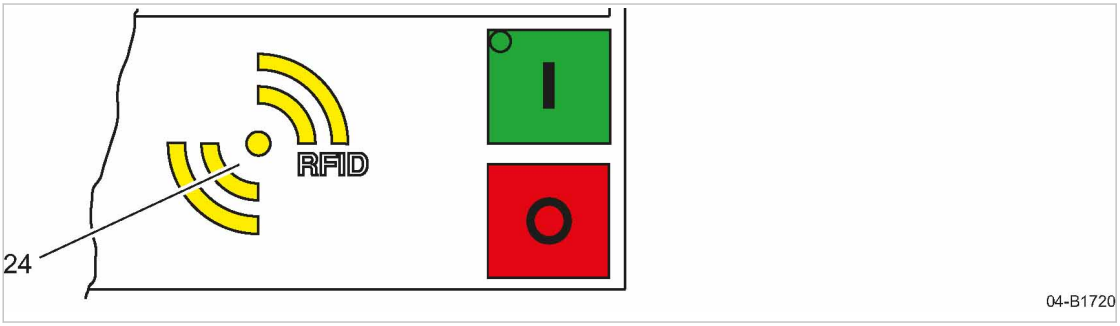


Fig. 8 RFID sensor field

Item	Name	Function
24	RFID	RFID sensor field for the communication with a RFID Equipment Card or RFID Key.

Tab. 29 RFID sensor field

Further information More information about the use of RFID technology is provided in the SIGMA CONTROL 2 operating manual.

4.3 Machine

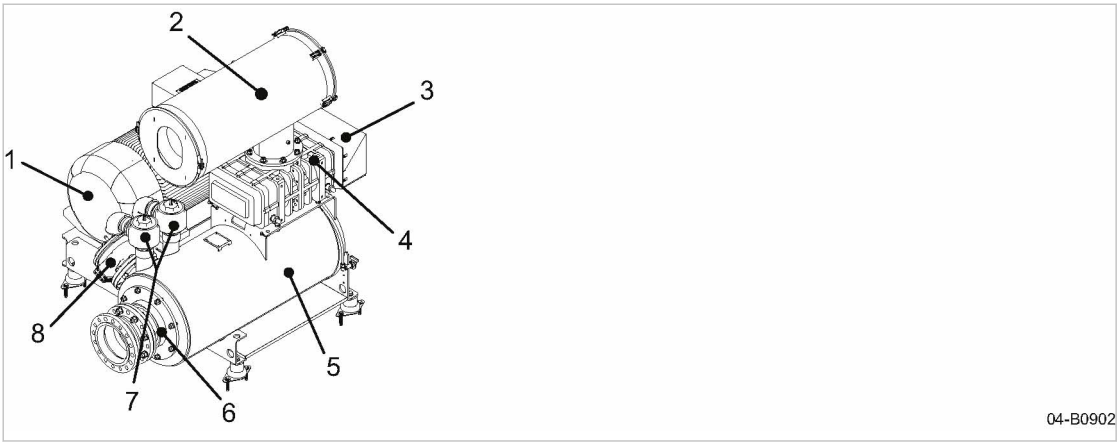


Fig. 9 Machine

1 Drive motor
2 Inlet silencer
3 Belt guard
4 Blower block
5 Outlet silencer
6 Check Plate (Option G1)
7 Safety relief valve
8 Unloaded start valve or start-up pressure control valve (Option C11, C18)

The drive motor 1 drives the blower block 4 via a belt drive.

Air is drawn into the inlet silencer 2 via an air filter where it is cleaned.

The air is then pushed from the blower block in a vertical direction into the outlet silencer [5], where the process forces pressure build-up.

4.4 Blower block

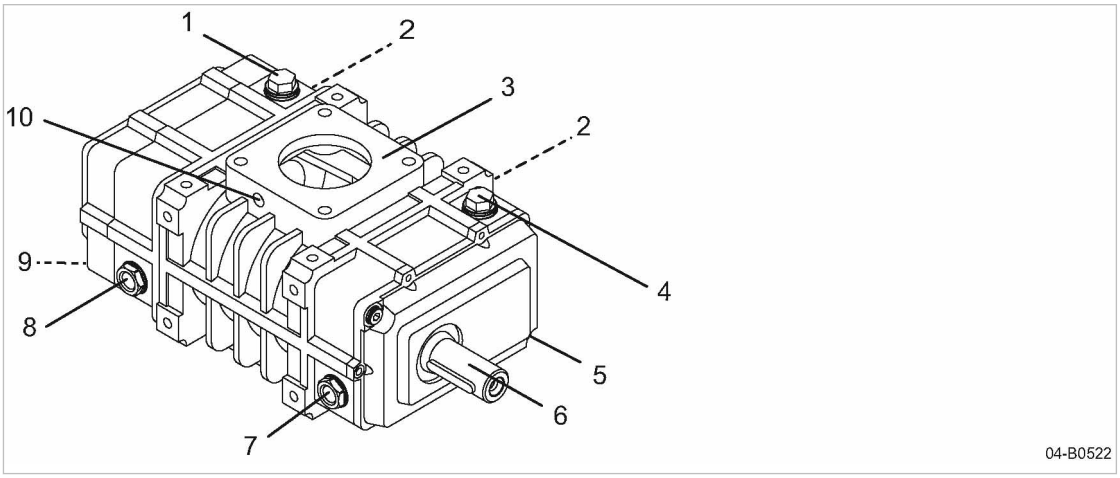


Fig. 10 Blower block

[1] Gear-end oil inlet
[2] Side gas drainage (closed)
[3] Flange connection (both sides)
[4] Drive-end oil inlet
[5] Drive-end oil drain
[6] Drive shaft
[7] Drive-end oil sight glass
[8] Gear-end oil sight glass
[9] Gear-end oil drain
[10] Connection for measuring instrument (both sides)

A pair or rotors with intermeshing lobes turn in opposite directions within a casing. The rotors are synchronized by timing gears on one end. Air in the block inlet is trapped between the rotor lobes and the casing and moved round to the discharge port.

As there is no contact between the rotors themselves and the casing, oil film lubrication is not required.

4.5 Safety relief valve

The safety relief valve (blow-off valve) protects the system from excessive pressure. It is factory set.

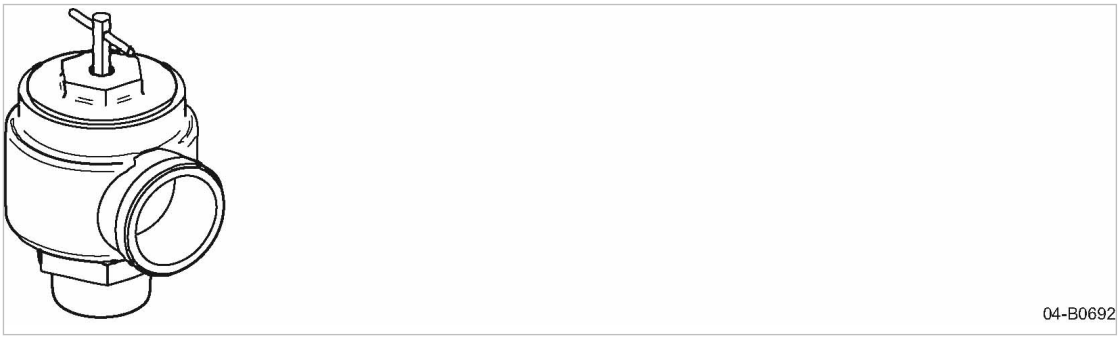


Fig. 11 Safety relief valve (blow-off valve)

4.6 Safety devices

The following safety devices are provided and may not be modified in any way.

- Safety relief valve:
  The safety relief valve protects the machine from excessive pressure build-up. It is factory set.
- Covers over moving parts and electrical connections:
  These protect against accidental contact.

4.7 Compensator

The compensator functions as follows:

- Inlet and outlet connections to silencers and accessories,
- Isolates the machine vibrations from the air pipeline.

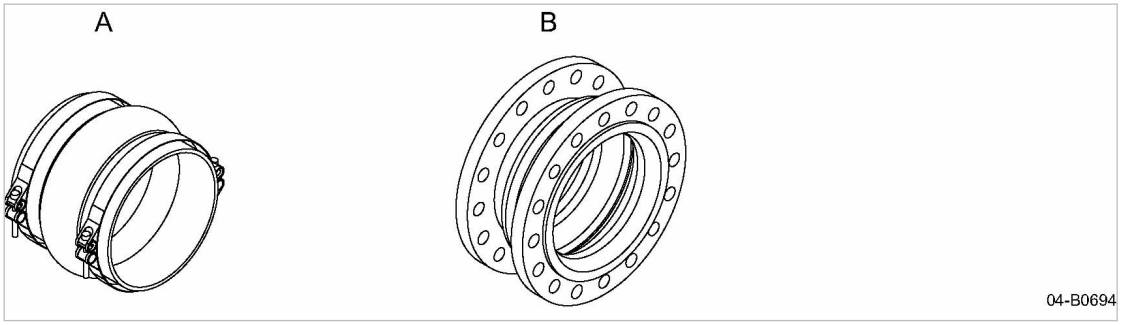


Fig. 12 Compensator

A Compensator, at intake end (in Option H11)
B Compensator, at pressure end

4.8 Automatic starting

Depending on the settings in the controller, the machine can automatically start after a power failure or external deactivation.

You must be logged in with the RFID Equipment Card in order to activate or deactivate this option.
Option deactivated (factory setting):

- Machine remains deactivated after a network power failure.

Option activated:

- Machine automatically restarts after the voltage supply has returned.

Further information Note the instructions in the operating manual supplied with SIGMA CONTROL 2 for activating and deactivating this function.

4.9 Floating relay contacts

Floating relay contacts are provided for the transfer of operational state (messages).
Information on location, loading capacity, and type of contact can be found in the electrical diagram.

If the floating relay contacts are connected to an external voltage source, voltage may be present even when the machine is isolated from the power supply.

4.10 Options

The options available for your machine are described below.

4.10.1 Option C5 Oil level monitor

The oil level switch monitors the level of lubricating oil in the blower block. This electronic monitoring does not relieve the obligation to perform regular manual checks of the lubricating oil level.

Two float-type level sensors monitor the level of oil in the drive and gear-end oil chambers. If the oil level falls below the minimum level, a switching contact is opened.

The controller registers the signal, displays an alarm message and shuts down the machine.

4.10.2 Option C10 Speed monitor

The speed monitor measures the rotational speed of the block rotors.

If the set minimum speed is not reached, the controller displays an alarm message and shuts down the machine.

4.10.3 Option C11 Unloaded start valve

The unloaded start valve prevents the machine starting against a load in the star-delta phase. The valve closes when the motor starter switches from star (Y) to delta (Δ).

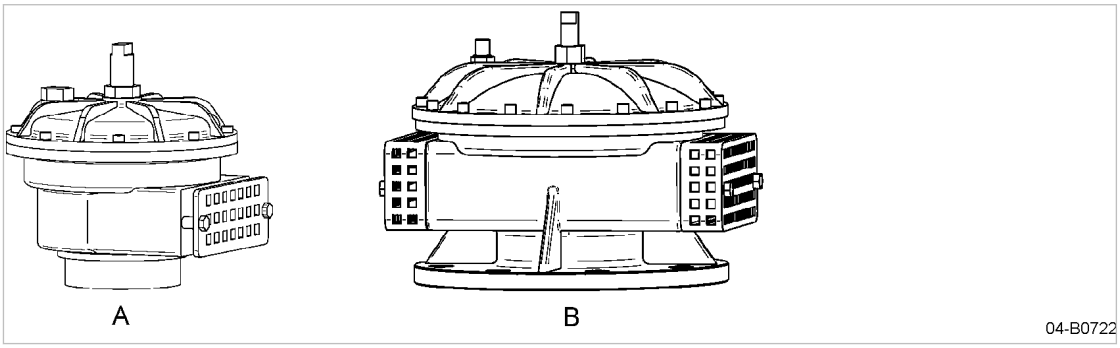


Fig. 13 Unloaded start valve

[A] AFE 45
[B] AFE 90

The unloaded start valve is factory set.

Function

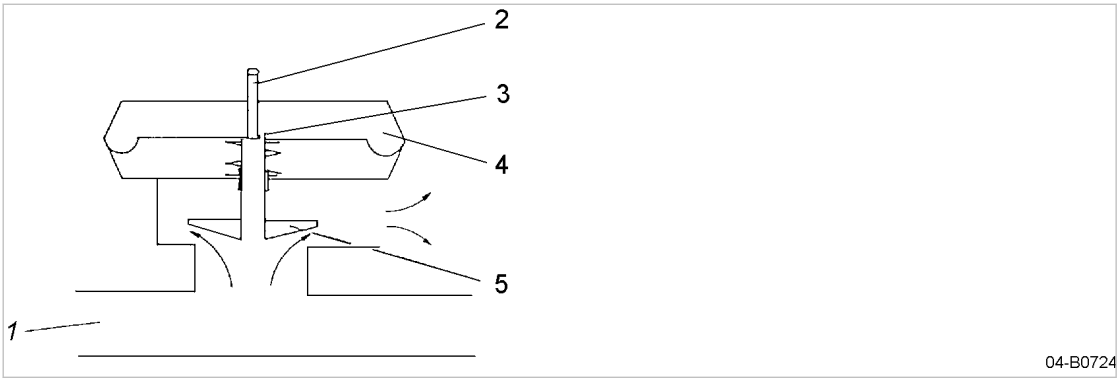


Fig. 14 Diagram of the unloaded start valve

1 Air network
2 Adjusting screw
3 Nozzle
4 Diaphragm chamber
5 Valve cone

When the machine is shut down the valve cone 5 is open.

When the machine is started, air passes through the blow-off aperture to atmosphere.

Turning the adjusting screw 2 reduces the valve aperture for the valve cone 5 to close at low volume flow.
(To close the valve cone 5 a pressure of 1.45 psi in the pipe is required.)

Back pressure acts through the nozzle 3 on the diaphragm chamber 4 to close the valve cone. The closing time can be influenced by changing the position of the valve cone with the adjusting screw 2.

Changing the closing time with the adjusting screw:

- Clockwise - shorter closing time
- Counterclockwise - longer closing time

4.10.4 Option C18 Unloaded start valve with regulating valve

The unloaded start valve with regulating valve is a medium-controlled valve with the following functions:

- Unloaded starting
- Pressure regulating during operation

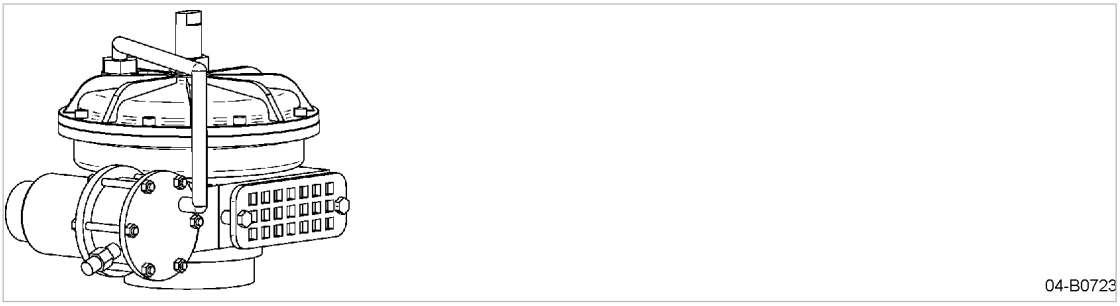


Fig. 15 Unloaded start valve with regulating valve

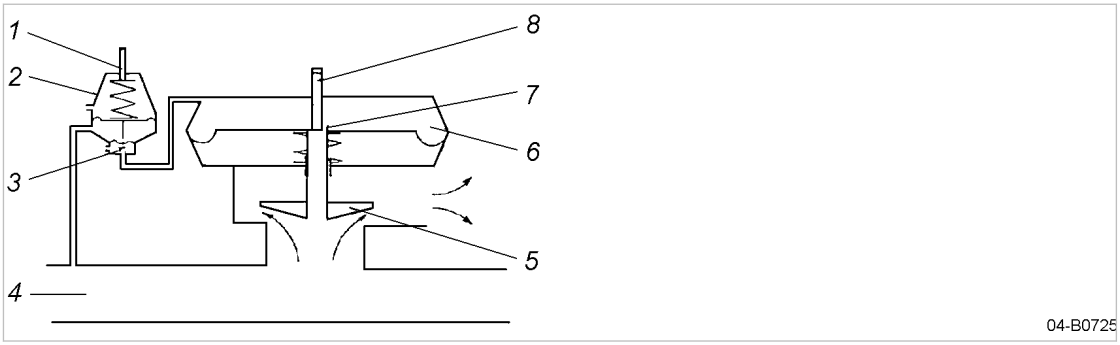


Fig. 16 Diagram of the unloaded start valve with regulating valve

[1]	Adjusting screw	[5]	Valve cone
[2]	Control air regulator	[6]	Diaphragm chamber
[3]	Valve cone	[7]	Nozzle
[4]	Air network	[8]	Adjusting screw

Unloaded starting

When the machine is stopped the valve cone [5] is open and valve cone [3] closed. When the machine is started, air flows over the valve cone [5] and is blown off to atmosphere. The pressure build-up in the air network [4] is transmitted through the hollow spindle and nozzle [7] into the upper diaphragm chamber [6]. The resulting pressure on the diaphragm closes the valve cone [5].

Changing the closing time:
The valve closing time can be adjusted by changing the nozzle [7] and turning the adjusting screw [8].

- Clockwise: shorter closing time
- Counterclockwise: longer closing time

The unloaded start function only works if the pressure in the air network [4] reaches at least 1.45 psig.

Overflow regulation

The control air regulator is set to atmospheric pressure.

After starting, the network pressure and the pressure on the control air regulator [2] rises. As soon as the set network pressure is reached the valve cone [3] opens. Pressure in the upper diaphragm chamber [6] bleeds off to atmosphere and the valve cone [5] opens.

The set network pressure is kept constant.

Changing the pressure setting:
Remove the rubber cap from the control regulator to change network pressure. Undo the locknut and adjust the screw with a screwdriver.

- Clockwise: lower pressure
- Counterclockwise: higher pressure

Lock the screw in position after adjusting and replace the rubber cap.

4.10.5 Option G1 Check valve

The check valve prevents a reversal of the normal air flow direction.
The valve is closed when the machine is at standstill.
The check valve is integrated in the outlet silencer.

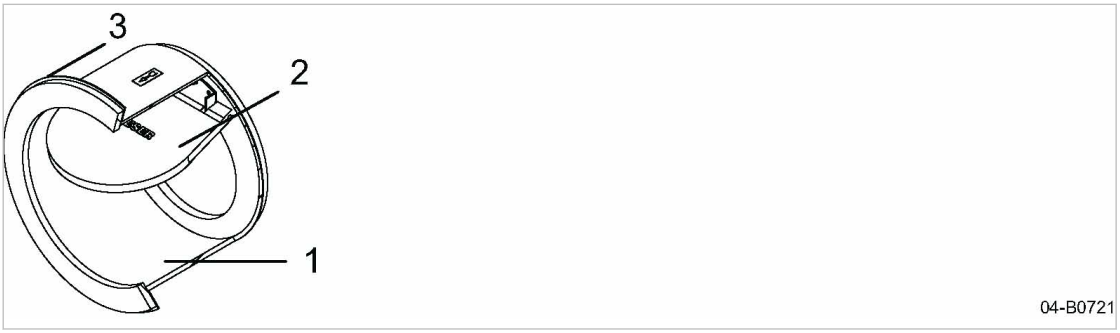


Fig. 17 Check valve

1 Enclosure
2 Closing mechanism
3 Gasket

4.10.6 Option H11 Piped inlet

Air is drawn into the block through the inlet silencer.

5 Installation and Operating Conditions

5.1 Ensuring safety

The conditions in which the machine is installed and operated have a decisive impact on safety.

Warning instructions are located before a potentially dangerous task.

Disregard of warning instructions can cause serious injuries!

Complying with safety instructions

Disregard of safety warnings can cause unforeseeable dangers!

- ➢ Strictly forbid fire, open flame and smoking.
- ➢ If welding is carried out on or near the machine, take adequate measures to prevent sparks or heat from igniting oil vapors or parts of the machine.
- ➢ Do not store flammable material in the vicinity of the machine.
- ➢ The machine is not explosion-proof!
  Do not operate in areas in which specific requirements with regard to explosion protection are in force.
- ➢ Ensure sufficient and suitable lighting such that the display can be read and work carried out comfortably and safely.
- ➢ Keep suitable fire extinguishing agents ready for use.
- ➢ Comply with the permissible ambient and intake conditions.
- ➢ Ensure the correct composition of the intake air:
  - Clean with no damaging contaminants (e.g., dust, fibers, fine sand).
  - Free of explosive or chemically unstable gases or vapors.
  - Free of acid/alkaline forming substances, particularly ammonia, chlorine or hydrogen sulfide.

Noise

The sound enclosure absorbs and reduces the machine noise to a comfortable level. This function will be effective only if the sound enclosure is closed.

- ➢ If necessary, wear hearing protection or take hearing protection measures on-site.

5.2 Installation conditions

5.2.1 Determining installation location and clearances

The machine is intended for installation in a suitable machine room. Information on wall clearances and ventilation is given below.

The clearances specified are recommended clearances and ensure unhindered access to all machine parts.

- ➢ Please consult KAESER if you cannot comply with these recommendations.

Precondition The floor must be level, firm and capable of bearing the weight of the machine.
No special foundations are necessary.

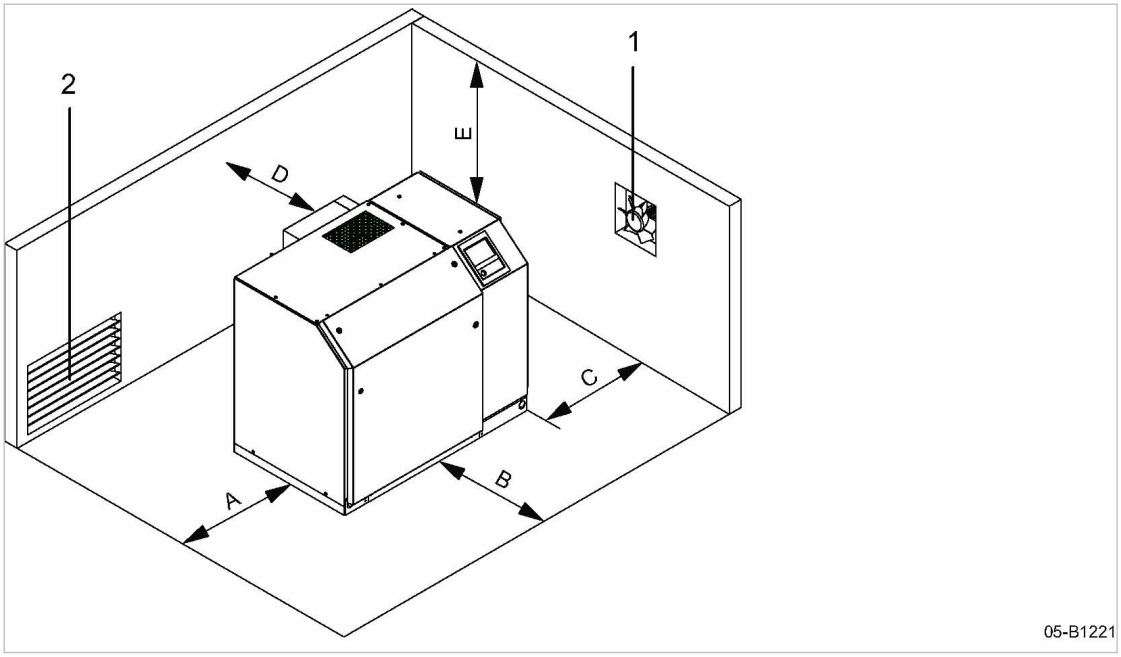


Fig. 18 Recommended positioning of the machine, minimum dimensions [in.]

A	See Table 30	E	32.0
B	51.2	1	Exhaust fan
C	See Table 30	2	Ventilation inlet air opening
D	39.4		

➢ Determine clearances A and C.

Characteristic, option	Recommended positioning of the machine, minimum dimensions
C33, START CONTROL (STC)	Distance A or C must be a minimum of 27.6 in.. Version 1: A = 2.4 in. and C = 27.6 in. Version 2: A = 27.6 in. and C = 2.4 in.
C34, OMEGA FREQUENCY CONTROL (OFC)	A = 2.4 in. C = 29.5 in.

Tab. 30 Recommended positioning of the machine, minimum dimensions

➢ If the ambient temperature is too low: Ensure that the compressor room is adequately heated.

➢ Ensure accessibility so that all work on the machine can be carried out hazard-free and without obstruction.

➢ Do not position the machine in the hot exhaust air flow from other machines.

➢ When installing multiple machines, ensure that all inlet and exhaust air openings are arranged on one side.

➢ Observe any additional clearances that may be specified in local occupational health & safety and building regulations, so that escape and rescue routes may safely be accessed, even when the machine enclosure is open.

5.2.2 Ensuring adequate ventilation

If the ventilation is insufficient, a partial vacuum can be created in the machine room.

- ➢ Ensure that the flow rate of inlet air is at least the same as the flow rate taken by the machine and exhaust fan from the machine room.
- ➢ Ensure that a sufficient amount of oxygen is available for any individuals entering the machine room.
- ➢ Ensure that the machine and exhaust fan can only be operated when the ventilation inlet air opening is open.
- ➢ Keep the inlet and exhaust openings free from obstructions so that the cooling air can flow freely through the machine room.

6 Installation

6.1 Ensuring safety

Follow these instructions to ensure safe installation.

Warning instructions are provided prior to any potentially dangerous task.

⚠ Disregard of warning instructions can result in life-threatening injuries!

Observing safety instructions

Ignoring safety instructions can result in unforeseen dangers.

- ➢ Follow the instructions in chapter 3 “Safety and Responsibility”.
- ➢ Installation work must only be carried out by authorized personnel!
- ➢ Ensure that no personnel are working on the machine.
- ➢ Ensure that all cover panels are closed.

Working on live components

Touching live components can result in electric shocks, burns or death.
Dangerous voltages remain in the frequency converter and intermediate circuit capacitors for some time after the power has been disconnected.
When the frequency converter is open, live components are exposed.

- ➢ Work on electrical equipment may only be carried out by authorized electricians.
- ➢ Switch off the power supply disconnecting device, lock out / tag out the device, verify the absence of any voltage.
- ➢ Before starting work on the frequency converter or intermediate circuit capacitors, wait for at least 5 minutes.
- ➢ Check that there is no voltage on floating contacts.

Working on the compressed air system

Compressed air is stored energy. Uncontrolled release of this energy can cause serious injury or death. The following safety instructions relate to any work on components that might be pressurized.

- ➢ Switch off the power supply disconnecting device, lock out / tag out the device, verify the absence of any voltage.
- ➢ Close shut-off valves or otherwise isolate the machine from the compressed air network so as to ensure that no compressed air can flow back into the machine.
- ➢ Fully vent all pressurized components and enclosures.
- ➢ Do not open or dismantle any valves.

Working on the drive system

Touching live components can result in electric shocks, burns or death.
Touching the fan wheel or the belt drive while the machine is running can result in serious injury.

- ➢ Switch off the power supply disconnecting device, lock out / tag out the device, verify the absence of any voltage.

➢ Do not open any of the cover panels while the machine is switched on.

➢ If full protection is only provided when the machine is completely installed, then in all other phases of the machine's life-cycle temporary protective devices (e.g. covers) must be fitted, in order to guarantee that parts of the body cannot reach or be caught/sucked in by the rotary lobes.

Further information Information regarding authorized personnel can be found in chapter 3.4.2.

Information regarding dangers and their avoidance can be found in chapter 3.5.

6.2 Reporting transport damage

1. Check the machine for visible and hidden transport damage.
2. Inform the carrier and the manufacturer in writing of any damage without delay.

6.3 Anchoring the machine

The machine may be anchored to the floor.

The following anchoring elements are shipped with the machine:

Foundation bolts for machines without sound enclosure.

Foundation bolts and angle brackets for machines with sound enclosure.

➢ Use the anchoring elements to anchor the machine without stress.

Further information Details of the fixing holes are contained in the dimensional drawing in chapter 13.2.

6.4 Connecting the power supply

Precondition The power supply disconnecting device is switched off,
lock out and tag out the device,
the absence of any voltage has been verified.
The tolerance limits of the power supply are within the tolerance limits of the rated machine voltage.

Option C34, OMEGA FREQUENCY CONTROL (OFC):
The voltage in the intermediate circuit capacitors of the frequency converter is reduced.

1. The power supply must only be connected by authorized installation personnel or authorized certified electricians.
2. Carry out protection measures as stipulated in relevant regulations and in national accident prevention regulations. In addition, observe the regulations of the local electricity supplier.
3. Select supply cable conductor cross—sections and fusing in accordance with local regulations and chapter 2.11.
4. Test the overcurrent protective device to ensure that the time it takes to shut down in response to a fault is within the permitted limit.
5. The user is required to fit the machine with a lockable power supply disconnecting device. This could be, for example, a load disconnect switch with fused input. If a circuit breaker is used it must be suitable for the motor starting characteristics.
6. Check that the control transformer is connected according to the supply voltage.
   If not, reconnect the control transformer to suit the power supply voltage.

7. **⚠ DANGER** *Danger of fatal injury from electric shock!*
   - ➢ *Switch off and lock out the power supply disconnecting device and verify the absence of voltage.*
8. Connect the machine to the power supply.
9. Properly close openings, cable glands, etc.

Further information The wiring diagram in chapter 13.4 contains further details of the power supply connection.

Connecting the control cabinet

The machine can be operated at full power at the rated voltage with a tolerance of ±5 %.

If the supply voltage deviates from the rated voltage, the control transformer's (component T11) cable bridge should be changed to correspond to the actual main power supply.

1. Select supply cable conductor cross—sections and fusing in accordance with local regulations and chapter 2.11.
2. Connect the control cabinet (note clockwise phase rotation!).

6.4.1 Option C32 Under frequency control

If the machine is delivered by KAESER including the frequency converter, the regulation behavior and operating mode of the frequency converter will be preset.

- ➢ Adapt and optimize the actual properties to the customer system on-site.

- ➢ Comply with the following provisions if you operate machines with a frequency converter:
  - Operate the machine only within its performance limits and under the permitted ambient conditions.
  - The speed change should be approx. 5 Hz per second. This value applies also for the starting ramp from standstill to reaching minimum frequency. Deviating settings, either slower or faster, may be possible after verification by an authorized KAESER SERVICE representative.
  - The frequency converter may be switched to a motor in standstill only, in order to avoid malfunctions.
  - The automatic restart of the machine is **not** preset for safety-relevant reasons.

6.5 Creating the compressed air connection

Material Torque wrench

Precondition The machine is factory assembled up to the point of connection to the discharge silencer.
The compressed air system is completely depressurized.

⚠ WARNING

Serious injury or death can result from loosening or opening components under pressure.

- ➢ *Fully vent all pressurized components and enclosures.*

If the system has a tendency for air/gas under pressure to flow back to the machine when it is stopped, a non-return device must be installed to allow for unloaded starting of the machine.

➢ Contact an authorized KAESER service representative on a suitable check valve and expert installation.

1. Use a flexible connector to create the compressed air connection to the pipeline system or the consumer and install, complying with the torques specified below:

Connection to the customer's pipeline	Torque [lbf-ft]
Compressor with hose clamps	—
Compressor with screwed joint M20*	66.4
* Manually tighten screws equally, torque crosswise at 37 lbf-ft and subsequently retighten crosswise with torque according to table.	

Tab. 31 Connection to the customer's pipeline

2. Support the weight of the pipework and any other connecting components.

6.6 Option H11 Connecting the inlet pipeline

If suction is to be from a pipeline, the inlet silencer is connected using a compensator.

Material Torque wrench

Precondition The compressed air system is vented completely to atmospheric pressure.

1. Connect to the compressed air system using the following torques:

Connection to an customer's pipeline	Torque [lbf-ft]
Compressor with hose clamps	14.8
Compressor with screwed joint M20*	—
* Manually tighten screws equally, pretension crosswise at 37 lbf-ft and subsequently retighten crosswise with torque according to table.	

Tab. 32 Inlet compressor torques

2. Separately secure the inlet pipelines upstream of the compensator.

Further information The dimensional drawing in chapter 13.2 provides information regarding the connection of the pipeline.

6.7 Rated motor power 175 hp: Readying for operation

For the transport, the nuts [1] and [3] at the rocker pivot piece [2] are locked.

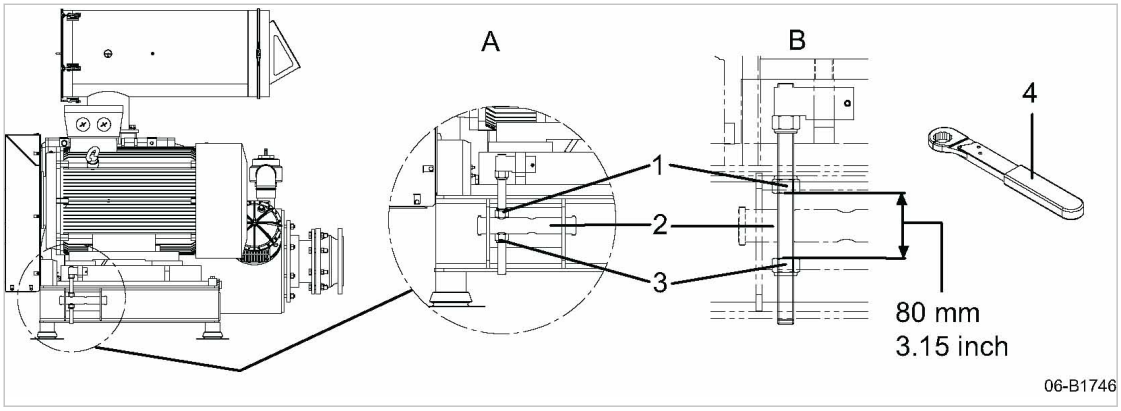


Fig. 19 Readying for operation

Ⓐ Transport state
Ⓑ Operational state
① Locking nut
② Rocker pivot piece
③ Locking nut
④ Ratchet ring spanner

1. Sound enclosure (Option H12) Open the access doors.
2. Turn the locking nut ① upward.
3. Turn the locking nut ③ downward using the ratchet ring spanner ④.
4. Set the distance of the locking nuts according to the operating state Ⓑ.

Due to the effects of the motor's own weight, the belt drive is tensioned continuously.

6.8 Option H12
Sound enclosure: Remove transport securing devices

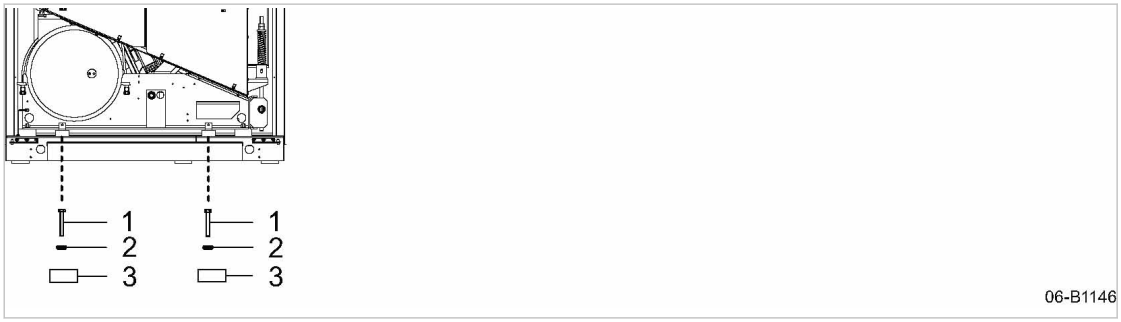


Fig. 20 Removing the transport securing devices

① Screw
② Washer
③ Spacer

Remove the transport securing devices after the machine has been installed.

1. Open the access panel of the sound enclosure.
2. Remove the transport securing device and store for future transports.

6.9 Option H12
Fitting the cover plate

A base frame cover plate is attached to the belt guard.

Fitting takes place after the machine has been installed.

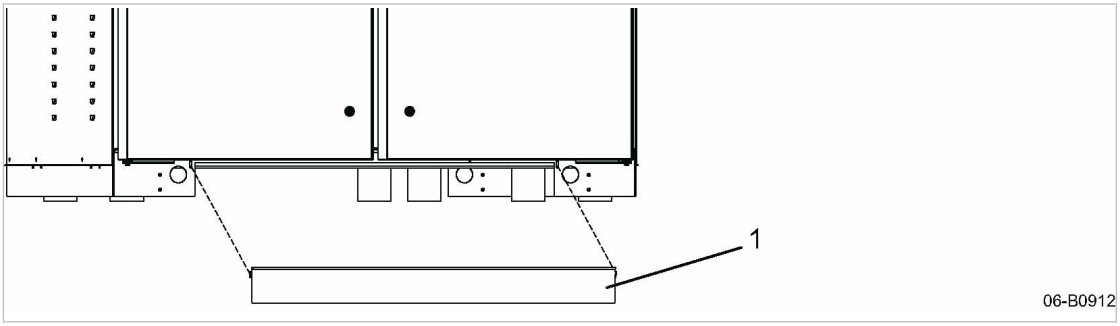


Fig. 21 Fitting the cover plate

[1] Cover plate

➢ Screw the cover plate to the base frame.

7 Initial Start-up

7.1 Ensuring safety

This chapter provides instructions for safe commissioning of the machine.
Warning instructions are provided prior to any potentially dangerous task.

⚠ Disregard of warning instructions can result in life-threatening injuries!

Observing safety instructions

Ignoring safety instructions can result in unforeseen dangers.

- ➢ Follow the instructions in chapter 3 “Safety and Responsibility”.
- ➢ Commissioning tasks may only be carried out by authorized installation personnel!
- ➢ Ensure that no personnel are working on the machine.
- ➢ Ensure that all cover panels are closed.

Working on live components

Touching live components can result in electric shocks, burns or death.
Dangerous voltages remain in the frequency converter and intermediate circuit capacitors for some time after the power has been disconnected.
When the frequency converter is open, live components are exposed.

- ➢ Work on electrical equipment may only be carried out by authorized electricians.
- ➢ Switch off the power supply disconnecting device, lock out / tag out the device, verify the absence of any voltage.
- ➢ Before starting work on the frequency converter or intermediate circuit capacitors, wait for at least 5 minutes.
- ➢ Check that there is no voltage on floating contacts.

Working on the compressed air system

Compressed air is stored energy. Uncontrolled release of this energy can cause serious injury or death. The following safety instructions relate to any work on components that might be pressurised.

- ➢ Switch off the power supply disconnecting device, lock out / tag out the device, verify the absence of any voltage.
- ➢ Close shut-off valves or otherwise isolate the machine from the compressed air network so as to ensure that no compressed air can flow back into the machine.
- ➢ Fully vent all pressurized components and enclosures.
- ➢ Do not open or dismantle any valves.

Working on the drive system

Touching live components can result in electric shocks, burns or death.
Touching the fan wheel or the belt drive while the machine is running can result in serious injury.

- ➢ Switch off the power supply disconnecting device, lock out / tag out the device, verify the absence of any voltage.

➢ Do not open any of the cover panels while the machine is switched on.

➢ If full protection is only provided when the machine is completely installed, then in all other phases of the machine's life-cycle temporary protective devices (e.g. covers) must be fitted, in order to guarantee that parts of the body cannot reach or be caught/sucked in by the rotary lobes.

Further information Information regarding authorized personnel can be found in chapter 3.4.2.

Information regarding dangers and their avoidance can be found in chapter 3.5.

7.2 Instructions to be observed before commissioning

Incorrect or improper commissioning can cause injury to persons and damage to the machine.

➢ Commissioning may be carried out only by authorized installation and service personnel who have been trained on this machine.

Special measures for recommissioning after storage/standstill

Storage period/ standstill longer than	Measure
12 months	➢ Change the lubricating oil. ➢ Re-grease the drive motor bearings if they are not of the permanently-greased type. ➢ Check the condition and tension of the drive belts. ➢ Have the frequency converter smoothing capacitors formed (refreshed) by an authorized KAESER service representative.
36 months	➢ Have the overall technical condition checked by an authorized KAESER service representative.

Tab. 33 Recommissioning after storage/standstill

7.3 Checking installation and operating conditions

➢ Check and confirm all the items on the checklist before initially starting the machine.

To be checked	See chapter	Confirmed?
➢ Have all packing materials, tool and transport securing means been removed from the machine?	—	
➢ Are the operators completely familiar with safety regulations?	—	
➢ Have all the positioning conditions been complied with?	5	
➢ Is the machine anchored to the floor without stress?	6.3	
➢ Are the tolerance limits of the power supply within the permissible tolerance limits of the machine rated voltage?	—	
➢ Are the cable cross-sections and fuse ratings adequate?	2.11	
➢ Is a user-supplied lockable power supply disconnecting device installed?	6.4	

To be checked	See chapter	Confirmed?
➢ Have all electrical connections for control cabinet been checked for tightness?	6.4	
➢ Has a suitable non-return valve been installed professionally?	6.5	
➢ Has the connection to the air network been made with a flexible pressure line or compensator?	6.5	
➢ Has the drive motor's direction of rotation been checked?	7.7	
➢ Have all electrical connections been checked for tightness?	—	
➢ Is there adequate lubricating oil in the control and drive-end of the blower block? (Check oil sight glass)	10.6	
➢ Has the drive belt tension been checked?	10.5	
➢ Are all access doors closed and latched, and removable panels in place and secured? (Option H12)	4.1	

Tab. 34 Installation conditions checklist

7.4 Re-greasing the motor bearings

➢ The motor bearings of motors with re-greasing facility must be re-greased with bearing grease prior to the initial commissioning of the machine.

Further information Further information on re-greasing motor bearings can be found in chapter 10.12.1.

7.5 Configuring the controller

➢ Configure the controller as described in the SIGMA CONTROL 2 operating manual.

7.6 Setting the display language

The controller can display message text in several languages.

You can set the language for texts on the display. This setting will be retained even when the machine is switched off.

1. In operating mode, switch to the main menu with the «Enter» key.
2. Press the «UP» or «DOWN» keys until the current language is shown as active line:

Current language (active line)
Submenu
Submenu
Submenu
Submenu
Submenu
Submenu

3. Use the «Enter» key to switch to setting mode.
   The language display flashes.
4. Move to the required language with «UP »or «DOWN».
5. Confirm the setting with the «Enter» key.

Result The display texts are now in the selected language.

Further information Detailed information can be found in the SIGMA CONTROL 2 operating manual.

7.7 Checking the direction of rotation for the drive motor

The machine is designed for a clockwise phase sequence.

An arrow showing the correct direction of rotation is indicated on the drive-side of the blower block and on the belt guard.

If the direction of rotation is incorrect, the flow direction will be reversed and air drawn in from the compressed air line.

A phase sequence relay is installed in the machine control cabinet, which only sends a release signal to the controller when a clockwise direction of rotation is detected.
The controller will report a fault if the direction of rotation is counterclockwise. In this case, exchange phases L1 and L2 of the supply line(s). The fault can then be acknowledged.

Material Phase sequence indicator

NOTICE

Incorrect direction of rotation!
This may result in damage to the machine from intake of foreign articles or excessive vacuum.

➢ *Ensure the correct direction of rotation.*

1. Remove the filter maintenance cover from the inlet silencer or inlet filter and/or remove the check plate on the inlet side.
2. Verify the direction of rotation using a phase sequence indicator on the machine supply lines.
3. If the direction of rotation is incorrect, exchange phases L1 and L2 of the supply lines.

If you do not have access to a phase sequence indicator:

➢ Arrange for the phase sequence to be checked by an authorized KAESER service representative.

7.8 Option C33 START CONTROL (STC): Setting the overload protection cut-out

The electrical diagram 13.4 gives the location of the overload protection cut-out.

With star-delta starting, the phase current is fed via the overload protection relay. This phase current is 0.58-times the rated drive motor current.

To prevent the overload relay being triggered by voltage fluctuations, temperature influences or component tolerances, the setting can be higher than the arithmetical phase current.

➢ Check the overload protection relay setting.

The overload protection relay shuts the machine down despite being correctly set?

➢ Contact an authorized KAESER service representative.

7.9 Starting the machine for the first time

Precondition
No personnel are working on the machine.
The control cabinet's door is closed and locked.
All maintenance doors and panels are in place and secured.

1. Allow the machine to cool to ambient temperature before switching on for the first time to avoid the build up of condensation.
2. Switch on the power supply disconnecting device.
   After the controller has carried out a self-test, the green *Control voltage* LED is lit continuously.
3. If required:
   Change the display language as described in chapter 7.6.
4. Press the «ON» key.
   The green *IDLE* LED is lit continuously.
   The drive motor runs up.

➢ Watch for any faults occurring in the first hours of operation.

➢ After the first 50 operating hours, check all electrical connections and tighten where necessary.

8 Operation

8.1 Switching on and off

Always switch the machine on with the «ON» key and off with the «OFF» key.
A power supply disconnecting device has been installed by the user.

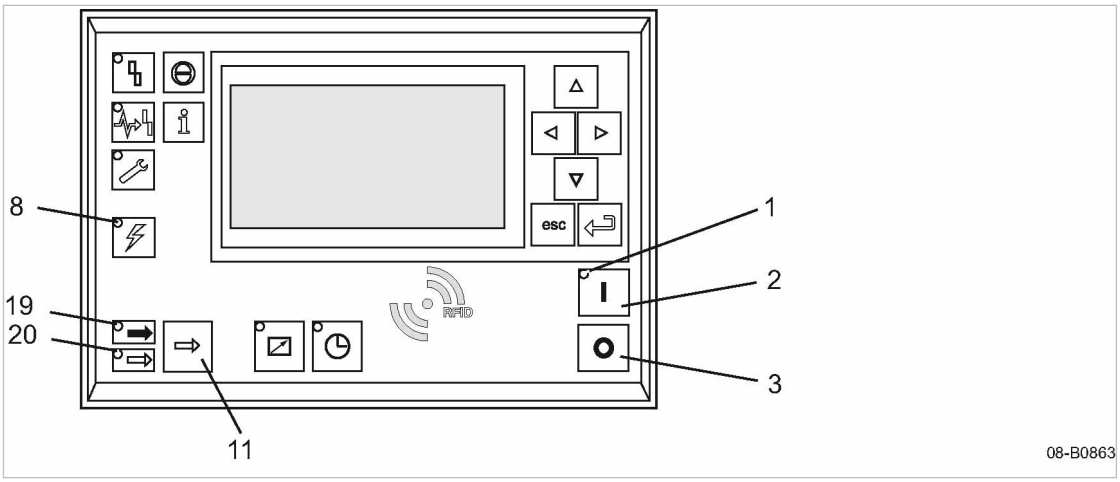


Fig. 22 Switching on and off

1 *ON* LED (green)
2 «ON» key
3 «OFF» key
8 *Controller voltage* LED (green)
11 «LOAD/IDLE» toggle key
19 *LOAD* LED
20 *IDLE* LED

8.1.1 Switching on

Precondition No personnel are working on the machine.
No personnel are inside the machine.
All access doors and removable panels are in place and secured.

1. Switch on the power supply disconnecting device.
   The *Controller voltage* LED lights green.
2. Press the «ON» key.
   The *ON* LED lights green.

Starting frequency

Characteristic, option	Maximum frequency of motor starts per hour
C33, START CONTROL (STC)	■ 6 times
C34, OMEGA FREQUENCY CONTROL (OFC)	■ any

Tab. 35 Starting frequency

➢ Adhere to maximum frequency of motor starts per hour.

Automatic restart

If a power failure occurs, the machine is **not** prevented from restarting automatically when power is resumed.
It can restart automatically as soon as power is restored.

➢ Note the instructions in the User Manual supplied with SIGMA CONTROL 2 for activating and deactivating this function.

8.1.2 Switching off

1. Press the «OFF» key.
   When the machine switches to IDLE (as per configuration), and during the fan run-on time, the *ON* LED flashes. The *ON* LED extinguishes as soon as the automatic shut-off action is completed.
2. Switch off and lock out/tag out the power supply disconnecting device.

Result The *Controller voltage* LED extinguishes. The machine is switched off and disconnected from the power supply.

In rare cases, you may want to shut down the machine immediately and cannot wait until the automatic shut-down process is finished.

➢ Press «OFF» once again.

8.2 Switching off in an emergency and switching on again

The EMERGENCY STOP push-button is located to the right of the control panel.

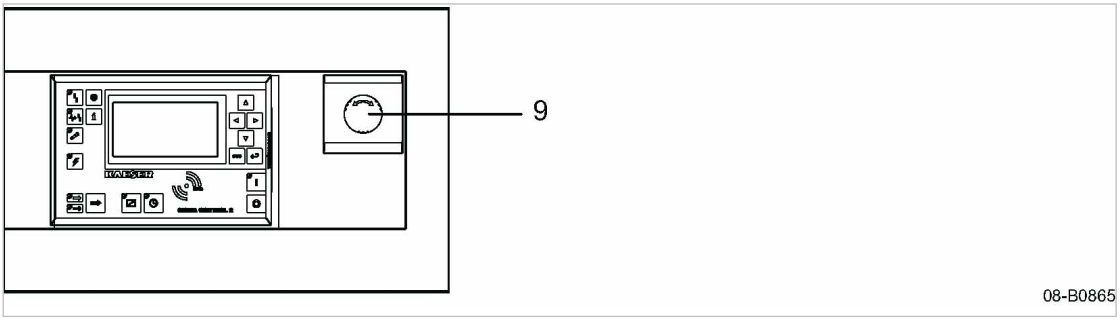


Fig. 23 Switching off in an emergency
9 EMERGENCY-STOP push button

Switching off

➢ Press the EMERGENCY STOP push button.

Result The EMERGENCY STOP push button remains latched after actuation.
The blower's pressure/vacuum system is vented and the machine is prevented from automatically restarting.

Switching on

Precondition The fault has been rectified.

1. Turn the EMERGENCY STOP push button in the direction of the arrow to unlatch it.
2. Acknowledge any existing alarm messages.

Result The machine can now be started again.

8.3 Switching on and off from a remote control center

Precondition A link to the remote control center exists.

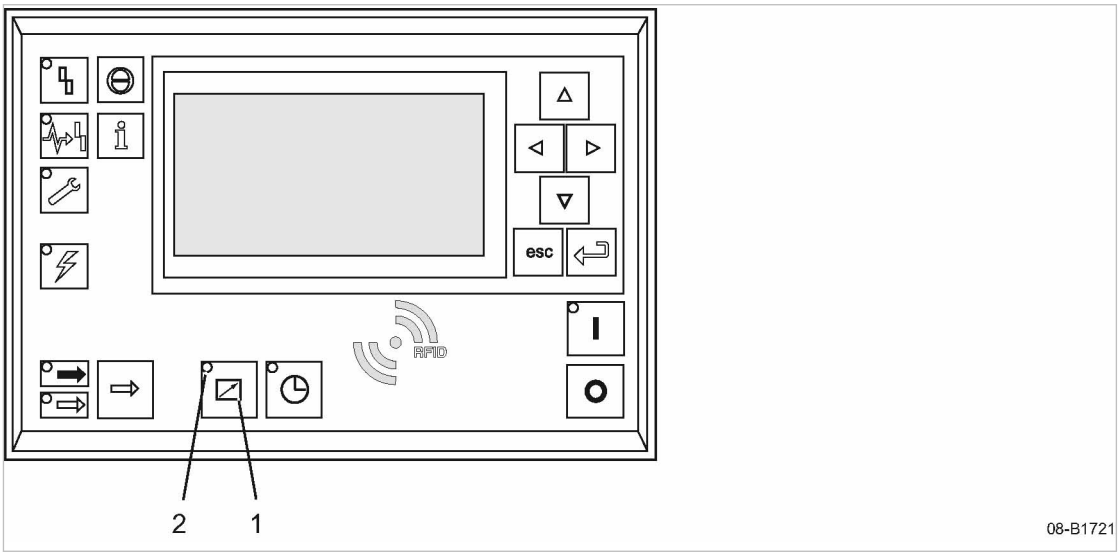


Fig. 24 Switching on and off from a remote control center

[1] «Remote control» key
[2] *Remote control* LED

1. Attach an easily seen notice to the machine that warns of remote operation.

⚠ WARNING

Remote control: Risk of injury caused by unexpected starting!

➢ Make sure that the power supply disconnecting device is switched off before commencing any work on the machine.

Tab. 36 Machine identification

2. Label the starting device in the remote control center as follows:

⚠ WARNING

Remote control: Risk of injury caused by unexpected starting!

➢ Before starting, make sure that no one is working on the machine and that it can be safely started.

Tab. 37 Remote control identification

3. Press the «Remote control» key.

Result The *Remote control* LED lights. The machine can be remotely controlled.

8.4 Switching on and off with the clock (timer)

Precondition The clock is programmed.

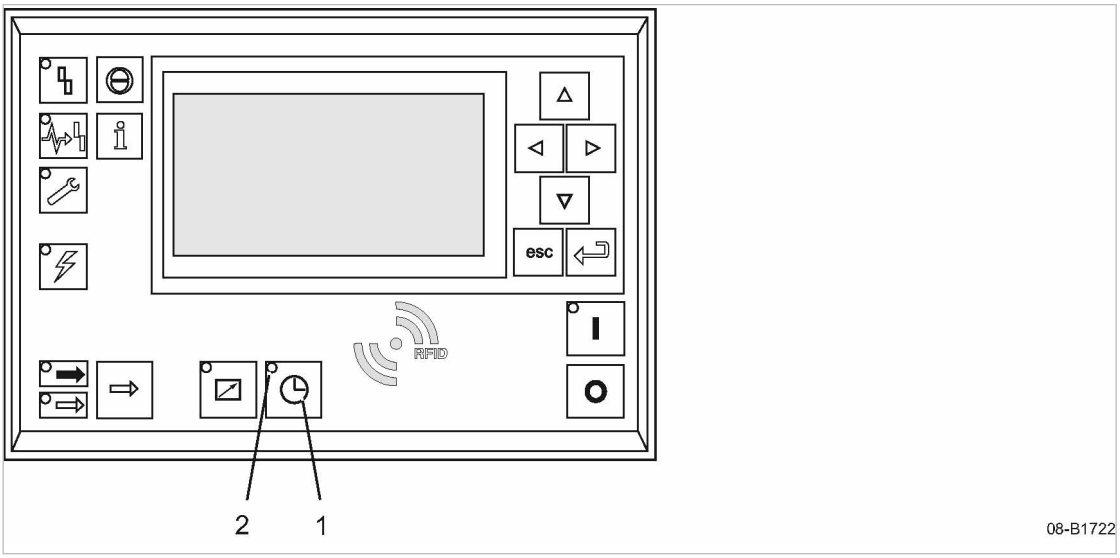


Fig. 25 Switching on and off with the clock (timer)

[1] «Timer control» key
[2] *Timer* control LED

1. Attach an easily seen notice warning of time-controlled operation:

⚠ WARNING
Time control: Risk of injury caused by unexpected starting!
➢ Make sure that the power supply disconnecting device is switched off before commencing any work on the machine.

Tab. 38 Machine identification

2. Press «Timer control».

Result The *Timer control* LED lights. The machine is switched on and off by the clock (timer).

8.5 Option H12
Checking the ventilator fan function (sound enclosure)

NOTICE

Overheating inside the sound enclosure!
A standstill of the ventilator can result in a breakdown of the blower block or other components.

➢ *If the ventilator stops, immediately provide an alternative flow of cooling air through the sound enclosure.*

➢ Check that air is actually being blown out of the enclosure cooling air outlet, e.g. by holding a sheet of paper in front of the outlet.

Further information KAESER SERVICE will advise on suitable measures.

8.6 Interpreting operation messages

The controller will automatically display operation messages informing you about the current operational state of the machine.

Operating messages are identified with the letter B.

Further information Detailed information can be found in the SIGMA CONTROL 2 operating manual.

8.7 Acknowledging alarm and warning messages

Messages are displayed on the "new value" principle:

- Message coming: LED flashes
- Message acknowledged: LED illuminates
- Message going: LED off

or

- Message coming: LED flashes
- Message going: LED flashes
- Message acknowledged: LED off

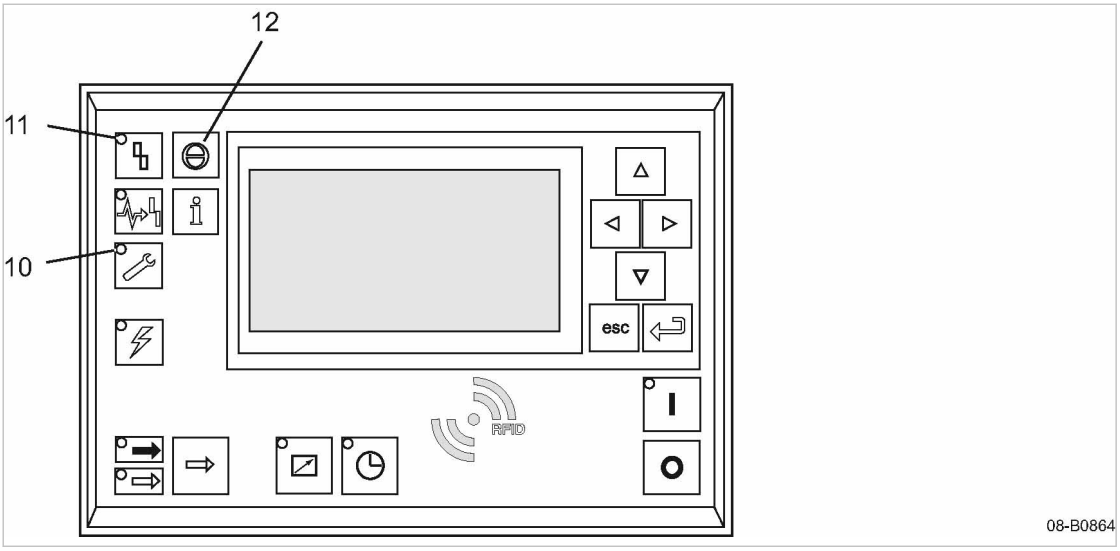


Fig. 26 Acknowledging messages

[10] *Warning* LED (yellow)
[11] *Alarm* LED (red)
[12] «Acknowledge» key

Alarm message

An alarm shuts the machine down automatically. The red *Alarm* LED flashes.

The system displays the appropriate message.

Precondition The fault has been rectified.

➢ Acknowledge the message with the «Acknowledge» key.

The *Alarm* LED extinguishes.

The machine is again ready for operation.

If the machine was switched off with the EMERGENCY STOP button:

➢ Unlatch the EMERGENCY STOP button (turn in direction of the arrow) before acknowledging the alarm message.

Further information Please refer to the SIGMA CONTROL 2 operating manual for a list of possible fault messages during operation.

Warning message

If maintenance work is to be carried out or if the warning is displayed before an alarm, the yellow *Warning* LED flashes.

The system displays the appropriate message.

Precondition The danger of an alarm is passed,
maintenance has been carried out.

➢ Acknowledge the message with the «Acknowledge» key.

The *Warning* LED extinguishes.

Further information Please refer to the SIGMA CONTROL 2 operating manual for a list of possible warning messages during operation.

9 Fault Recognition and Rectification

9.1 Basic instructions

Fault messages are classified in various categories:

- Warning:
  - Warning messages *W*
- Fault (with indication):
  - Alarm messages *S*
  - System messages *Y*
  - Diagnostic messages *D*
- Other faults (without indication): See chapter 9.2

The messages valid for your machine are dependent on how the individual machine is equipped.

1. Do not attempt fault rectification measures other than those given in this manual!
2. In all other cases:
   Have the fault rectified by an authorized KAESER SERVICE representative.

Further information

See the operating manual of SIGMA CONTROL 2 for details regarding the various messages.

9.2 Other faults

Alarm	Possible cause	Remedy
Unusual noise when running.	Too much backlash in the timing gears.	Contact KAESER Service.
	Too much clearance in the rotor bearings.	Contact KAESER Service.
	Rotors not synchronized.	Maintain the pressure differential and speed shown in the specification. Contact KAESER Service.
Blower block runs too hot.	Pressure differential too great.	Check and correct pressure differential.
	Clogged inlet filter reducing air intake volume.	Clean the inlet filter.
	Rotor clearance too large.	Contact KAESER Service.
	Leakage due to incorrect installation of pressure-bearing components.	Contact KAESER Service.
Oil leaks from the gas drain.	Lubricating oil level too high.	Drain off lubricating oil until the correct level is reached.
Oil leaking from around the drive shaft.	Shaft seal defective.	Contact KAESER Service.
Low intake flow volume.	Rotor clearance too large because of wear.	Contact KAESER Service.
	Intake resistance too high.	Clean the inlet filter.

Alarm	Possible cause	Remedy
Black film on the oil sight glasses.	Oil not changed at the correct interval.	Change the lubricating oil. Clean or renew the sight glass.
	Insufficient lubricating oil.	Change the lubricating oil. Clean or replace the sight glass.
	Oil overheated.	Contact KAESER Service.
	Block overloaded.	Contact KAESER Service.
Water in the oil.	Condensate build-up by prolonged storage and high humidity.	Change the lubricating oil.
Safety relief valve activates.	Inadmissible operating state, operating pressure too high.	Bring the machine to a permissible operational state or shut down.

Tab. 39 Other faults and remedies

9.3 Option H12 Sound enclosure faults

Alarm	Possible cause	Remedy
Overheating inside the sound enclosure!	Fan defective or turning in the wrong direction.	Check connection. Contact an authorized KAESER service representative.
	Flow of cooling air blocked.	Check and clean cooling air apertures. Check the cooling air inlet temperature.
	Drive motor overloaded.	Check operating conditions.
	Leakage due to incorrect installation of pressure-bearing components.	Contact an authorized KAESER service representative.

Tab. 40 Faults and remedies (option H12)

10 Maintenance

10.1 Ensuring safety

Follow the safety instructions below to ensure safe maintenance of the machine.

Warning instructions are provided prior to any potentially dangerous task.

⚠ Disregard of warning instructions can result in life-threatening injuries!

Observing safety instructions

Ignoring safety instructions can result in unforeseen dangers.

- ➢ Follow the instructions in chapter 3 “Safety and Responsibility”.
- ➢ Allow maintenance work to be performed by authorized personnel only!
- ➢ Ensure that no personnel are working on the machine.
- ➢ Ensure that all cover panels are closed.

Working on live components

Touching live components can result in electric shocks, burns or death.
Dangerous voltages remain in the frequency converter and intermediate circuit capacitors for some time after the power has been disconnected.
When the frequency converter is open, live components are exposed.

- ➢ Work on electrical equipment may only be carried out by authorized electricians.
- ➢ Switch off the power supply disconnecting device, lock out / tag out the device, verify the absence of any voltage.
- ➢ Before starting work on the frequency converter or intermediate circuit capacitors, wait for at least 5 minutes.
- ➢ Check that there is no voltage on floating contacts.

Working on the compressed air system

Compressed air is stored energy. Uncontrolled release of this energy can cause serious injury or death. The following safety instructions relate to any work on components that might be pressurised.

- ➢ Switch off the power supply disconnecting device, lock out / tag out the device, verify the absence of any voltage.
- ➢ Close shut-off valves or otherwise isolate the machine from the compressed air network so as to ensure that no compressed air can flow back into the machine.
- ➢ Fully vent all pressurized components and enclosures.
- ➢ Do not open or dismantle any valves.

Working on the drive system

Touching live components can result in electric shocks, burns or death.
Touching the fan wheel or the belt drive while the machine is running can result in serious injury.

- ➢ Switch off the power supply disconnecting device, lock out / tag out the device, verify the absence of any voltage.

- ➢ Do not open any of the cover panels while the machine is switched on.
- ➢ If full protection is only provided when the machine is completely installed, then in all other phases of the machine's life-cycle temporary protective devices (e.g. covers) must be fitted, in order to guarantee that parts of the body cannot reach or be caught/sucked in by the rotary lobes.

Further information Information regarding authorized personnel can be found in chapter 3.4.2.
Information regarding dangers and their avoidance can be found in chapter 3.5.

10.2 Maintenance schedule

10.2.1 Logging maintenance work

The maintenance intervals given are those recommended for average operating conditions.

- ➢ Maintenance tasks should be carried out more frequently where operating conditions are unfavorable (e.g. dusty atmosphere) or when the equipment is in constant use.
- ➢ Adjust the maintenance intervals with regard to local installation and operating conditions.

- ➢ Keep a log of all maintenance and service work.
  This enables the frequency of individual maintenance tasks and deviations from our recommendations to be determined.

Further information A prepared list is provided in chapter 10.15.

10.2.2 Resetting maintenance interval counters

Depending on the way a machine is equipped, sensors and/or maintenance interval counters monitor the operational state of important functional devices. Required maintenance work is shown on the SIGMA CONTROL 2.

Precondition Maintenance performed and,
Maintenance message acknowledged.

- ➢ Reset the maintenance interval counter as described in the SIGMA CONTROL 2 operating manual.

10.2.3 Regular maintenance tasks

The table below lists the required maintenance tasks.

If operating conditions are unfavorable (e.g. dusty ambient) or if the equipment is in constant use, maintenance tasks must be carried out more frequently (shorter intervals).

➢ Carry out maintenance tasks in a timely manner, taking the ambient and operating conditions into consideration:

Interval	Maintenance task	See chapter
At least 24 hours after initial commissioning	Check drive belt tension.	10.5
At least 50 hours after initial commissioning	Check that all electrical connections are secure and tighten if necessary.	–
Weekly	Control cabinet: Check the filter mat.	10.3
500 hours after initial commissioning*	Change the lubricating oil.	10.8
Up to 500 h Or monthly	Check the oil level.	10.6
	Check drive belt tension.	10.5
	Check the air filter.	10.9
	Control cabinet: Clean the filter mat.	10.3
Up to 1000 h	Clean the machine.	10.11
Up to 2000 h At least once a year	Drive motor bearings with re-greasing facility: Re-grease the motor bearings.	10.12.1
Up to 3000 h At least once a year	Change the FGB 220 lubricating oil.	10.8
Up to 3000 h, At least once a year	Change the air filter.	10.9
	Control cabinet: Replace the filter mat.	10.3
Annually	Check the safety relief valve.	10.13
	Check the EMERGENCY STOP push button.	10.14
	Check that all electrical connections are secure and tighten if necessary.	–
Up to 6000 h, At least every 2 years	Change the SB 220 lubricating oil.	10.8
Up to 12000 h, At least every 4 years	Replace the drive belt.	10.5

h = operating hours

* Not applicable in the case of initial commissioning by an authorized KAESER service representative.

Tab. 41 Regular maintenance tasks

10.2.4 Regular service tasks

The table below lists necessary service tasks.

➢ Only an authorized KAESER service representative should carry out service work.

➢ Have service tasks carried out in a timely manner, taking the ambient and operating conditions into account:

Interval	Service task
Up to 12000 h, At least every 4 years	Permanently greased drive motor bearings: Replace the motor bearings.
Up to 36000 h	Blower block Replace the radial shaft sealing ring.
	Drive motor bearings with re-greasing facility: Replace the motor bearings.
	Fan frequency converter: Replace the fan.
	Fan control cabinet: Replace the fan.
	Fan sound enclosure: Replace the fan.
	(Option C11) Maintain the unloaded start valve.
	(Option C18) Maintain the start pressure control valve.
Up to 36000 h, At least every 8 years	(Option G1) Maintain the check valve.
	Replace the compensators
At least every20 years	Replace safety-relevant components of the safety functions.
h = operating hours	

Tab. 42 Regular service tasks

10.3 Cleaning or replacing the control cabinet filter mats

Filter mats protect the control cabinet from ingress of dirt. If the filter mats are clogged, adequate cooling of the components is no longer ensured. In such a case, clean or replace the filter mats.

Material Warm water and household detergent

Spare parts (as required)

Precondition The power supply disconnecting device is switched off,
the device is locked off,
the absence of any voltage has been verified.

Fig. 27 Control cabinet ventilation grill

[1] Ventilation grill
[2] Filter mat

1. Carefully remove the ventilation grill and take out the filter mat.
2. Beat the mat or use a vacuum cleaner to remove loose dirt. If necessary, wash with lukewarm water and household detergent.
3. Replace the filter mat if cleaning is not possible or if the change interval has expired.
4. Lay the filter mat in the frame and latch in the ventilation grill.

10.4 Option H12 Sound enclosure

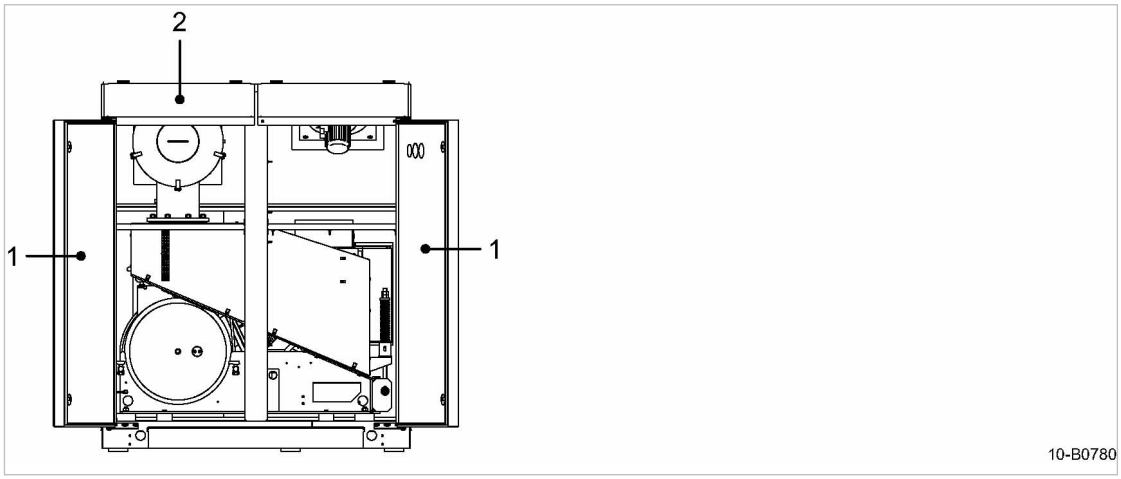


Fig. 28 Sound enclosure

[1] Access doors
[2] Flaps

➢ Open maintenance doors [1] for maintenance tasks.

➢ If required, open the flap(s) [2]
Latches are released by a key supplied with the machine.

FB 441 C pr and FB 621 C pr: Crushing hazard due to potential risk of flap(s) falling back down.

➢ Fold the flap(s) [2] back completely to safeguard against unintentional folding back down.

10.5 Drive belt maintenance

The maintenance of the drive belts depends on the rated motor output.

Material Spare parts (if required)

Precondition The power supply disconnecting device is switched off,
lock out and tag out the device,
the absence of any voltage has been verified.

The machine has cooled down.

⚠ WARNING

Touching the moving drive belt may result in severe bruising or even loss of limbs or extremities.

➢ *Switch off and lock out/tag out the power supply disconnecting device and verify the absence of any voltage.*

➢ At a rated motor output of 40–150 hp, proceed with the steps outlined in chapter 10.5.1.

➢ At a rated motor output of 175 hp, proceed with the steps outlined in chapter 10.5.2.

10.5.1 Rated drive motor power 40-150 hp

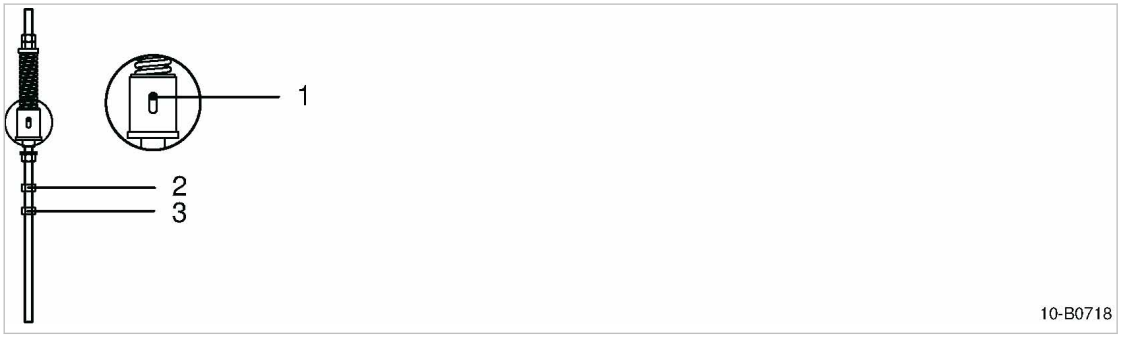


Fig. 29 Drive belt maintenance

[1] Marker pin (shown as: belt tensioning required)
[2] Locking nut
[3] Adjusting nut

Checking belt tension and adjustment

The tensioning device uses spring force to automatically adjust the tension to the belt.

Adjust the tension before the marker pin reaches the **top** end of the elongated hole.

1. Loosen the locking nut [2].
2. Use the adjusting nut [3] to adjust drive belt tension until the marker pin reaches the lower end of the elongated hole.
3. Tighten the locking nut [2].

Visually check for damages

1. **⚠ CAUTION** *Danger of pinching between belt and V-belt pulleys. Severe bruising may result.*
   ➢ *Work with caution.*
2. Turn the drive belt by hand at the pulley and inspect the entire belt for damage.
3. In case of damage: Replace the drive belt immediately.

When individual V-belts fail in multiple-groove drives, all belts must be replaced.

Replace the drive belt

1. Remove the belt guard.
2. Loosen the locking nut [2].
3. Turn the adjusting nut [3] to loosen the tension on the drive belt until it can be removed from the pulley.
4. Install the new drive belt over the pulleys and use the adjusting nut [3] to adjust the tension until the marker pin reaches the lower end of the elongated hole.
5. Tighten the locking nut [2].
6. Attach the belt guard.
7. Retighten for the first time after the new drive belt has been in operation for 50 hours.

10.5.2 Rated drive motor power 175 hp

Due to the effects of the motor's own weight, the belt drive is tensioned continuously.

Visually check for damages

1. **⚠ CAUTION** *Danger of pinching between belt and V-belt pulleys. Severe bruising may result.*
   ➢ *Work with caution.*
2. Turn the drive belt by hand at the pulley and inspect the entire belt for damage.
3. In case of damage: Replace the drive belt immediately.

When individual V-belts fail in multiple-groove drives, all belts must be replaced.

Replace the drive belt

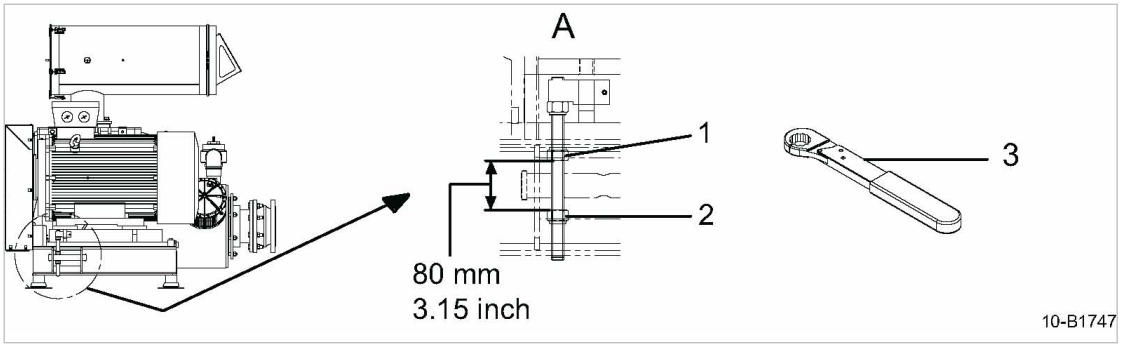


Fig. 30 Changing the drive belt, 175 hp

[A]	Operating state	[2]	Nut
[1]	Nut	[3]	Ratchet ring spanner

1. Remove the belt guard.
2. Turn the nut [1] upward.
3. Turn the nut [2] upward using the ratchet ring spanner [3], until the drive belts can be removed.
4. Place the new belt over the pulleys.
5. Turn the nut [2] downward using the ratchet ring spanner [3].
6. Set the distance of the nuts according to the operating state [A].
7. Attach the belt guard.

10.6 Checking the oil level

The true oil level can be seen in the oil sight glass only when the machine is stopped.

The gear-end and drive-end oil chambers are not connected.

⚠ WARNING

Danger of burns from hot components!

➢ *Wear long-sleeved clothing and protective gloves.*

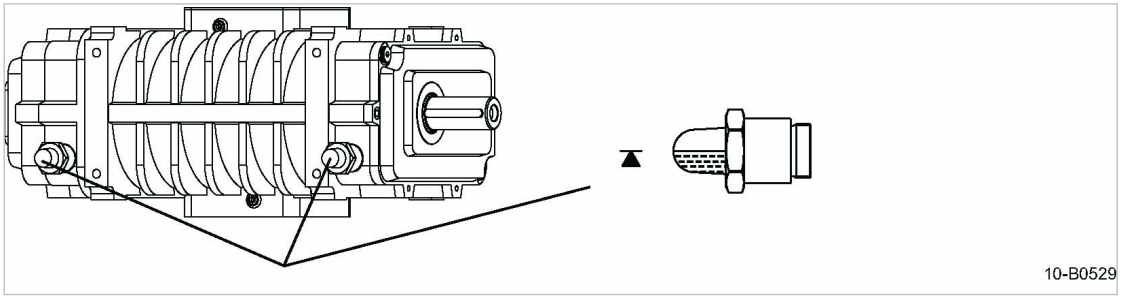


Fig. 31 Checking the oil level

1. Check the oil level in the sight glasses on both ends of the block.
2. Replenish as soon as the level falls 0.3 in. below the center of the sight glass.

10.7 Replenishing lubricating oil

Labels giving the oil type for topping off are to be found on the blower block and belt guard.

The machine must be isolated from the compressed air network and completely vented before undertaking any work on the pressure system.

Precondition The power supply disconnecting device is switched off,
the disconnecting device is locked in the off position,
the oil level has settled.

⚠ WARNING

Danger of burns from hot components and oil!

➢ *Wear long-sleeved clothing and protective gloves.*

NOTICE

Unsuitable oil can damage the block!

➢ *Never mix different types of oil.*

➢ *Never top off with a different type of oil to that already used in the block.*

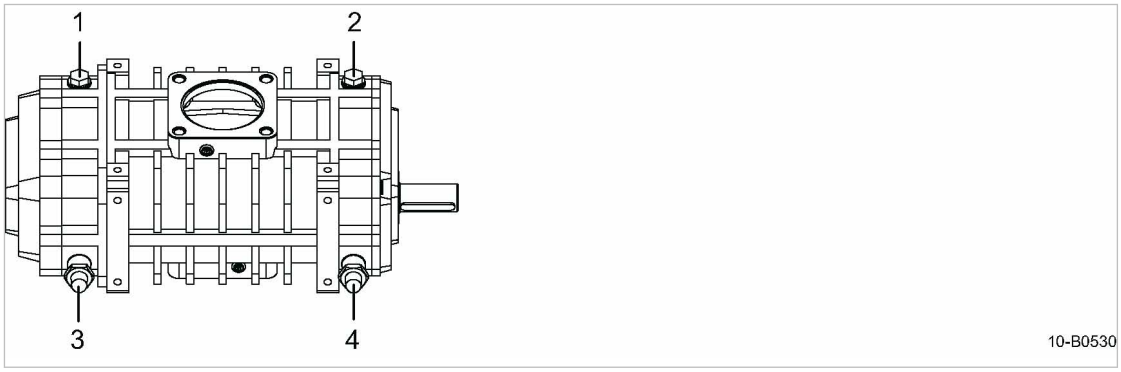


Fig. 32 Replenishing lubricating oil

[1] Plug (gear-end oil filling port)
[2] Plug (drive-end oil filling port)
[3] Gear-end oil sight glass
[4] Drive-end oil sight glass

1. Slowly remove the plug [1] and/or [2].
2. Top off until the level is at the marking on the sight glass [3] and/or [4].
3. Screw in the plugs.
4. Visually check for leaks.

10.8 Changing the oil

The machine must be isolated from the compressed air network and completely vented before undertaking any work on the pressure system.

The oil should be changed with the block temperature at 130°F to ensure the oil flows freely.

Drain the oil thoroughly from the blower block:

- Gear-end
- Drive-end

Material Lubricating oil

Oil receptacle

Precondition The power supply disconnecting device is switched off,
The device is locked off,
A check has been made that no voltage is present.

⚠ WARNING

Danger of burns from hot components and oil!

➢ *Wear long-sleeved clothing and protective gloves.*

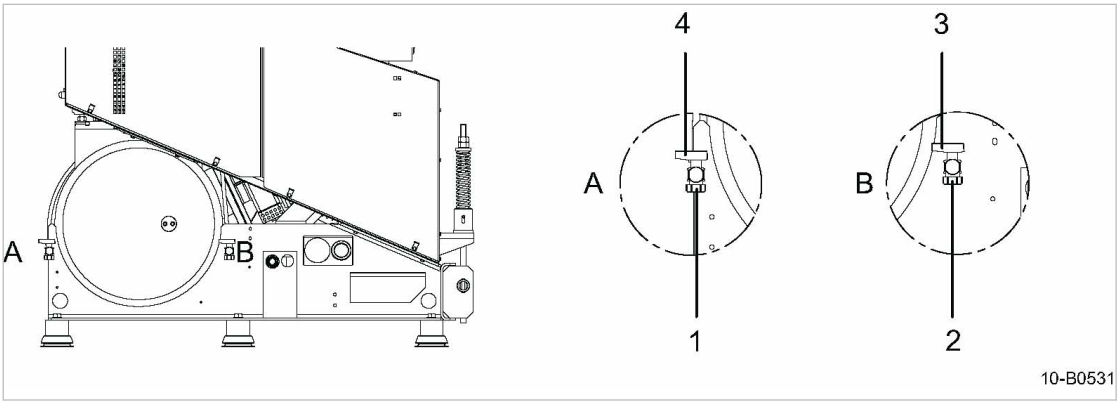


Fig. 33 Changing the oil

[A] Drive-end
[B] Gear-end
[1] Cap
[2] Cap
[3] Oil drain tap
[4] Oil drain tap

Draining the oil

1. Prepare an oil receptacle.
2. Take out the oil filler plugs at the oil inlet of the blower block [1] and [2] (Fig. 32).
3. Take off the caps [1] and [2] and open the oil drain taps [3] and [4].
4. Drain the lubricating oil.

Dispose of the old oil in accordance with local environmental protection regulations.

Filling with fresh oil

1. Fill with fresh oil.

2. Allow the oil drain taps to remain open until fresh oil begins to run out (bleeding the oil drain lines).
3. Close the oil drain taps [3] and [4].
4. Check the oil level in both sight glasses (Fig. 32) and top off as necessary.
5. Screw on the caps [1] and [2].
6. Replace and tighten the oil filler plugs of the oil inlets at the blower block.
7. Visually check for leaks.

10.9 Air filter maintenance

The air filter protects the supplied pressure system from dirt entering.

NOTICE

Machine damage caused by unsuitable air filter!
The use of an unsuitable air filter can permit dirt to enter the pressure system and cause damage to the machine.

➢ *Use a suitable air filter.*

The air filter cannot be cleaned.

10.10 Changing the air filter

The machine must be isolated from the compressed air network and completely vented before undertaking any work on the pressure system.

Material Spare parts

Precondition The power supply disconnecting device is switched off,
the device is locked off,
the absence of any voltage has been verified.

⚠ WARNING

Danger of burns from hot components!

➢ *Wear long-sleeved clothing and protective gloves.*

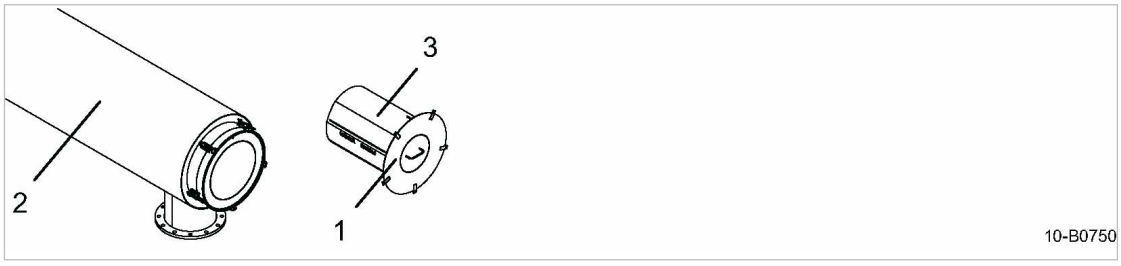


Fig. 34 Changing the air filter

[1] Cover
[2] Inlet silencer
[3] Air filter

1. Open the snap fastener on the inlet silencer cover [2] .
2. Remove off the cover [1].
3. Loosen the Velcro strip and remove the air filter [3].
4. Clean all parts and sealing surfaces.
5. Place the new filter around the perforated inlet port and secure with the Velcro strip.
6. Attach the cover to the inlet silencer.

10.11 Machine cleaning

Regularly clean the machine. This ensures reliable cooling of the machine. The frequency is mainly dependent on local operating conditions.

Clogged machines are indicative of unfavorable ambient conditions. Such ambient conditions clog the cooling air ducts in the machine's interior and the motors resulting in increased wear and tear.

Material
Brush and/or compressed air
Protective gloves
Face mask and safety goggles (if required)
Vacuum cleaner

Precondition
The power supply disconnecting device is switched off,
the device is locked off,
the absence of any voltage has been verified.

The machine has cooled down.

1. Open the sound enclosure (Option H12).
   Dismantle panels in order to clean the cooling air ducts of the drive motor.
2. Dry brush the machine or blow off with compressed air.
3. Vacuum off dirt.
4. Close sound enclosure (Option H12).
   Replace and lock panels.

The machine cannot be cleaned?

➢ Have severe clogging removed by an authorized KAESER service representative.

10.12 Motor maintenance

Motor maintenance depends on the type of motor.

Material
Grease gun with bearing grease UNIREX N3
Cleaning cloth

10.12.1 Drive motor bearings with re-greasing facility

Use only the high temperature grease UNIREX N3 for the motor bearings. Damage to bearings caused by the use of other brands of grease is excluded from the warranty.

The required quantity of grease is stated on the motor maintenance plate.

Precondition
The motor is running.

1. **⚠ WARNING** *Noise during machine operation (without sound enclosure) or noise due to opened service access of the sound enclosure (Option H12)! Hearing may be damaged.*
   - ➢ *Always wear ear protection.*
2. **⚠ WARNING** *Danger of burns from hot components!*
   - ➢ *Wear long-sleeved clothing and protective gloves.*
   - ➢ *Work with caution.*
3. **NOTICE** *Motor damage due to incorrect re-greasing!*
   If the motor is switched off, the new bearing grease is distributed incorrectly and pressed unused into the old grease tank.
   - ➢ *Re-grease the bearings only with the motor running.*
4. The motor bearings must be replaced in the course of regular maintenance by an authorized KAESER service representative.

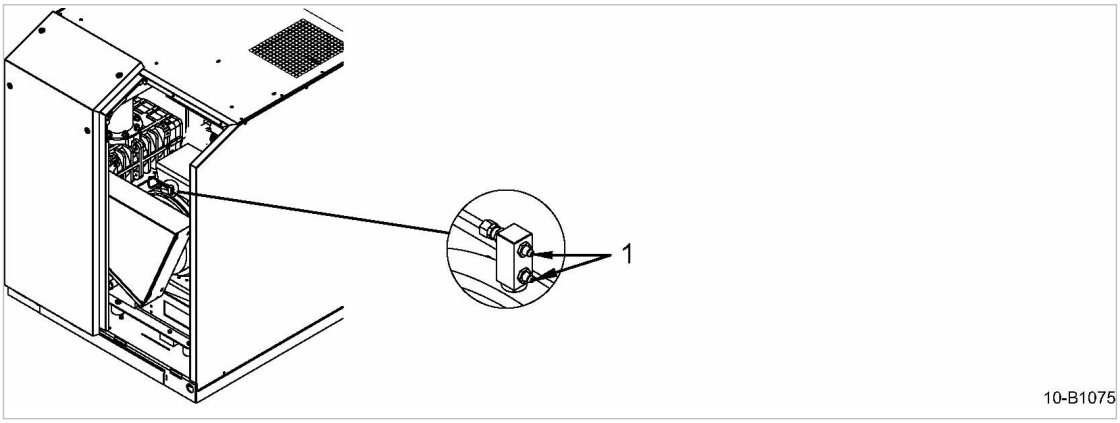


Fig. 35 Maintenance of a drive motor with re-greasing facility
[1] Grease fitting

1. Open the right-side service panel of the sound enclosure.
2. Clean the grease fittings [1] with a cloth before greasing.
3. Grease both bearings with a grease gun.
4. Close the service panel, close the latch.

Further information The re-greasing interval and required quantity of grease are provided in chapter 2.4.
For further information regarding the motor, please consult the motor manual.

10.12.2 Permanently greased drive motor bearings

The motor bearings are permanently lubricated. Re-greasing is not necessary.

- ➢ The motor bearings must be replaced in the course of regular maintenance by an authorized KAESER service representative.

Further information For further information regarding the motor, please consult the motor manual.

10.12.3 Fan motor

The motor bearings are permanently lubricated. Re-greasing is not necessary.

➢ The fan must be replaced in the course of regular maintenance by an authorized KAESER service representative.

10.13 Testing the safety relief valve

Free movement of the safety relief valve's tension rod is checked by hand or with a lifting device.

Precondition The machine is switched off.
The machine is fully vented to atmosphere.

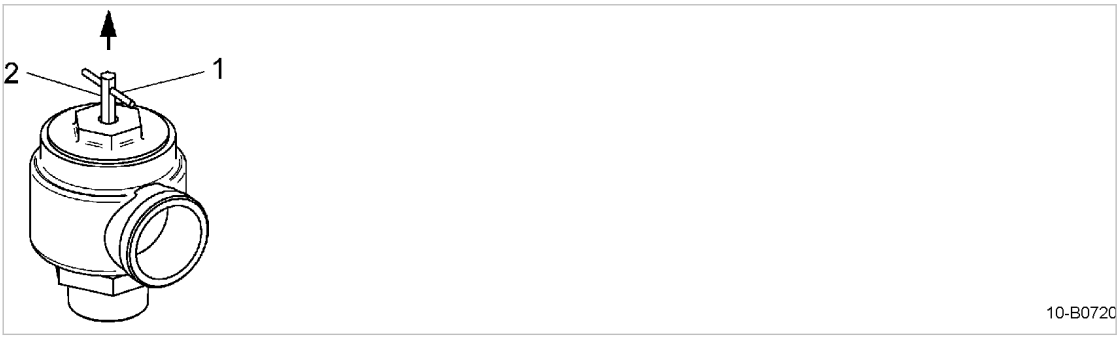


Fig. 36 Testing the safety relief valve

[1] Opening lever
[2] Tension rod

➢ Check for free movement of the tension rod [2] by pulling vertically by the opening lever [1].

The valve opens as soon as maximum working pressure is exceeded.

➢ Never operate the machine without a correctly functioning safety relief valve!

➢ Do **not** adjust the safety relief valve.

➢ Immediately replace a defective safety relief valve.

10.14 Testing the EMERGENCY STOP push button

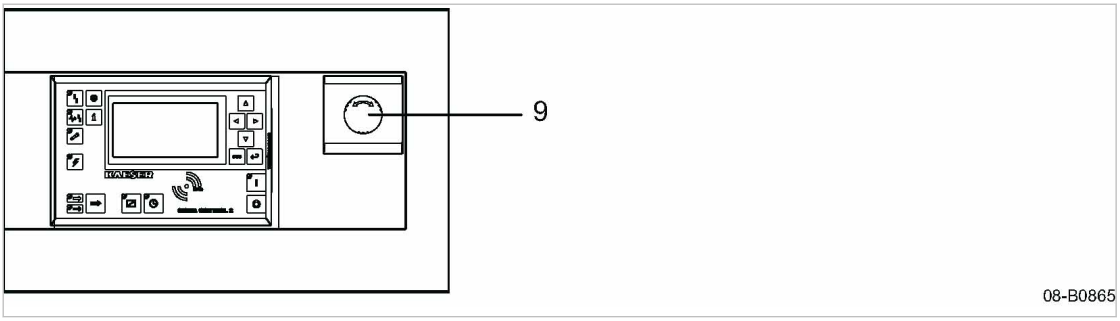


Fig. 37 Testing the EMERGENCY STOP push button

[9] EMERGENCY STOP push button

Precondition The drive motor is running.

1. Press the EMERGENCY STOP push button.

   The drive motor stops, the pressure system is vented and the machine is prevented from automatic restarting.

The drive motor does not stop?

The safety function of the EMERGENCY STOP push button is no longer ensured.

➢ Immediately shut down the machine and contact an authorized KAESER service representative.

2. Turn the EMERGENCY STOP push button in the direction of the arrow to unlatch it.
3. Acknowledge the fault message.

10.15 Documenting maintenance and service work

Machine equipment number:

➢ Enter any maintenance and service work carried out in the table below.

Date	Maintenance task carried out	Operating hours	Signature

Tab. 43 Logged maintenance tasks

11 Spares, Operating Materials, Service

11.1 Note the nameplate

The nameplate contains all information to identify your machine. This information is essential to us in order to provide you with optimal service.

➢ Please give the information from the nameplate with every inquiry and order for spares.

11.2 Ordering spares and operating fluids/materials

KAESER consumable parts and operating fluids/materials operating materials are original KAESER products. They are specifically selected for use in KAESER machines.

⚠ WARNING

There is risk of personal injury or damage to the machine resulting from the use of unsuitable spare parts or operating fluids/materials.
Non-Kaeser parts and operating fluids/materials may be unsuitable or of poor quality and can damage the machine or impair its proper function.
Damage to the machine can also result in personal injury.

➢ *Use only original KAESER parts and operating fluids/materials.*

➢ *Have authorized KAESER SERVICE representative carry out regular repair and maintenance.*

Machine

Name	Number
Drive belt	1800
Filter mat (control cabinet)	1150
Air filter	1250
Lubricating oil	1600

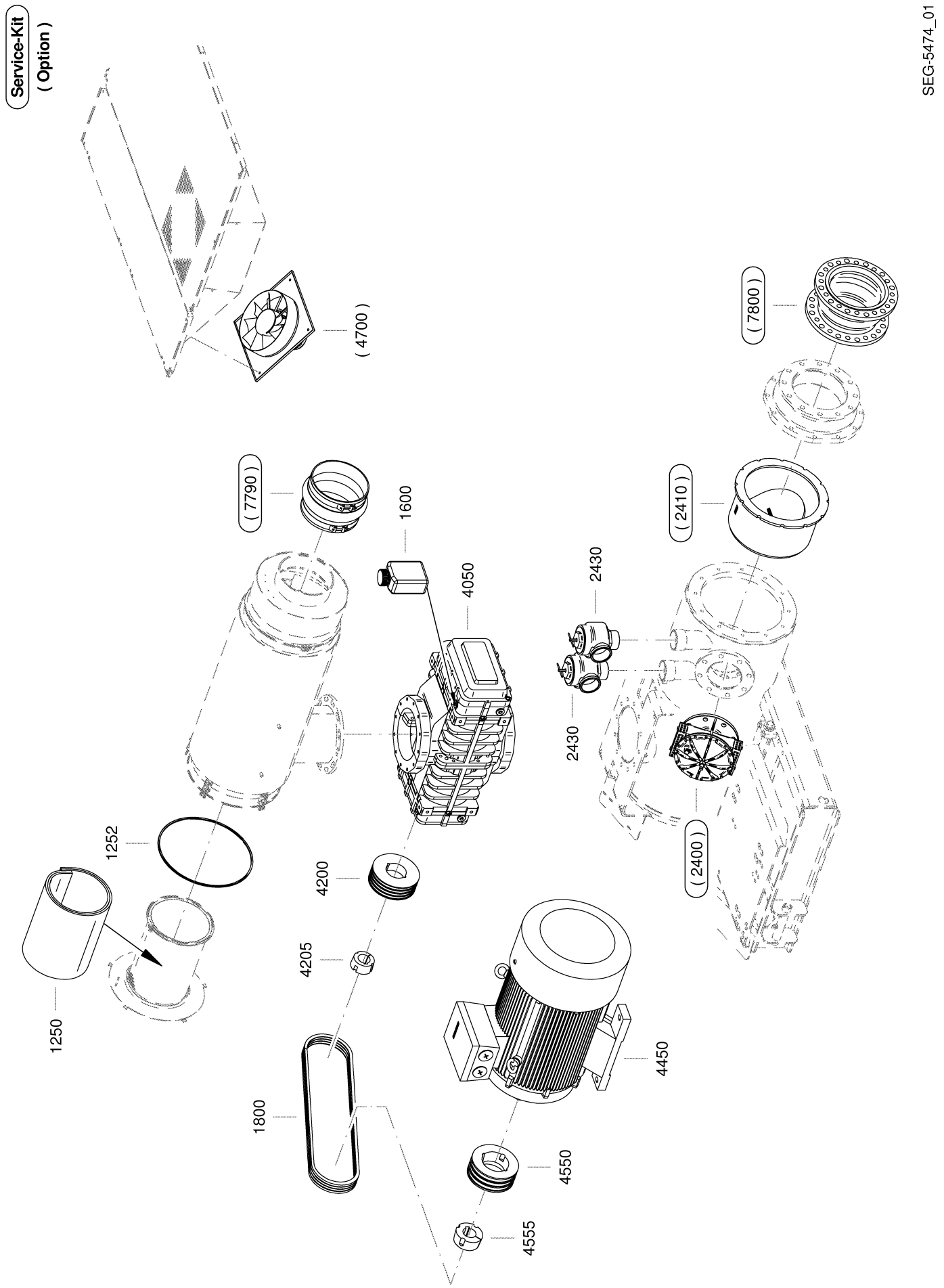
Tab. 44 Consumable parts

11.3 Replacement parts for service and repair

Use these spare parts lists to plan your material requirement according to operating conditions and to order the required spare parts.

➢ Make sure that any service or repair tasks not described in this manual are carried out by an authorized KAESER service representative.

11.3.1 Option C33, START CONTROL (STC)


Service-Kit
(Option)
SEG-5474_01
(4700)
(7800)
(7790)
1600
(2410)
4050
2430
2430
1252
4200
(2400)
4205
1250
4450
1800
4550
4555

Legend		KAESER
	FBC.2 pr	SEL-3904_01 E

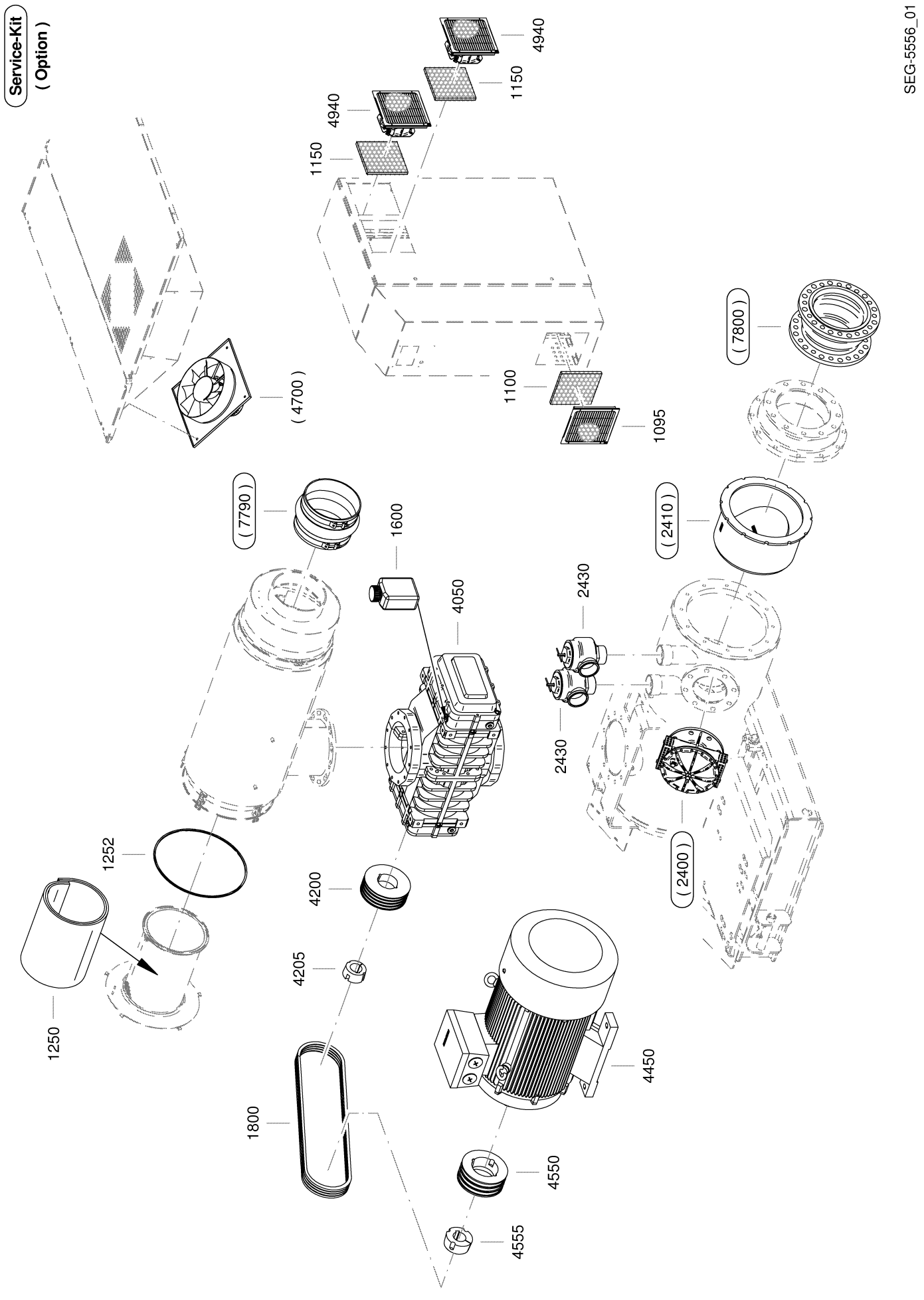
Item	Description	Option
1250	Air filter insert	
1252	Inlet silencer gasket	
1600	OMEGA FLUID	
1800	Drive belt	
2400	Start control valve	X
2410	Check valve	X
2430	Pressure limiting valve	
4050	OMEGA blower block	
4200	Airend pulley	
4205	Tapered bushing, airend	
4450	Drive motor	
4550	Drive motor pulley	
4555	Tapered bushing, drive motor	
4700	Fan unit	X
7790	Compensator, air inlet	X
7800	Compensator, air outlet	X

Please quote the part number and serial number of the machine together with the item number and the description of the part when ordering.

Before and during all work, be sure to read and follow the safety and service instructions in the machine's service manual!

*) see cooling oil recommendations

11.3.2 Option C34, OMEGA FREQUENCY CONTROL (OFC)


Service-Kit
(Option)
SEG-5556_01
4940
1150
4940
1150
(4700)
1100
1095
(7800)
(7790)
1600
4050
(2410)
2430
2430
1252
4200
4205
(2400)
1250
4450
1800
4550
4555

Legend		KAESER
	FBC.2 OFC pr	SEL-3934_01 E

Item	Description	Option
1095	Control cabinet breather	
1100	Filter mat, control cabinet	
1150	Filter mat, converter cabinet	
1250	Air filter insert	
1252	Inlet silencer gasket	
1600	OMEGA FLUID	
1800	Drive belt	
2400	Start control valve	X
2410	Check valve	X
2430	Pressure limiting valve	
4050	OMEGA blower block	
4200	Airend pulley	
4205	Tapered bushing, airend	
4450	Drive motor	
4550	Drive motor pulley	
4555	Tapered bushing, drive motor	
4700	Fan unit	X
4940	Control cabinet fan SFC	
7790	Compensator, air inlet	X
7800	Compensator, air outlet	X

Please quote the part number and serial number of the machine together with the item number and the description of the part when ordering.

Before and during all work, be sure to read and follow the safety and service instructions in the machine's service manual!

*) see cooling oil recommendations

11.4 KAESER AIR SERVICE

KAESER AIR SERVICE offers:

- authorized KAESER service representatives with KAESER factory training,
- increased operational reliability ensured by preventive maintenance,
- energy savings achieved by avoidance of pressure losses,
- optimum conditions for operation of the compressed air system,
- the security of genuine KAESER spare parts,
- increased legal certainty as all regulations are kept to.

➢ Why not sign a KAESER AIR SERVICE maintenance agreement!

Result Your advantage:
lower costs and higher compressed air availability.

11.5 Completing the contamination declaration

Every company (user) is responsible for the health and safety of its employees. This extends to personnel who carry out servicing work at the user or service contractor.

A Declaration of Contamination must be completed and signed whenever maintenance or repair work is to be carried out on the machine.

1. Contact KAESER SERVICE and request the contamination declaration form.
2. Attach a copy of the Declaration of Contamination to the **outside** of the packing.

12 Decommissioning, Storage and Transport

12.1 Decommissioning

Decommissioning is necessary, for example, under the following circumstances:

- The machine is temporarily not needed,
- The machine is to be moved to another location,
- The machine is to be scrapped.

Temporary decommissioning

Precondition The machine can be started at regular intervals.

➢ Run the machine once a week for at least 30 minutes at operating temperature to ensure corrosion protection.

Long-term decommissioning

Precondition The power supply disconnecting device is switched off,
the device is locked off,
the absence of voltage has been verified,
the machine is fully vented.

1. Allow the machine to completely cool down.
2. Disconnect all air and electrical connections.
3. Relax the drive belt.
4. Spray the machine inside and out with a preservative to prevent corrosion.
5. Store the machine in a dry, frost-proof room.

Further information Details of preservatives can be found in chapter 12.4.

12.2 Packing

A wooden crate is required for overland transport to protect the machine from mechanical damage.

Other measures must be taken for the transport of machines by sea or air. Please contact an authorized KAESER SERVICE for more information.

Material Protective plastic sheeting
Wooden transport crate

Precondition The machine is decommissioned.
The machine is dry and cooled down.

1. Wrap the machine fully in plastic sheeting.
2. Protect the machine in a wooden crate against mechanical damages.

12.3 Transportation

12.3.1 Safety

Weight and center of gravity determine the most suitable method of transportation. Both are specified in the dimensional drawing in chapter 13.2.

Precondition Transport only by pallet truck, forklift truck or lifting gear by personnel trained in the safe transportation of loads.

➢ Ensure the danger area is clear of personnel.

12.3.2 Transport machine with a pallet truck or forklift truck

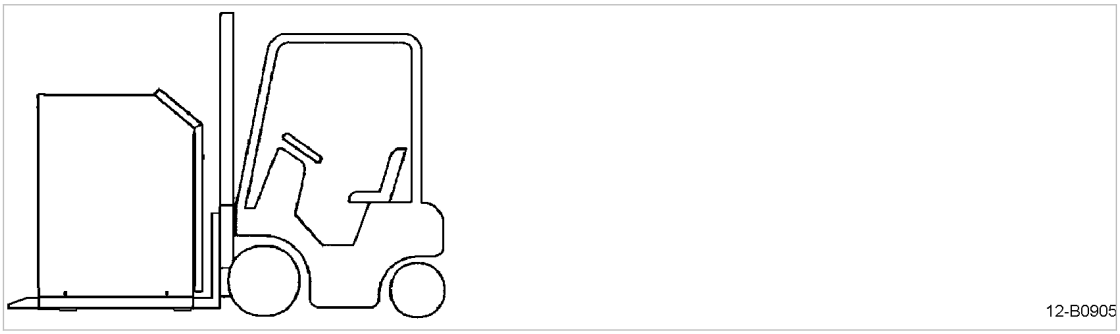


Fig. 38 Transport

1. Remove the cover sheet from the sound enclosure's frame (see chapter 6.9).
2. Take note of the center of gravity.
3. Drive the pallet truck fully or forklift truck beneath the entire machine and transport with care.

12.4 Storage

Moisture can lead to corrosion, particularly on the surfaces of the blower block. The storage temperature must not fall below –86 °F.

Should you have any questions concerning the correct storage and recommissioning procedure, KAESER will be glad to assist you.

⚠ CAUTION

Rotating lobes!
Danger of crushing or severing limbs.

➢ *Do not reach into the interior of the blower block.*

➢ *If full protection is only provided when the machine is completely installed, then in all other phases of the machine's life-cycle temporary protective devices (e.g. covers) must be fitted, in order to guarantee that parts of the body cannot reach or be caught/sucked in by the rotary lobes.*

NOTICE

Moisture and frost can damage the machine.

➢ *Prevent the ingress of moisture and formation of condensation.*

- ➢ Store the machine in a dry, frost-proof room.
- ➢ Seal off the inlet and discharge ports to prevent the ingress of dirt.
- ➢ Every month, manually turn the motor shaft by approx. 30°.
- ➢ Change the lubricating oil annually.

After long-term storage

- ➢ Observe the procedures for assembly and initial commissioning.

12.5 Disposal

When disposing of a machine, drain out all liquids and remove old filters.

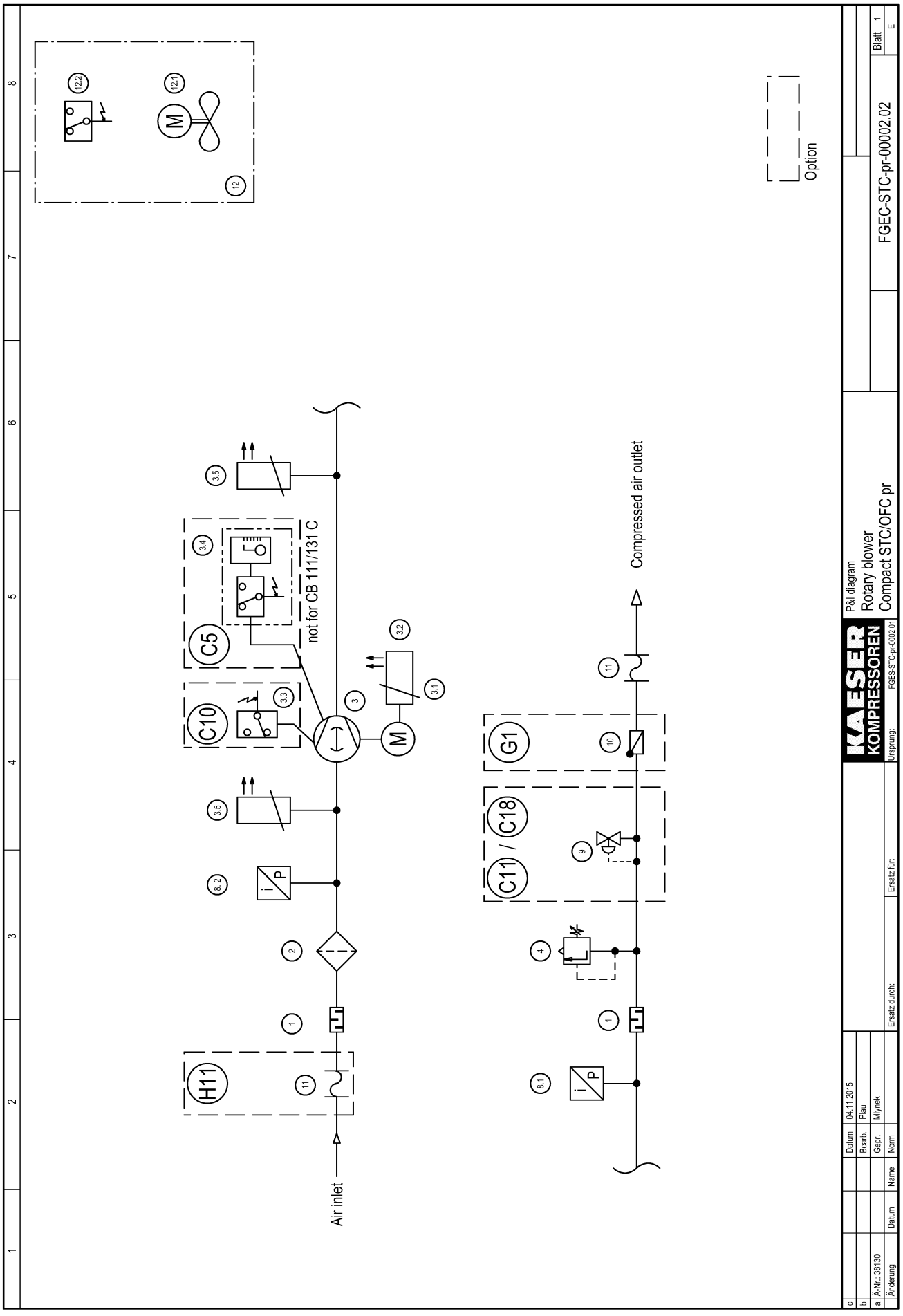
Precondition The machine is decommissioned.

1. Completely drain the oil from the machine.
2. Remove old filters.
3. Hand the machine over to an authorized disposal expert.

- ➢ Components contaminated with oil must be disposed of in accordance with local environmental protection regulations.

13 Annex

13.1 Pipeline and instrument flow diagram (P+I diagram)

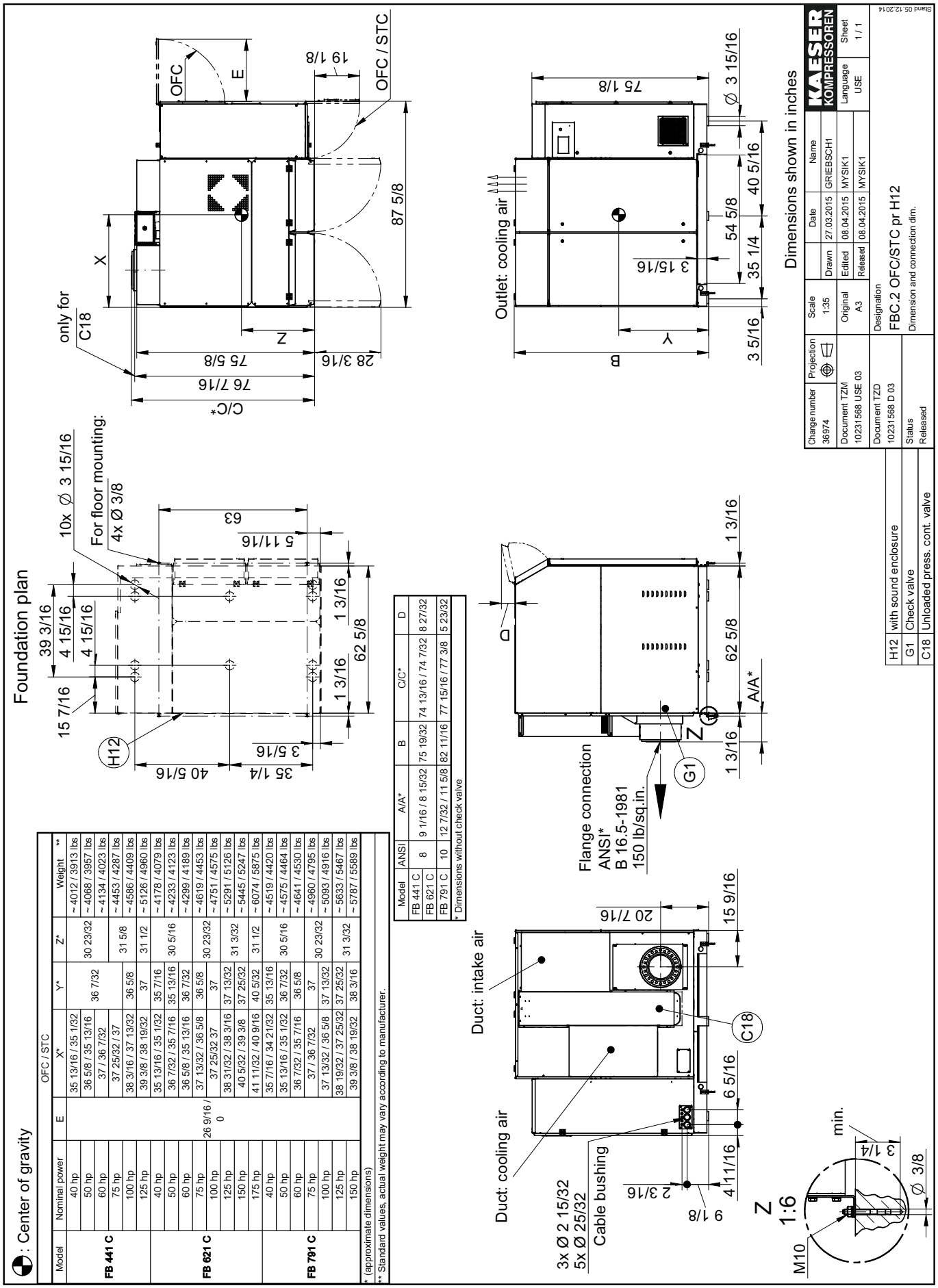

Option
not for CB 111/131 C
Compressed air outlet
Air inlet
P&I diagram
Rotary blower
Compact STC/OFC pr
FGEC-STC-pr-00002.02
Blatt 1
FGES-STC-pr-0002.01
Ursprung:
Ersatz für:
Ersatz durch:
Datum 04.11.2015
Bearb. Plau
Gepr. Mlynek
Norm
Name
Datum
Änderung
A-Nr.: 38130

1	2	3	4	5	6	7	8

1	Silencer	11	Compensator
2	Air filter	12	Sound enclosure
3	Blower block	12.1	Fan motor
3.1	Drive motor	12.2	Thermostat
3.2	PTC-sensor		
3.3	Speed monitor		
3.4	Oil-level sensor (switching)	Option	
3.5	Pt100 sensor	C5	Oil level monitoring (not for CB 111/131 C)
4	Pressure relief valve	C10	Speed monitor
8.1	Pressure transducer - Network pressure	C11	Unloaded start valve
8.2	Pressure transducer - Inlet pressure	C18	Start-up pressure control valve
9	Unloaded start valve or start-up pressure control valve	G1	Check plate
10	Check plate	H11	Piped inlet

c				Datum	04.11.2015		KAESER KOMPRESSOREN	P&I diagram	
b				Bearb.	Plau			Rotary blower	
a				Gepr.	Mlynek			Compact STC/OFC pr	
	Änderung	Datum	Name	Norm		Ersatz durch:	Ersatz für:	Ursprung: FGES-STC-pr-0002.01	FGEC-STC-pr-00002.02 Blatt 2 E

13.2 Dimensional drawing



: Center of gravity

Model	Nominal power	E	OFC / STC X*	Y*	Z*	Weight **
FB 441 C	40 hp	26 9/16 / 0	35 13/16 / 35 1/32	36 7/32	30 23/32	~ 4012 / 3913 lbs
	50 hp		36 5/8 / 35 13/16			~ 4068 / 3957 lbs
	60 hp		37 / 36 7/32			~ 4134 / 4023 lbs
	75 hp		37 25/32 / 37		31 5/8	~ 4453 / 4287 lbs
	100 hp		38 3/16 / 37 13/32	36 5/8		~ 4586 / 4409 lbs
	125 hp		39 3/8 / 38 19/32	37	31 1/2	~ 5126 / 4960 lbs
FB 621 C	40 hp		35 13/16 / 35 1/32	35 7/16	30 5/16	~ 4178 / 4079 lbs
	50 hp		36 7/32 / 35 7/16	35 13/16		~ 4233 / 4123 lbs
	60 hp		36 5/8 / 35 13/16	36 7/32		~ 4299 / 4189 lbs
	75 hp		37 13/32 / 36 5/8	36 5/8	30 23/32	~ 4619 / 4453 lbs
	100 hp		37 25/32 37	37		~ 4751 / 4575 lbs
	125 hp		38 31/32 / 38 3/16	37 13/32	31 3/32	~ 5291 / 5126 lbs
	150 hp		40 5/32 / 39 3/8	37 25/32		~ 5445 / 5247 lbs
	175 hp		41 11/32 / 40 9/16	40 5/32	31 1/2	~ 6074 / 5875 lbs
FB 791 C	40 hp		35 7/16 / 34 21/32	35 13/16	30 5/16	~ 4519 / 4420 lbs
	50 hp		35 13/16 / 35 1/32	36 7/32		~ 4575 / 4464 lbs
	60 hp		36 7/32 / 35 7/16	36 5/8		~ 4641 / 4530 lbs
	75 hp		37 / 36 7/32	37	30 23/32	~ 4960 / 4795 lbs
	100 hp		37 13/32 / 36 5/8	37 13/32		~ 5093 / 4916 lbs
	125 hp		38 19/32 / 37 25/32	37 25/32	31 3/32	~ 5633 / 5467 lbs
	150 hp		39 3/8 / 38 19/32	38 3/16		~ 5787 / 5589 lbs

* (approximate dimensions)
** Standard values, actual weight may vary according to manufacturer.

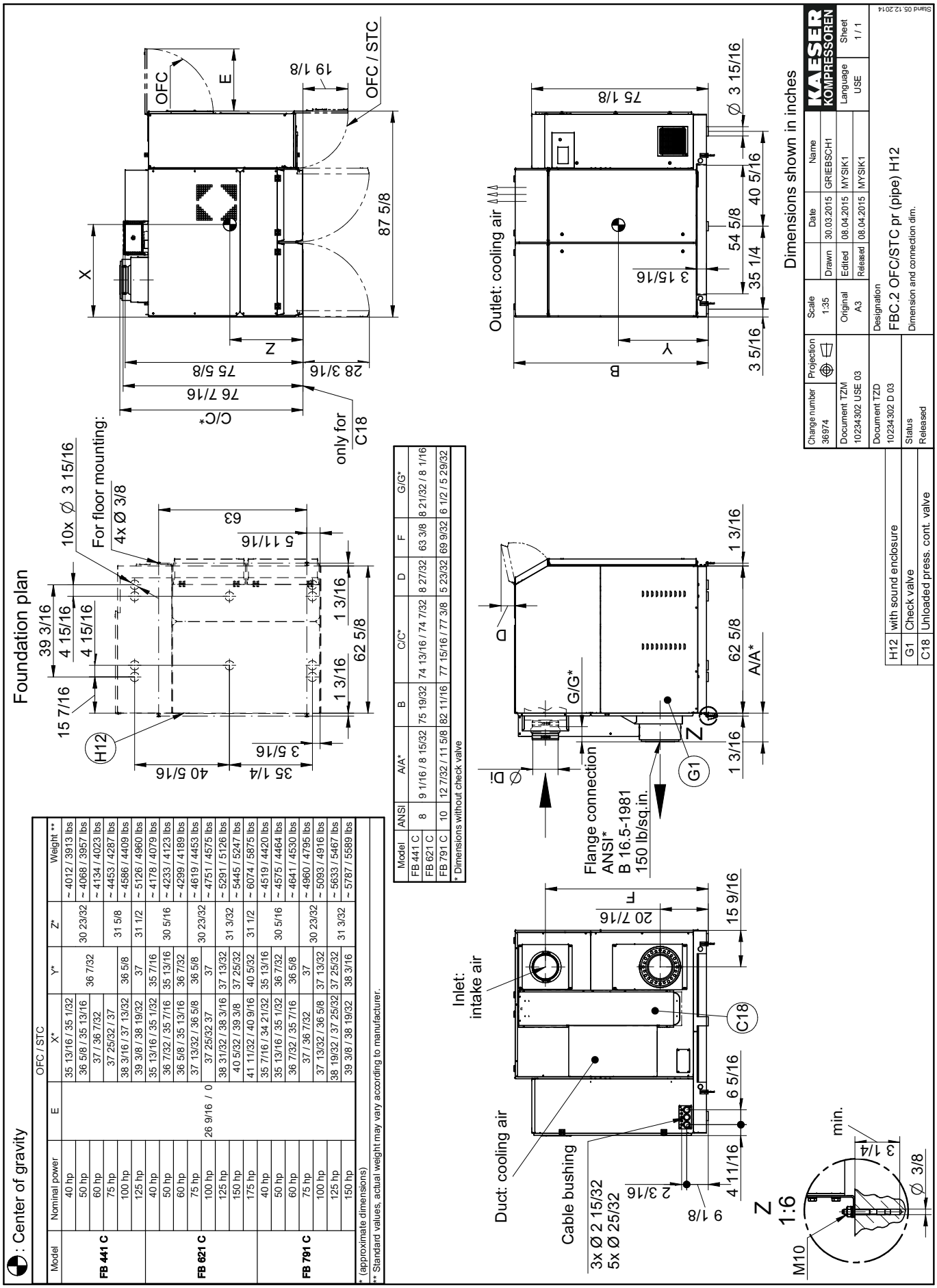
Model	ANSI	A/A*	B	C/C*	D
FB 441 C	8	9 1/16 / 8 15/32	75 19/32	74 13/16 / 74 7/32	8 27/32
FB 621 C					
FB 791 C	10	12 7/32 / 11 5/8	82 11/16	77 15/16 / 77 3/8	5 23/32

* Dimensions without check valve

H12	with sound enclosure
G1	Check valve
C18	Unloaded press. cont. valve

Change number 36974	Projection	Scale 1:35		Date	Name	KAESER KOMPRESSOREN
			Drawn	27.03.2015	GRIEBSCH1	
Document TZM 10231568 USE 03		Original A3	Edited	08.04.2015	MYSIK1	Language USE / Sheet 1 / 1
			Released	08.04.2015	MYSIK1	
Document TZD 10231568 D 03		Designation FBC.2 OFC/STC pr H12				
Status Released		Dimension and connection dim.				

Stand 05.12.2014


: Center of gravity
OFC / STC
Model | Nominal power | E | X* | Y* | Z* | Weight **
FB 441 C: 40 hp | 35 13/16 / 35 1/32 | 36 7/32 | 30 23/32 | ~ 4012 / 3913 lbs
50 hp | 36 5/8 / 35 13/16 | ~ 4068 / 3957 lbs
60 hp | 37 / 36 7/32 | ~ 4134 / 4023 lbs
75 hp | 37 25/32 / 37 | 36 5/8 | 31 5/8 | ~ 4453 / 4287 lbs
100 hp | 38 3/16 / 37 13/32 | ~ 4586 / 4409 lbs
125 hp | 39 3/8 / 38 19/32 | 37 | 31 1/2 | ~ 5126 / 4960 lbs
FB 621 C: 40 hp | 35 13/16 / 35 1/32 | 35 7/16 | ~ 4178 / 4079 lbs
50 hp | 36 7/32 / 35 7/16 | 35 13/16 | 30 5/16 | ~ 4233 / 4123 lbs
60 hp | 36 5/8 / 35 13/16 | 36 7/32 | ~ 4299 / 4189 lbs
75 hp | 37 13/32 / 36 5/8 | 36 5/8 | 30 23/32 | ~ 4619 / 4453 lbs
100 hp | 37 25/32 37 | 37 | ~ 4751 / 4575 lbs
125 hp | 38 31/32 / 38 3/16 | 37 13/32 | 31 3/32 | ~ 5291 / 5126 lbs
150 hp | 40 5/32 / 39 3/8 | 37 25/32 | ~ 5445 / 5247 lbs
175 hp | 41 11/32 / 40 9/16 | 40 5/32 | 31 1/2 | ~ 6074 / 5875 lbs
FB 791 C: 40 hp | 35 7/16 / 34 21/32 | 35 13/16 | ~ 4519 / 4420 lbs
50 hp | 35 13/16 / 35 1/32 | 36 7/32 | 30 5/16 | ~ 4575 / 4464 lbs
60 hp | 36 7/32 / 35 7/16 | 36 5/8 | ~ 4641 / 4530 lbs
75 hp | 37 / 36 7/32 | 37 | 30 23/32 | ~ 4960 / 4795 lbs
100 hp | 37 13/32 / 36 5/8 | 37 13/32 | ~ 5093 / 4916 lbs
125 hp | 38 19/32 / 37 25/32 | 37 25/32 | 31 3/32 | ~ 5633 / 5467 lbs
150 hp | 39 3/8 / 38 19/32 | 38 3/16 | ~ 5787 / 5589 lbs
26 9/16 / 0
* (approximate dimensions)
** Standard values, actual weight may vary according to manufacturer.
Subject to development-related changes.
Drawing may be altered only via CAD.
Foundation plan
39 3/16
4 15/16
4 15/16
15 7/16
10x ∅ 3 15/16
For floor mounting:
4x Ø 3/8
63
5 11/16
1 3/16
1 3/16
62 5/8
3 5/16
35 1/4
40 5/16
H12
OFC
E
19 1/8
OFC / STC
87 5/8
X
Z
C/C*
76 7/16
75 5/8
28 3/16
only for C18
Outlet: cooling air
75 1/8
∅ 3 15/16
54 5/8
40 5/16
35 1/4
3 15/16
3 5/16
B
Y
Dimensions shown in inches
Model | ANSI | A/A* | B | C/C* | D | F | G/G*
FB 441 C | 8 | 9 1/16 / 8 15/32 | 75 19/32 | 74 13/16 / 74 7/32 | 8 27/32 | 63 3/8 | 8 21/32 / 8 1/16
FB 621 C | 10 | 12 7/32 / 11 5/8 | 82 11/16 | 77 15/16 / 77 3/8 | 5 23/32 | 69 9/32 | 6 1/2 / 5 29/32
FB 791 C
* Dimensions without check valve
D
G/G*
∅ Di
Flange connection
ANSI*
B 16.5-1981
150 lb/sq.in.
Z
G1
1 3/16
62 5/8
A/A*
1 3/16
Inlet:
intake air
20 7/16
T
15 9/16
C18
Duct: cooling air
6 5/16
Cable bushing
3x Ø 2 15/32
5x Ø 25/32
2 3/16
4 11/16
9 1/8
Z
1:6
M10
min.
3 1/4
∅ 3/8
H12 with sound enclosure
G1 Check valve
C18 Unloaded press. cont. valve
Change number 36974
Projection
Document TZM 10234302 USE 03
Scale 1:35
Original A3
Document TZD 10234302 D 03
Status Released
Designation
FBC.2 OFC/STC pr (pipe) H12
Dimension and connection dim.
Drawn 30.03.2015 GRIEBSCH1
Edited 08.04.2015 MYSIK1
Released 08.04.2015 MYSIK1
Language USE
Sheet 1 / 1
Stand 05.12.2014
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13.3 Sound emission

The values for sound pressure levels and sound power levels are provided in the tables below: Each table discusses one model.
The values applicable to the machine result from the combination of the blower block speed and the differential pressure.

If the texts of the tables are not provided in the chosen language, a translation can be found here.

	Table legend
a)	Type
b)	Without sound enclosure
c)	With sound enclosure
d)	Blower block speed
e)	Pressure differential
f)	Sound pressure level
g)	Sound power level

Tab. 45 Sound emission - legend

a) FB441C			b) without sound enclosure		c) with sound enclosure	
d) block speed	e) pressure differential		f) sound level	g) sound power level	f) sound level	g) sound power level
[min^{-1}]	[mbar]	[psi]	[dB(A)]	[dB(A)]	[dB(A)]	[dB(A)]
			± 3 dB(A)	± 3 dB(A)	± 3 dB(A)	± 3 dB(A)
2350	200	3	83	100	73	91
2350	300	4	84	101	73	91
2350	400	6	86	103	73	91
2350	500	7	88	105	74	91
2350	600	9	88	105	73	91
2350	700	10	89	107	73	91
2350	800	12	90	108	73	91
2350	900	13	93	110	73	91
2350	1000	15	94	112	73	91
2490	200	3	84	101	73	91
2490	300	4	85	102	73	91
2490	400	6	87	104	73	91
2490	500	7	88	106	73	91
2490	600	9	89	106	73	91
2490	700	10	90	107	73	91
2490	800	12	91	108	73	91
2490	900	13	93	111	73	91
2490	1000	15	95	112	73	91
2640	200	3	84	101	73	91
2640	300	4	86	103	73	91
2640	400	6	87	105	73	91
2640	500	7	89	106	73	91
2640	600	9	89	106	73	91
2640	700	10	91	108	74	91
2640	800	12	92	109	74	91
2640	900	13	94	111	75	92
2640	1000	15	96	113	73	91
2780	200	3	85	102	73	91
2780	300	4	86	104	73	91
2780	400	6	88	105	73	91
2780	500	7	90	107	73	91
2780	600	9	90	107	73	91
2780	700	10	91	108	73	91
2780	800	12	92	109	73	91
2780	900	13	95	112	74	91
2780	1000	15	96	114	75	92
2950	200	3	86	103	74	92
2950	300	4	87	105	74	92
2950	400	6	89	106	73	91
2950	500	7	90	107	73	91
2950	600	9	91	108	73	91
2950	700	10	92	109	73	91
2950	800	12	93	110	73	91
2950	900	13	96	113	74	91
2950	1000	15	97	114	73	91
3110	200	3	86	103	73	91
3110	300	4	88	105	74	91
3110	400	6	89	106	77	95
3110	500	7	91	108	77	94
3110	600	9	92	109	77	95
3110	700	10	93	110	76	93
3110	800	12	94	111	73	91
3110	900	13	96	113	75	93
3110	1000	15	98	115	73	91
3300	200	3	87	104	73	91
3300	300	4	89	107	73	91
3300	400	6	90	107	73	91
3300	500	7	91	108	75	92
3300	600	9	93	110	74	91
3300	700	10	94	111	76	93

a) FB441C			b) without sound enclosure		c) with sound enclosure	
d) block speed	e) pressure differential		f) sound level	g) sound power level	f) sound level	g) sound power level
[min^{-1}]	[mbar]	[psi]	[dB(A)]	[dB(A)]	[dB(A)]	[dB(A)]
			± 3 dB(A)	± 3 dB(A)	± 3 dB(A)	± 3 dB(A)
3300	800	12	95	112	74	91
3300	900	13	97	114	77	95
3300	1000	15	98	116	78	95
3480	200	3	88	105	78	95
3480	300	4	91	108	74	92
3480	400	6	90	108	78	96
3480	500	7	92	109	74	92
3480	600	9	94	111	78	96
3480	700	10	94	112	73	91
3480	800	12	96	113	75	92
3480	900	13	98	115	74	92
3480	1000	15	99	116	75	93
3690	200	3	89	106	74	92
3690	300	4	92	109	75	93
3690	400	6	91	108	76	94
3690	500	7	92	109	76	94
3690	600	9	95	112	77	95
3690	700	10	95	113	78	96
3690	800	12	97	114	78	96
3690	900	13	99	116	78	96
3690	1000	15	100	117	78	96

a) FB621C			b) without sound enclosure		c) with sound enclosure	
d) block speed	e) pressure differential		f) sound level	g) sound power level	f) sound level	g) sound power level
[min^{-1}]	[mbar]	[psi]	[dB(A)]	[dB(A)]	[dB(A)]	[dB(A)]
			± 3 dB(A)	± 3 dB(A)	± 3 dB(A)	± 3 dB(A)
2350	200	3	87	104	74	91
2350	300	4	88	105	74	91
2350	400	6	89	106	74	91
2350	500	7	90	107	75	93
2350	600	9	91	108	75	92
2350	700	10	92	109	75	92
2350	800	12	93	110	76	93
2350	900	13	94	112	77	94
2350	1000	15	96	113	78	96
2490	200	3	88	105	73	91
2490	300	4	89	106	73	91
2490	400	6	90	107	73	91
2490	500	7	90	108	74	92
2490	600	9	92	109	74	92
2490	700	10	93	110	75	93
2490	800	12	94	111	76	94
2490	900	13	95	112	77	95
2490	1000	15	97	115	79	96
2640	200	3	89	106	73	91
2640	300	4	90	107	73	91
2640	400	6	91	108	73	91
2640	500	7	91	108	74	91
2640	600	9	92	110	74	92
2640	700	10	93	111	75	93
2640	800	12	95	112	77	95
2640	900	13	96	113	78	96
2640	1000	15	98	116	79	97
2780	200	3	89	106	73	91
2780	300	4	90	107	73	91
2780	400	6	91	108	73	91
2780	500	7	92	109	73	91
2780	600	9	93	110	75	92
2780	700	10	94	111	76	94
2780	800	12	96	113	78	95
2780	900	13	97	114	79	96
2780	1000	15	99	116	79	97
2950	200	3	90	107	74	91
2950	300	4	91	108	74	91
2950	400	6	92	109	74	91
2950	500	7	92	109	74	92
2950	600	9	94	111	75	93
2950	700	10	95	112	77	94
2950	800	12	96	114	78	96
2950	900	13	97	115	79	97
2950	1000	15	100	117	79	97
3110	200	3	90	108	74	92
3110	300	4	91	109	74	92
3110	400	6	92	110	74	92
3110	500	7	93	110	75	93
3110	600	9	94	111	76	94
3110	700	10	95	112	77	95
3110	800	12	97	114	79	97
3110	900	13	98	115	79	97
3110	1000	15	101	118	79	97
3300	200	3	91	108	79	97
3300	300	4	92	109	79	97
3300	400	6	93	110	79	97
3300	500	7	93	110	79	97
3300	600	9	95	112	79	97
3300	700	10	96	113	79	97

a) FB621C			b) without sound enclosure		c) with sound enclosure	
d) block speed	e) pressure differential		f) sound level	g) sound power level	f) sound level	g) sound power level
[min^{-1}]	[mbar]	[psi]	[dB(A)]	[dB(A)]	[dB(A)]	[dB(A)]
			± 3 dB(A)	± 3 dB(A)	± 3 dB(A)	± 3 dB(A)
3300	800	12	98	115	79	97
3300	900	13	99	116	79	97
3300	1000	15	102	119	79	97
3480	200	3	92	109	79	97
3480	300	4	92	109	79	97
3480	400	6	93	110	79	97
3480	500	7	94	111	79	97
3480	600	9	96	113	79	97
3480	700	10	97	114	79	97
3480	800	12	99	116	79	97
3480	900	13	99	117	79	97
3480	1000	15	102	119	79	97

a) FB791C			b) without sound enclosure		c) with sound enclosure	
d) block speed	e) pressure differential		f) sound level	g) sound power level	f) sound level	g) sound power level
[min^{-1}]	[mbar]	[psi]	[dB(A)]	[dB(A)]	[dB(A)]	[dB(A)]
			± 3 dB(A)	± 3 dB(A)	± 3 dB(A)	± 3 dB(A)
2350	200	3	90	108	73	91
2350	300	4	91	109	73	91
2350	400	6	92	110	74	92
2350	500	7	93	111	75	93
2350	600	9	94	112	76	94
2350	700	10	95	113	77	95
2350	800	12	96	114	73	91
2490	200	3	91	108	74	92
2490	300	4	92	109	74	92
2490	400	6	93	110	75	93
2490	500	7	94	111	76	94
2490	600	9	95	113	77	95
2490	700	10	96	114	78	96
2490	800	12	97	115	73	91
2640	200	3	92	109	75	92
2640	300	4	93	110	75	92
2640	400	6	94	111	76	93
2640	500	7	95	112	77	95
2640	600	9	96	113	78	96
2640	700	10	97	114	79	97
2640	800	12	98	115	73	91
2780	200	3	92	110	75	93
2780	300	4	93	111	75	93
2780	400	6	94	112	76	94
2780	500	7	95	113	77	95
2780	600	9	97	114	79	97
2780	690	10	98	115	79	97
2780	700	10	98	115	79	97
2780	790	11	98	116	73	91
2780	800	12	98	116	73	91
2950	200	3	93	110	76	94
2950	300	4	94	111	76	94
2950	400	6	95	112	77	95
2950	500	7	96	114	78	96
2950	600	9	97	115	79	97
2950	690	10	98	116	79	97
2950	700	10	98	116	79	97
2950	790	11	99	116	73	91
3110	200	3	93	111	76	94
3110	300	4	94	112	76	94
3110	400	6	95	113	77	95
3110	500	7	97	115	79	96
3110	600	9	98	116	79	97
3110	690	10	99	116	79	97
3110	700	10	99	116	79	97
3200	200	3	94	111	77	94
3200	300	4	95	112	77	94
3200	400	6	96	113	78	95
3200	500	7	97	115	79	97
3200	600	9	98	116	79	97
3200	690	10	99	117	79	97

13.4 Electrical diagrams

13.4.1 Option C33, START CONTROL (STC)

Electrical diagrams

Blower with Star-Delta-Start

+ SIGMA CONTROL 2 (SC2)

230V/50Hz 4kW-30kW
400V/50Hz 4kW-132kW

TT/TN power supply with common point grounding

ATTENTION !!!
The document gives collective information on
power supply voltages and frequencies for all machines.
The voltage and frequency and local conditions under
which any particular machine may be used
are given on the nameplate of the machine
and in the accompanying service manual.

KAESER KOMPRESSOREN SE
Postfach 2143
96410 Coburg

c				Date	20.06.2018 E	KAESER KOMPRESSOREN	Cover page	=	
b				Drawn	M.Zeeh		Blower STC+SC2	+	
a				Released	M.Zeeh				
A	Change	Date	Name			SXB.STC-03010.02		DXB.STC-03020.05	page 1 / 1 Sht.

Lfd. Nr. No.	Benennung Name		Zeichnungsnummer (Kunde) Drawing No. (customer)	Zeichnungsnummer (Hersteller) Drawing No. (manufacturer)	Blatt Page	Anlagenkennzeichen Unit designation
1	Cover page			DXB.STC-03020.05	1	
2	List of contents			ZXB.STC-03020.05	1	
3	general instructions	Instructions+option		UXB.STC-03020.05	1	
4	Electrical equipment identification	Electrical equipment identification		UXB.STC-03020.05	2	
5	Equipment parts list	Common parts		UXB.STC-03020.05	3	
6	Equipment parts list	Common parts		UXB.STC-03020.05	4	
7	Equipment parts list	option		UXB.STC-03020.05	5	
8	Equipment parts list	option		UXB.STC-03020.05	6	
9	Equipment parts list	performance-related components		UXB.STC-03020.05	7	
10	Equipment parts list	performance-related components		UXB.STC-03020.05	8	
11	Equipment parts list	performance-related components		UXB.STC-03020.05	9	
12	Equipment parts list	performance-related components		UXB.STC-03020.05	10	
13	Equipment parts list	performance-related components		UXB.STC-03020.05	11	
14	Equipment parts list	performance-related components		UXB.STC-03020.05	12	
15	Equipment parts list	performance-related components		UXB.STC-03020.05	13	
16	Equipment parts list	performance-related components		UXB.STC-03020.05	14	
17	Equipment parts list	performance-related components		UXB.STC-03020.05	15	
18	Circuit diagram	Power switching		SXB.STC-03020.05	1	
19	Circuit diagram	Fan+Control		SXB.STC-03020.05	2	
20	Circuit diagram	Control voltage		SXB.STC-03020.05	3	
21	Circuit diagram	Gear housing ventilation + Venting valve		SXB.STC-03020.05	4	
22	Circuit diagram	Type Speed Supervisory module		SXB.STC-03020.05	5	
23	Circuit diagram	Oil return + SC2 + IOM		SXB.STC-03020.05	6	
24	Circuit diagram	IOM-Configuration		SXB.STC-03020.05	7	
25	Circuit diagram	digital inputs IOM		SXB.STC-03020.05	8	
26	Circuit diagram	analog inputs IOM		SXB.STC-03020.05	9	
27	Circuit diagram	Relay-outputs IOM		SXB.STC-03020.05	10	
28	Circuit diagram	Handling Terminals		SXB.STC-03020.05	11	
29	Circuit diagram	Feed line connection		SXB.STC-03020.05	12	
30	Circuit diagram	Feed line connection		SXB.STC-03020.05	13	
31	Terminal schedule	-X0,-X11,-X12		KXB.STC-03020.05	1	
32	Terminal schedule	-X15,-X16,-X21,-X22,-X100		KXB.STC-03020.05	2	
33	Component layout	Mounting plate BBxxx		AXB.STC-03020.05	1	
34	Component layout	Mounting plate CB/DB xxx		AXB.STC-03020.05	2	
35	Component layout	Mounting plate EBxxx		AXB.STC-03020.05	3	
36	Component layout	Mounting plate FBxxx		AXB.STC-03020.05	4	

general instructions

ATTENTION !!!
Install supplies, grounding and shock protection
to local safety regulations.
Do not make or break
live plug-in connectors.

control cabinet wiring for non-designated conductors
with multi-standard stranded conductors

primary circuits:	black 2,5mm² H07V-K, 14AWG UL-Style 1015, CSA-TEW
Control voltage AC 24/230V:	red 1mm² H05V-K, 18AWG UL-Style 1015, CSA-TEW
Control voltage AC 24/230V grounded:	white 1mm² H05V-K, 18AWG UL-Style 1015, CSA-TEW
Control voltage DC 24V(+):	blue 1mm² H05V-K, 18AWG UL-Style 1015, CSA-TEW
Control voltage DC 24V(-) grounded:	blue/white 1mm² H05V-K, 18AWG UL-Style 1015, CSA-TEW
external voltage:	orange 1,5mm² H07V-K, 16AWG UL-Style 1015, CSA-TEW
earth conductor:	green/yellow H07V-K, UL-Style 1015, CSA-TEW

Type model-dependent components

B13 = Mode of operation Overpressure
B14 = Mode of operation Vacuum

C5 = option Oil level monitoring (-B80/-B81) (standard by Screw blowers)
C10 = option Speed monitoring (-K26+sensor -B90)
C11 = option Unloaded start valve

C33 = START CONTROL
C39 = option oil temperature monitoring (-B55) (standard by Screw blowers)
xxx = Gear housing ventilation+Oil return (only EBS/FBS)
xxx = Aftercooler (external) -F6/-Q6/-M6 /// -F7/-Q7/-M7

-B1/-B4	Pressure transducer (4...20mA)
-B5	Differential pressure switch filter clogging
-B21	Compressor motor overload protection
-B40/43	Temperature probe Blower (PT100)
-B55	Temperature probe PT100 (option)
-B59	PTC thermistor trigger
-B60	PTC resistor sensor/compressor motor
-B70	Temperature probe Soundproof enclosure
-B80/-B81	Oil level switch
-B90	Speed sensor
-F1	Overload protection switch Control voltage tapping
-F4	Overload protection switch Fan Soundproof enclosure
-F10	Fuse 24V-AC
-F11	Overload protection switch Control transformer
-F29	Overload protection switch Phase sequence relay
-K1	Solenoid valve
-K10	Solenoid valve Oil return
-K20	SIGMA CONTROL 2 (SC2) (MCS)
-K21	SIGMA CONTROL 2 (SC2) (IOM-Modul)
-K26	Speed Supervisory module
-K29	Phase sequence relay
-K52	Coupling relay Solenoid valve
-K53	Coupling relay Unloaded starting ball valve (-M23/-M24))
-K55	Coupling relay Oil return
-K60	Contactor EMERGENCY STOP (external/User)
-M1	Motor Blower
-M4	Fan Soundproof enclosure
-M10	Vacuum pump Gear housing ventilation
-M23	Motor Unloaded starting ball valve
-M24	Motor Unloaded starting ball valve
-Q1	Mains contactor
-Q2	Delta contactor
-Q3	Star contactor
-Q4	Contactor Fan Soundproof enclosure
-S1	EMERGENCY STOP pushbutton
-S9	REMOTE reset Alarm indicator

-T11	Control transformer 230V-AC
-T21	control voltage supply 24V-DC
-T45	Isolating amplifier
-X0	Terminal strip, Power supply
-X11	Terminal strip, Control
-X12	SC2-IOM digital outputs
-X15	SC2-IOM digital inputs
-X16	analog signals (external)
-X21	Control voltage 24V-DC
-X22	not used
-X100	EMERGENCY STOP (external/User)
-K20	*Main Control System SC2 MCS*
-X1	Ethernet
-X2	IO-BUS
-X3	RS485-FC (USS-Bus)
-X4	Communication module
-X5	SD card slot
-X6	Earth connection
-K21	*IO-Modul SC2 IOM-1*
	internal
-X1	*IO-Bus Input*
-X2	*IO-Bus Output*
-X3	digital inputs
-X4	Power supply unit and Transistor outputs
-X5,-X9	Relay outputs
-X6	Analog input 0-20mA
-X7	Analog input PT100
-X8	digital inputs
	external
-X11...-X13	analog inputs 0-20mA
-X14...-X17	analog inputs PT100
-X18...-X29	digital inputs
-X30...-X32	digital outputs

c				Date	20.06.2018	KAESER KOMPRESSOREN	Electrical equipment identification	=	
b				Drawn	M.Zeeh		Blower STC+SC2	+	
a				Released	M.Zeeh		Electrical equipment identification	UXB.STC-03020.05	page 2 / 15 Sht.
C	Change	Date	Name						

model	Common parts 4 - 30 kW	4 - 132 kW		
machine power supply	**230 V ±10 %, 50 Hz**	**400 V ±10 %, 50 Hz**		
Pressure transducer **-B1** **Huba Control**	894786.0 0.-1200mbar	894786.0 0.-1200mbar		
Pressure transducer **-B4** **Huba Control**	894787.0 0.1200mbar	894787.0 0.1200mbar		
Differential pressure switch **-B5** **Dungs**	893307.0 setting: 35mbar	893307.0 setting: 35mbar		
Temperature probe **-B40/-B43** **WIKA**	895251.10010 (BB/CB/DB) 895251.10040 (EB-C/FB) 895603.00040 (EB-S) Pt100	895251.10010 (BB/CB/DB) 895251.10040 (EB-C/FB) 895603.00040 (EB-S) Pt100		
Temperature probe **-B55**	895251.10100 895603.00100 (EB-S) Pt100	895251.10100 895603.00100 (EB-S) Pt100		
PTC thermistor trigger **-B59** **Ziehl**	7.2711.00040 MS220K 24 V UC	7.2711.00040 MS220K 24 V UC		
Temperature probe **-B70** **Wieland**	895393.10400 (BB/CB/DB) 895393.10410 (EB) 895393.10420 (FB) Pt100	895393.10400 (BB/CB/DB) 895393.10410 (EB) 895393.10420 (FB) Pt100		
Overload protection switch **-F1** Connecting block . **Siemens**	7.8237.01100 3RV2021-1GA20 4,5-6,3 A setting: 5,5 A 7.8237.00080 3RV2927-5A	7.8237.01100 3RV2021-1GA20 4,5-6,3 A setting: 5,5 A 7.8237.00080 3RV2927-5A		
Phase rail **-F1** **Siemens**	7.6861.00010 3RV1915-1CB	7.6861.00010 3RV1915-1CB		
Fuse **-F10**	895637.0 5x20 0,315 A-T 250 VAC	895637.0 5x20 0,315 A-T 250 VAC		
Overload protection switch **-F29** Connecting block . **Siemens**	7.8237.00200 3RV2011-0HA20 0,55-0,80 A setting: 0,6 A 7.8237.00030 3RV2917-5A	7.8237.00200 3RV2011-0HA20 0,55-0,80 A setting: 0,6 A 7.8237.00030 3RV2917-5A		
Solenoid valve **-K10** **bürkert**	895601.0 24V-DC 8W	895601.0 24V-DC 8W		
Blower **-K20** Control **Prodrive**	7.7601.0 SC2MCS	7.7601.0 SC2MCS		
Blower **-K21** Control **Prodrive**	7.7602.1 SC2IOM-1	7.7602.1 SC2IOM-1		
Phase sequence relay **-K29**	7.6487.0 CARLO GAVAZZI DPB01CM23	7.0458.0 DOLD SK9179.11		
Coupling relay **-K55** **Siemens**	7.8237.00340 3RH2122-2JB40 DC 17-30 V AC-15: 240 V/10 A	7.8237.00340 3RH2122-2JB40 DC 17-30 V AC-15: 240 V/10 A		
Vacuum pump **-M10** **Schwarzer**	895612.0 24V-AC 50 Hz, 4W	895612.0 24V-AC 50 Hz, 4W		

Fortsetzung: nächstes Blatt

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Equipment parts list
Blower STC+SC2
Common parts
KAESER KOMPRESSOREN

	Date	Name
c		
b	Drawn 20.06.2018	
a	Released M.Zeeh	
C Change	Date	Name

model	Common parts 4 - 30 kW	4 - 132 kW		
machine power supply	**230 V ±10 %, 50 Hz**	**400 V ±10 %, 50 Hz**		
Contactor **-Q4** **Siemens** Interference suppressor . **Siemens** Connecting block . **Siemens**	7.8237.00410 3RT2016-2AP01 7.8740.05100 3RT2916-1CD00 7.8237.00040 3RA2911-2A	7.8237.00410 3RT2016-2AP01 7.8740.05100 3RT2916-1CD00 7.8237.00040 3RA2911-2A		
Not-Halt **-S1**	834424.0 module complete	834424.0 module complete		
Control transformer **-T11** **Block**	7.2238.10090 USTE630 - 630 VA 208-600 V/2x 115 V+ 24 V	7.2238.10090 USTE630 - 630 VA 208-600 V/2x 115 V+ 24 V		
Power supply **-T21** **Prodrive**	7.7605P0 PSDC24/2.5 100-240 V-AC/24 V-DC 2,5 A	7.7605P0 PSDC24/2.5 100-240 V-AC/24 V-DC 2,5 A		
Isolating amplifier **-T45** **Phoenix**	7.2892.00040 MCR-C-I/I-00-DC	7.2892.00040 MCR-C-I/I-00-DC		
Control line terminal **-X.** **11/12/15/16/21/22/100** **Handling**	895635.0 Wieland WTP fig. 1, Sht. 11	895635.0 Wieland WTP fig. 1, Sht. 11		

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UXB.STC-03020.05
Equipment parts list
Blower STC+SC2
Common parts
KAESER KOMPRESSOREN
Date 20.06.2018
Drawn M.Zeeh
Released M.Zeeh
Name
Date
Change
C a b c

model	option BB	CB+ DB+EB-C	EB-S	BB	CB
machine power supply	230 V ±10 %, 50 Hz	230 V ±10 %, 50 Hz	230 V ±10 %, 50 Hz	400 V ±10 %, 50 Hz	400 V ±10 %, 50 Hz
option C5/C39: Oil Function monitors					
Oil level switch -B80/-B81 (option C5) Elobau	--- ---	894631.00010	894631.00010	--- ---	--- ---
Oil temperature -B55 (option C39) Wika	--- ---	895251.10100 Pt100	895603.00100 Pt100	--- ---	--- ---
option C10: Speed monitoring					
Supervisory module -K26 ifm	895323.0 FR1 - DD2503	895323.0 FR1 - DD2503	895323.0 FR1 - DD2503	895323.0 FR1 - DD2503	895323.0 FR1 - DD2503
Speed sensor -B90 ifm	895039.0 IFC201	895039.0 IFC201	895039.0 IFC201	895039.0 IFC201	895039.0 IFC201
option C11: Unloaded start valve 24 V-DC (electromagnetic)					
Solenoid valve -K1 Riegler	--- ---	--- ---	894204.00020 24V - DC	--- ---	--- ---
option C11: Unloaded start valve 230 V-AC (electromagnetic)					
Solenoid valve -K1 bürkert	893584.1 230V-AC 1/N/PE	--- ---	--- ---	893584.1 230V-AC 1/N/PE	--- ---
Coupling relay -K52 Wieland	7.3149.00660 FLARE 24 V-DC 1W-250 V/6 A	--- --- ---	--- --- ---	7.3149.00660 FLARE 24 V-DC 1W-250 V/6 A	--- --- ---
option C11: Unloaded start valve 230 V-AC (ball valve)					
Coupling relay -K53 Siemens	--- --- --- ---	--- --- --- ---	7.8237.00340 3RH2122-2JB40 DC 17-30 V AC-15: 240 V/10 A	--- --- --- ---	--- --- --- ---
Actuator drive -M23 / (-M24) Sun Yeh	--- ---	--- ---	895449.0 OM-1 230 V	--- ---	--- ---

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UXB.STC-03020.05
Equipment parts list
Blower STC+SC2
option
KAESER KOMPRESSOREN

		Date	Name
c			
b			
a	Drawn	20.06.2018	M.Zeeh
C	Released	M.Zeeh	
Change	Date	Name	

model	option DB	EB-C	EB-S	FB-C	FB-S
machine power supply	**400 V ±10 %, 50 Hz**	**400 V ±10 %, 50 Hz**	**400 V ±10 %, 50 Hz**	**400 V ±10 %, 50 Hz**	**400 V ±10 %, 50 Hz**
option C5/C39: Oil Function monitors					
Oil level switch **-B80/-B81** (option C5) **Elobau**	894631.00010	894631.00010	894631.00010	894631.00010	894631.00010
Oil temperature **-B55** (option C39) **Wika**	---	895251.10100 Pt100	895603.00100 Pt100	895251.10100 Pt100	895251.10100 Pt100
option C10: Speed monitoring					
Supervisory module **-K26** **ifm**	895323.0 FR1 - DD2503	895323.0 FR1 - DD2503	895323.0 FR1 - DD2503	895323.0 FR1 - DD2503	895323.0 FR1 - DD2503
Speed sensor **-B90** **ifm**	895039.0 IFC201	895039.0 IFC201	895039.0 IFC201	895039.0 IFC201	895039.0 IFC201
option C11: Unloaded start valve 24 V-DC (electromagnetic)					
Solenoid valve **-K1** **Riegler**	--- ---	--- ---	894204.00020 24V - DC	--- ---	894204.00020 24V - DC
option C11: Unloaded start valve 230 V-AC (ball valve)					
Coupling relay **-K53** **Siemens**	--- --- --- ---	--- --- --- ---	7.8237.00340 3RH2122-2JB40 DC 17-30 V AC-15: 240 V/10 A	--- --- --- ---	--- --- --- ---
Actuator drive **-M23 / (-M24)** **Sun Yeh**	--- ---	--- ---	895449.0 OM-1 230 V	--- ---	--- ---

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UXB.STC-03020.05
Equipment parts list
option
KAESER KOMPRESSOREN

c		Date	20.06.2018	
b		Drawn	M.Zeeh	
a		Released	M.Zeeh	
C	Change	Date	Name	

model		performance-related components 4 kW BB	5,5 kW BB+ CB+DB	7,5 kW BB+ CB+DB	11 kW BB+ CB+DB
machine power supply		230 V ±10 %, 50 Hz	230 V ±10 %, 50 Hz	230 V ±10 %, 50 Hz	230 V ±10 %, 50 Hz
Overload protection	-B21	7.8741.00060 3RB3026-1SB0 3-12 A / S0	7.8741.00070 3RB3026-1QB0 6-25 A / S0	7.8741.00070 3RB3026-1QB0 6-25 A / S0	7.8741.00080 3RB3026-1VB0 10-40 A / S0
	Siemens	setting: 8,5 A	setting: 11,6 A	setting: 15,3 A	setting: 23,6 A
Overload protection switch	-F4	7.8237.00190 3RV2011-0FA20 0,35-0,5 A setting: 0,44 A	7.8237.00190 3RV2011-0FA20 0,35-0,5 A setting: 0,44 A	7.8237.00190 3RV2011-0FA20 0,35-0,5 A setting: 0,44 A	7.8237.00190 3RV2011-0FA20 0,35-0,5 A setting: 0,44 A
Auxiliary switch	.	7.8237.00250 3RV2901-2E	7.8237.00250 3RV2901-2E	7.8237.00250 3RV2901-2E	7.8237.00250 3RV2901-2E
Connecting block	.	7.8237.00030	7.8237.00030	7.8237.00030	7.8237.00030
	Siemens	3RV2917-5A	3RV2917-5A	3RV2917-5A	3RV2917-5A
Overload protection switch	-F11	7.8237.00220 3RV2011-1DA20 2,2-3,2 A	7.8237.00220 3RV2011-1DA20 2,2-3,2 A	7.8237.00220 3RV2011-1DA20 2,2-3,2 A	7.8237.00220 3RV2011-1DA20 2,2-3,2 A
	Siemens	setting: 2,9 A	setting: 2,9 A	setting: 2,9 A	setting: 2,9 A
Blower Motor	-M1	894969.00230 230 V-D/50 Hz	894970.00230 230 V-D/50 Hz	894971.00230 230 V-D/50 Hz	894972.00230 230 V-D/50 Hz
	Siemens	12,8 A, 3000U	17,5 A, 3000U	23 A, 3000U	35,5 A, 3000U
Fan motor	-M4	895240.0	895240.0	895240.0	895240.0
Soundproof enclosure	.	W2D250 - 110W	W2D250 - 110W	W2D250 - 110W	W2D250 - 110W
	ebm	230 V-D/50 Hz 0,38 A	230 V-D/50 Hz 0,38 A	230 V-D/50 Hz 0,38 A	230 V-D/50 Hz 0,38 A
Contactor	-Q1 / -Q2	7.8740.00040 3RT2023-1AL20	7.8740.00050 3RT2024-1AL20	7.8740.00060 3RT2025-1AL20	7.8740.00070 3RT2026-1AL20
Auxiliary switch	.				
Auxiliary switch	.				
Interference suppressor	.	7.8740.05110 3RT2926-1CD00	7.8740.05110 3RT2926-1CD00	7.8740.05110 3RT2926-1CD00	7.8740.05110 3RT2926-1CD00
terminal	.	7.3140.05050 3RV2925-5AB	7.3140.05050 3RV2925-5AB	7.3140.05050 3RV2925-5AB	7.3140.05050 3RV2925-5AB
Phase rail	.	7.6861.0	7.6861.0	7.6861.0	7.6861.0
	Siemens	3RV1915-1AB	3RV1915-1AB	3RV1915-1AB	3RV1915-1AB
Contactor	-Q3	7.8740.00010 3RT2016-1AP01	7.8740.00010 3RT2016-1AP01	7.8740.00010 3RT2016-1AP01	7.8740.00060 3RT2025-1AL20
Auxiliary switch	.				
Auxiliary switch	.				
Interference suppressor	.	7.8740.05100 3RT2916-1CD00	7.8740.05100 3RT2916-1CD00	7.8740.05100 3RT2916-1CD00	7.8740.05110 3RT2926-1CD00
star bridge	.	7.3140.05030	7.3140.05030	7.3140.05030	7.3140.02070
	Siemens	3RT1916-4BA31	3RT1916-4BA31	3RT1916-4BA31	3RT1926-4BA31
motor cable	-W19.1/19.2	4G2,5 mm² 500 V - 70°C	4G2,5 mm² 500 V - 70°C	4G4 mm² 500 V - 70°C	4G6 mm² 500 V - 70°C
connection	-W11 -W13 -W14	2,5 mm2 Phase rail 2,5 mm2 500 V - 70°C	6 mm2 Phase rail 2,5 mm2 500 V - 70°C	6 mm2 Phase rail 2,5 mm2 500 V - 70°C	10 mm2 Phase rail 2,5 mm2 500 V - 70°C
supply terminals	-X0: U1/V1/W1/PE	894864.00010 Wieland 2,5-16 mm²	894864.00010 Wieland 2,5-16 mm²	894864.00010 Wieland 2,5-16 mm²	894864.00010 Wieland 2,5-16 mm²
	Handling	fig. 2, Sht. 11	fig. 2, Sht. 11	fig. 2, Sht. 11	fig. 2, Sht. 11
	Stripped length X	16 mm	16 mm	16 mm	16 mm
supply	connection	fig. 1, Sht. 12	fig. 1, Sht. 12	fig. 1, Sht. 12	fig. 1, Sht. 12

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UXB.STC-03020.05
Equipment parts list
Blower STC+SC2
performance-related components
KAESER KOMPRESSOREN

	Date	Name
c		
b	20.06.2018	M.Zeeh
a	Drawn	M.Zeeh
C	Released	
Change	Date	Name

model	performance-related components 15 kW BB+ CB+DB	18,5 kW CB+ DB	22 kW CB+ DB	30 kW CB+ DB
machine power supply	230 V ±10 %, 50 Hz	230 V ±10 %, 50 Hz	230 V ±10 %, 50 Hz	230 V ±10 %, 50 Hz
Overload protection -B21 Siemens	7.8741.00090 3RB3036-1UB0 12,5-50 A / S2 setting: 32,2 A	7.8741.00090 3RB3036-1UB0 12,5-50 A / S2 setting: 36,9 A	7.8741.00090 3RB3036-1UB0 12,5-50 A / S2 setting: 43,2 A	7.8741.00100 3RB3036-1WB0 20-80 A / S2 setting: 61,1 A
Overload protection switch -F4 Auxiliary switch . Connecting block . Siemens	7.8237.00190 3RV2011-0FA20 0,35-0,5 A setting: 0,44 A 7.8237.00250 3RV2901-2E 7.8237.00030 3RV2917-5A	7.8237.00190 3RV2011-0FA20 0,35-0,5 A setting: 0,44 A 7.8237.00250 3RV2901-2E 7.8237.00030 3RV2917-5A	7.8237.00190 3RV2011-0FA20 0,35-0,5 A setting: 0,44 A 7.8237.00250 3RV2901-2E 7.8237.00030 3RV2917-5A	7.8237.00190 3RV2011-0FA20 0,35-0,5 A setting: 0,44 A 7.8237.00250 3RV2901-2E 7.8237.00030 3RV2917-5A
Overload protection switch -F11 Siemens	7.8237.00220 3RV2011-1DA20 2,2-3,2 A setting: 2,9 A	7.8237.00220 3RV2011-1DA20 2,2-3,2 A setting: 2,9 A	7.8237.00220 3RV2011-1DA20 2,2-3,2 A setting: 2,9 A	7.8237.00220 3RV2011-1DA20 2,2-3,2 A setting: 2,9 A
Blower Motor -M1 Siemens	895161.00230 (BB) 894973.00230 (CB/DB) 230 V-D/50 Hz 48,5 A, 3000U	894974.00230 230 V-D/50 Hz 55,5 A, 3000U	894975.00230 230 V-D/50 Hz 65 A, 3000U	894976.10231 (CB) 894977.10230 (DB) 230 V-D/50 Hz 92 A, 3000U
Fan motor -M4 Soundproof enclosure . ebm	895240.0 W2D250 - 110W 230 V-D/50 Hz 0,38 A	895240.0 W2D250 - 110W 230 V-D/50 Hz 0,38 A	895240.0 W2D250 - 110W 230 V-D/50 Hz 0,38 A	895240.0 W2D250 - 110W 230 V-D/50 Hz 0,38 A
Contactor -Q1 / -Q2 Auxiliary switch . Auxiliary switch . Interference suppressor . terminal . Phase rail . Siemens	7.8740.00100 3RT2035-1AL20 7.8740.05120 3RT2936-1CD00 7.3140.05060 3RV2935-5A 7.3140.05270 3RA2933-3FA00	7.8740.00100 3RT2035-1AL20 7.8740.05120 3RT2936-1CD00 7.3140.05060 3RV2935-5A 7.3140.05270 3RA2933-3FA00	7.8740.00110 3RT2036-1AL20 7.8740.05120 3RT2936-1CD00 7.3140.05060 3RV2935-5A 7.3140.05270 3RA2933-3FA00	7.8740.00120 3RT2037-1AL20 7.8740.05120 3RT2936-1CD00 7.3140.05060 3RV2935-5A 7.3140.05270 3RA2933-3FA00
Contactor -Q3 Auxiliary switch . Auxiliary switch . Interference suppressor . star bridge . Siemens	7.8740.00070 3RT2026-1AL20 7.8740.05110 3RT2926-1CD00 7.3140.02070 3RT1926-4BA31	7.8740.00080 3RT2027-1AL20 7.8740.05110 3RT2926-1CD00 7.3140.02070 3RT1926-4BA31	7.8740.00100 3RT2035-1AL20 7.8740.05120 3RT2936-1CD00 7.3140.01170 3RT1936-4BA31	7.8740.00100 3RT2035-1AL20 7.8740.05120 3RT2936-1CD00 7.3140.01170 3RT1936-4BA31
motor cable -W19.1/19.2	4G10 mm² 500 V - 70°C	4G16 mm² 500 V - 70°C	4G16 mm² 500 V - 70°C	4G25 mm² 500 V - 70°C
connection -W11 -W13 -W14	16 mm2 Phase rail 6 mm2 500 V - 70°C	25 mm2 Phase rail 6 mm2 500 V - 70°C	35 mm2 Phase rail Phase rail 500 V - 70°C	50 mm2 Phase rail Phase rail 500 V - 70°C
supply terminals -X0: U1/V1/W1/PE Handling Stripped length X supply connection	894864.00010 Wieland 2,5-16 mm² fig. 2, Sht. 11 16 mm fig. 1, Sht. 12	3x 895314.0 3x 895314.00010 4x 895314.00040 Wago 10-50 mm² fig. 3, Sht. 11 30 mm fig. 2, Sht. 12	3x 895314.0 3x 895314.00010 4x 895314.00040 Wago 10-50 mm² fig. 3, Sht. 11 30 mm fig. 2, Sht. 12	3x 895314.0 3x 895314.00010 4x 895314.00040 Wago 10-50 mm² fig. 3, Sht. 11 30 mm fig. 2, Sht. 12

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UXB.STC-03020.05
Equipment parts list
Blower STC+SC2
performance-related components
KAESER KOMPRESSOREN
Date 20.06.2018
Drawn M.Zeeh
Released M.Zeeh
c b a C Change Date Name

model		performance-related components 18,5 kW EB	22 kW EB	30 kW EB	
machine power supply		230 V ±10 %, 50 Hz	230 V ±10 %, 50 Hz	230 V ±10 %, 50 Hz	
Overload protection	-B21	7.8741.00090 3RB3036-1UB0 12,5-50 A / S2	7.8741.00090 3RB3036-1UB0 12,5-50 A / S2	7.8741.00100 3RB3036-1WB0 20-80 A / S2	
	Siemens	setting: 36,9 A	setting: 43,2 A	setting: 61,1 A	
Overload protection switch	-F4	7.8237.00210 3RV2011-0JA20 0,70-1,00 A	7.8237.00210 3RV2011-0JA20 0,70-1,00 A	7.8237.00210 3RV2011-0JA20 0,70-1,00 A	
		setting: 0,85 A	setting: 0,85 A	setting: 0,85 A	
Auxiliary switch	.	7.8237.00250 3RV2901-2E	7.8237.00250 3RV2901-2E	7.8237.00250 3RV2901-2E	
Connecting block	.	7.8237.00030	7.8237.00030	7.8237.00030	
	Siemens	3RV2917-5A	3RV2917-5A	3RV2917-5A	
Overload protection switch	-F11	7.8237.00220 3RV2011-1DA20 2,2-3,2 A	7.8237.00220 3RV2011-1DA20 2,2-3,2 A	7.8237.00220 3RV2011-1DA20 2,2-3,2 A	
	Siemens	setting: 2,9 A	setting: 2,9 A	setting: 2,9 A	
Blower Motor	-M1	894974.00230 230 V-D/50 Hz	894975.00230 230 V-D/50 Hz	894977.10230 230 V-D/50 Hz	
	Siemens	55,5 A, 3000U	65 A, 3000U	92 A, 3000U	
Fan motor	-M4	892997.0	892997.0	892997.0	
Soundproof enclosure	.	W2D300 - 210W	W2D300 - 210W	W2D300 - 210W	
	ebm	230 V-D/50 Hz 0,74 A	230 V-D/50 Hz 0,74 A	230 V-D/50 Hz 0,74 A	
Contactor	-Q1 / -Q2	7.8740.00100 3RT2035-1AL20	7.8740.00110 3RT2036-1AL20	7.8740.00120 3RT2037-1AL20	
Auxiliary switch	.	7.8740.05030 3RH2911-1HA20	7.8740.05030 3RH2911-1HA20	7.8740.05030 3RH2911-1HA20	
Auxiliary switch	.				
Interference suppressor	.	7.8740.05120 3RT2936-1CD00	7.8740.05120 3RT2936-1CD00	7.8740.05120 3RT2936-1CD00	
terminal	.	7.3140.05060 3RV2935-5A	7.3140.05060 3RV2935-5A	7.3140.05060 3RV2935-5A	
Phase rail	.	7.3140.05270	7.3140.05270	7.3140.05270	
	Siemens	3RA2933-3FA00	3RA2933-3FA00	3RA2933-3FA00	
Contactor	-Q3	7.8740.00100 3RT2035-1AL20	7.8740.00100 3RT2035-1AL20	7.8740.00100 3RT2035-1AL20	
Auxiliary switch	.				
Auxiliary switch	.				
Interference suppressor	.	7.8740.05120 3RT2936-1CD00	7.8740.05120 3RT2936-1CD00	7.8740.05120 3RT2936-1CD00	
star bridge	.	7.3140.01170	7.3140.01170	7.3140.01170	
	Siemens	3RT1936-4BA31	3RT1936-4BA31	3RT1936-4BA31	
motor cable	-W19.1/19.2	4G16 mm² 500 V - 70°C	4G16 mm² 500 V - 70°C	4G25 mm² 500 V - 70°C	
connection	-W11	25 mm2	35 mm2	50 mm2	
	-W13	Phase rail	Phase rail	Phase rail	
	-W14	Phase rail 500 V - 70°C	Phase rail 500 V - 70°C	Phase rail 500 V - 70°C	
supply terminals	-X0:	3x 895314.0	3x 895314.0	3x 895314.0	
	U1/V1/W1/PE	3x 895314.00010 4x 895314.00040 Wago 10-50 mm²	3x 895314.00010 4x 895314.00040 Wago 10-50 mm²	3x 895314.00010 4x 895314.00040 Wago 10-50 mm²	
	Handling	fig. 3, Sht. 11	fig. 3, Sht. 11	fig. 3, Sht. 11	
	Stripped length X	30 mm	30 mm	30 mm	
supply	connection	fig. 2, Sht. 12	fig. 2, Sht. 12	fig. 2, Sht. 12	

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Equipment parts list
Blower STC+SC2
performance-related components
KAESER KOMPRESSOREN

	Date	Name
c		
b	20.06.2018	M.Zeeh
a	Drawn	M.Zeeh
C	Released	
Change	Date	Name

model	performance-related components 4 kW BB	5,5 kW BB+ CB+DB	7,5 kW BB+ CB+DB	11 kW BB+ CB+DB	15 kW BB+ CB+DB
machine power supply	**400 V ±10 %, 50 Hz**	**400 V ±10 %, 50 Hz**	**400 V ±10 %, 50 Hz**	**400 V ±10 %, 50 Hz**	**400 V ±10 %, 50 Hz**
Overload protection -B21 Siemens	7.8741.00060 3RB3026-1SB0 3-12 A / S0 setting: 4,9 A	7.8741.00060 3RB3026-1SB0 3-12 A / S0 setting: 6,6 A	7.8741.00060 3RB3026-1SB0 3-12 A / S0 setting: 8,8 A	7.8741.00070 3RB3026-1QB0 6-25 A / S0 setting: 13,6 A	7.8741.00070 3RB3026-1QB0 6-25 A / S0 setting: 18,6 A
Overload protection switch -F4 Auxiliary switch . Connecting block . Siemens	7.8237.00100 3RV2011-0DA20 0,22-0,32 A setting: 0,25 A 7.8237.00250 3RV2901-2E 7.8237.00030 3RV2917-5A	7.8237.00100 3RV2011-0DA20 0,22-0,32 A setting: 0,25 A 7.8237.00250 3RV2901-2E 7.8237.00030 3RV2917-5A	7.8237.00100 3RV2011-0DA20 0,22-0,32 A setting: 0,25 A 7.8237.00250 3RV2901-2E 7.8237.00030 3RV2917-5A	7.8237.00100 3RV2011-0DA20 0,22-0,32 A setting: 0,25 A 7.8237.00250 3RV2901-2E 7.8237.00030 3RV2917-5A	7.8237.00100 3RV2011-0DA20 0,22-0,32 A setting: 0,25 A 7.8237.00250 3RV2901-2E 7.8237.00030 3RV2917-5A
Overload protection switch -F11 Siemens	7.8237.00220 3RV2011-1DA20 2,2-3,2 A setting: 2,5 A	7.8237.00220 3RV2011-1DA20 2,2-3,2 A setting: 2,5 A	7.8237.00220 3RV2011-1DA20 2,2-3,2 A setting: 2,5 A	7.8237.00220 3RV2011-1DA20 2,2-3,2 A setting: 2,5 A	7.8237.00220 3RV2011-1DA20 2,2-3,2 A setting: 2,5 A
Blower Motor -M1 Siemens	894969.0 400 V-D/50 Hz 7,4 A, 3000U	894970.0 400 V-D/50 Hz 10 A, 3000U	894971.0 400 V-D/50 Hz 13,2 A, 3000U	894972.0 400 V-D/50 Hz 20,5 A, 3000U	895161.0 (BB) 894973.0 (CB/DB/EB) 400 V-D/50 Hz 28 A, 3000U
Fan motor -M4 Soundproof enclosure . ebm	895240.0 W2D250 - 110W 400 V-Y/50 Hz 0,22 A	895240.0 W2D250 - 110W 400 V-Y/50 Hz 0,22 A	895240.0 W2D250 - 110W 400 V-Y/50 Hz 0,22 A	895240.0 W2D250 - 110W 400 V-Y/50 Hz 0,22 A	895240.0 W2D250 - 110W 400 V-Y/50 Hz 0,22 A
Contactor -Q1 / -Q2 Auxiliary switch . Auxiliary switch . Interference suppressor . terminal . Phase rail . Siemens	7.8740.00040 3RT2023-1AL20 7.8740.05110 3RT2926-1CD00 7.3140.05050 3RV2925-5AB 7.6861.0 3RV1915-1AB	7.8740.00040 3RT2023-1AL20 7.8740.05110 3RT2926-1CD00 7.3140.05050 3RV2925-5AB 7.6861.0 3RV1915-1AB	7.8740.00040 3RT2023-1AL20 7.8740.05110 3RT2926-1CD00 7.3140.05050 3RV2925-5AB 7.6861.0 3RV1915-1AB	7.8740.00060 3RT2025-1AL20 7.8740.05110 3RT2926-1CD00 7.3140.05050 3RV2925-5AB 7.6861.0 3RV1915-1AB	7.8740.00070 3RT2026-1AL20 7.8740.05110 3RT2926-1CD00 7.3140.05050 3RV2925-5AB 7.6861.0 3RV1915-1AB
Contactor -Q3 Auxiliary switch . Auxiliary switch . Interference suppressor . star bridge . Siemens	7.8740.00010 3RT2016-1AP01 7.8740.05000 3RH2911-1HA12 7.8740.05100 3RT2916-1CD00 7.3140.05030 3RT1916-4BA31	7.8740.00010 3RT2016-1AP01 7.8740.05000 3RH2911-1HA12 7.8740.05100 3RT2916-1CD00 7.3140.05030 3RT1916-4BA31	7.8740.00010 3RT2016-1AP01 7.8740.05000 3RH2911-1HA12 7.8740.05100 3RT2916-1CD00 7.3140.05030 3RT1916-4BA31	7.8740.00010 3RT2016-1AP01 7.8740.05000 3RH2911-1HA12 7.8740.05100 3RT2916-1CD00 7.3140.05030 3RT1916-4BA31	7.8740.00030 3RT2018-1AP01 7.8740.05000 3RH2911-1HA12 7.8740.05100 3RT2916-1CD00 7.3140.05030 3RT1916-4BA31
motor cable -W19.1/19.2	4G2,5 mm² 500 V - 70°C	4G2,5 mm² 500 V - 70°C	4G2,5 mm² 500 V - 70°C	4G2,5 mm² 500 V - 70°C	4G6 mm² 500 V - 70°C
connection -W11 -W13 -W14	2,5 mm2 Phase rail 2,5 mm2 500 V - 70°C	2,5 mm2 Phase rail 2,5 mm2 500 V - 70°C	2,5 mm2 Phase rail 2,5 mm2 500 V - 70°C	6 mm2 Phase rail 2,5 mm2 500 V - 70°C	10 mm2 Phase rail 2,5 mm2 500 V - 70°C
supply terminals -X0: U1/V1/W1/PE Handling Stripped length X supply connection	894864.00010 Wieland 2,5-16 mm² fig. 2, Sht. 11 16 mm fig. 1, Sht. 12	894864.00010 Wieland 2,5-16 mm² fig. 2, Sht. 11 16 mm fig. 1, Sht. 12	894864.00010 Wieland 2,5-16 mm² fig. 2, Sht. 11 16 mm fig. 1, Sht. 12	894864.00010 Wieland 2,5-16 mm² fig. 2, Sht. 11 16 mm fig. 1, Sht. 12	894864.00010 Wieland 2,5-16 mm² fig. 2, Sht. 11 16 mm fig. 1, Sht. 12

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UXB.STC-03020.05
Equipment parts list
Blower STC+SC2
performance-related components
KAESER KOMPRESSOREN
Date 20.06.2018
Drawn M.Zeeh
Released M.Zeeh
Name
Date
c b a C Change

model	performance-related components 18,5 kW CB+ DB	22 kW CB+ DB	30 kW CB+ DB	37 kW DB	45 kW DB
machine power supply	400 V ±10 %, 50 Hz	400 V ±10 %, 50 Hz	400 V ±10 %, 50 Hz	400 V ±10 %, 50 Hz	400 V ±10 %, 50 Hz
Overload protection -B21	7.8741.00070 3RB3026-1QB0 6-25 A / S0	7.8741.00080 3RB3026-1VB0 10-40 A / S0	7.8741.00090 3RB3036-1UB0 12,5-50 A / S2	7.8741.00090 3RB3036-1UB0 12,5-50 A / S2	7.8741.00100 3RB3036-1WB0 20-80 A / S2
Siemens	setting: 21,2 A	setting: 24,9 A	setting: 35,2 A	setting: 43,2 A	setting: 52,5 A
Overload protection switch -F4	7.8237.00100 3RV2011-0DA20 0,22-0,32 A	7.8237.00100 3RV2011-0DA20 0,22-0,32 A	7.8237.00100 3RV2011-0DA20 0,22-0,32 A	7.8237.00100 3RV2011-0DA20 0,22-0,32 A	7.8237.00100 3RV2011-0DA20 0,22-0,32 A
	setting: 0,25 A	setting: 0,25 A	setting: 0,25 A	setting: 0,25 A	setting: 0,25 A
Auxiliary switch .	7.8237.00250 3RV2901-2E	7.8237.00250 3RV2901-2E	7.8237.00250 3RV2901-2E	7.8237.00250 3RV2901-2E	7.8237.00250 3RV2901-2E
Connecting block .	7.8237.00030	7.8237.00030	7.8237.00030	7.8237.00030	7.8237.00030
Siemens	3RV2917-5A	3RV2917-5A	3RV2917-5A	3RV2917-5A	3RV2917-5A
Overload protection switch -F11	7.8237.00220 3RV2011-1DA20 2,2-3,2 A	7.8237.00220 3RV2011-1DA20 2,2-3,2 A	7.8237.00220 3RV2011-1DA20 2,2-3,2 A	7.8237.00220 3RV2011-1DA20 2,2-3,2 A	7.8237.00220 3RV2011-1DA20 2,2-3,2 A
Siemens	setting: 2,5 A	setting: 2,5 A	setting: 2,5 A	setting: 2,5 A	setting: 2,5 A
Blower Motor -M1	894974.0	894975.0	894976.1 (CB) 894977.1 (DB)	894978.1	894979.1
	400 V-D/50 Hz	400 V-D/50 Hz	400 V-D/50 Hz	400 V-D/50 Hz	400 V-D/50 Hz
Siemens	32 A, 3000U	37,5 A, 3000U	53 A, 3000U	65 A, 3000U	79 A, 3000U
Fan motor -M4	895240.0	895240.0	895240.0	895240.0	895240.0
Soundproof enclosure .	W2D250 - 110W	W2D250 - 110W	W2D250 - 110W	W2D250 - 110W	W2D250 - 110W
ebm	400 V-Y/50 Hz 0,22 A	400 V-Y/50 Hz 0,22 A	400 V-Y/50 Hz 0,22 A	400 V-Y/50 Hz 0,22 A	400 V-Y/50 Hz 0,22 A
Contactor -Q1 / -Q2	7.8740.00080 3RT2027-1AL20	7.8740.00080 3RT2027-1AL20	7.8740.00100 3RT2035-1AL20	7.8740.00110 3RT2036-1AL20	7.8740.00120 3RT2037-1AL20
Auxiliary switch .					
Auxiliary switch .					
Interference suppressor .	7.8740.05110 3RT2926-1CD00	7.8740.05110 3RT2926-1CD00	7.8740.05120 3RT2936-1CD00	7.8740.05120 3RT2936-1CD00	7.8740.05120 3RT2936-1CD00
terminal .	7.3140.05050 3RV2925-5AB	7.3140.05050 3RV2925-5AB	7.3140.05060 3RV2935-5A	7.3140.05060 3RV2935-5A	7.3140.05060 3RV2935-5A
Phase rail .	7.6861.0	7.6861.0	7.3140.05270	7.3140.05270	7.3140.05270
Siemens	3RV1915-1AB	3RV1915-1AB	3RA2933-3FA00	3RA2933-3FA00	3RA2933-3FA00
Contactor -Q3	7.8740.00060 3RT2025-1AL20	7.8740.00070 3RT2026-1AL20	7.8740.00070 3RT2026-1AL20	7.8740.00100 3RT2035-1AL20	7.8740.00100 3RT2035-1AL20
Auxiliary switch .					
Auxiliary switch .					
Interference suppressor .	7.8740.05110 3RT2926-1CD00	7.8740.05110 3RT2926-1CD00	7.8740.05110 3RT2926-1CD00	7.8740.05120 3RT2936-1CD00	7.8740.05120 3RT2936-1CD00
star bridge .	7.3140.02070	7.3140.02070	7.3140.02070	7.3140.01170	7.3140.01170
Siemens	3RT1926-4BA31	3RT1926-4BA31	3RT1926-4BA31	3RT1936-4BA31	3RT1936-4BA31
motor cable -W19.1/19.2	4G6 mm² 500 V - 70°C	4G10 mm² 500 V - 70°C	4G16 mm² 500 V - 70°C	4G16 mm² 500 V - 70°C	4G25 mm² 500 V - 70°C
connection -W11	10 mm2	16 mm2	25 mm2	35 mm2	35 mm2
-W13	Phase rail	Phase rail	Phase rail	Phase rail	Phase rail
-W14	Phase rail 500 V - 70°C	Phase rail 500 V - 70°C	6 mm2 500 V - 70°C	Phase rail 500 V - 70°C	Phase rail 500 V - 70°C
supply terminals -X0:	894864.00010	894864.00010	3x 895314.0	3x 895314.0	3x 895314.0
U1/V1/W1/PE			3x 895314.00010	3x 895314.00010	3x 895314.00010
			4x 895314.00040	4x 895314.00040	4x 895314.00040
	Wieland	Wieland	Wago	Wago	Wago
	2,5-16 mm²	2,5-16 mm²	10-50 mm²	10-50 mm²	10-50 mm²
Handling	fig. 2, Sht. 11	fig. 2, Sht. 11	fig. 3, Sht. 11	fig. 3, Sht. 11	fig. 3, Sht. 11
Stripped length X	16 mm	16 mm	30 mm	30 mm	30 mm
supply connection	fig. 1, Sht. 12	fig. 1, Sht. 12	fig. 2, Sht. 12	fig. 2, Sht. 12	fig. 2, Sht. 12

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15 Sht.

UXB.STC-03020.05

Equipment parts list
Blower STC+SC2
performance-related components

KAESER KOMPRESSOREN

	Change	Date	Name
c			
b			
a			
	Date	20.06.2018	
	Drawn	M.Zeeh	
	Released	M.Zeeh	

model		performance-related components 18,5 kW EB	22 kW EB	30 kW EB+ FB-C	30 kW FB-S
machine power supply		400 V ±10 %, 50 Hz	400 V ±10 %, 50 Hz	400 V ±10 %, 50 Hz	400 V ±10 %, 50 Hz
Overload protection	-B21	7.8741.00080 3RB3026-1VB0 10-40 A / S0	7.8741.00080 3RB3026-1VB0 10-40 A / S0	7.8741.00090 3RB3036-1UB0 12,5-50 A / S2	7.8741.00090 3RB3036-1UB0 12,5-50 A / S2
	Siemens	setting: 21,2 A	setting: 24,9 A	setting: 35,2 A	setting: 35,2 A
Overload protection switch	-F4	7.8237.00110 3RV2011-0GA20 0,45-0,63 A setting: 0,49 A	7.8237.00110 3RV2011-0GA20 0,45-0,63 A setting: 0,49 A	7.8237.00110 3RV2011-0GA20 0,45-0,63 A setting: 0,49 A	7.8237.00110 3RV2011-0GA20 0,45-0,63 A setting: 0,60 A
Auxiliary switch	.	7.8237.00250 3RV2901-2E	7.8237.00250 3RV2901-2E	7.8237.00250 3RV2901-2E	7.8237.00250 3RV2901-2E
Connecting block	.	7.8237.00030	7.8237.00030	7.8237.00030	7.8237.00030
	Siemens	3RV2917-5A	3RV2917-5A	3RV2917-5A	3RV2917-5A
Overload protection switch	-F11	7.8237.00220 3RV2011-1DA20 2,2-3,2 A	7.8237.00220 3RV2011-1DA20 2,2-3,2 A	7.8237.00220 3RV2011-1DA20 2,2-3,2 A	7.8237.00220 3RV2011-1DA20 2,2-3,2 A
	Siemens	setting: 2,5 A	setting: 2,5 A	setting: 2,5 A	setting: 2,5 A
Blower Motor	-M1	894974.0 400 V-D/50 Hz	894975.0 400 V-D/50 Hz	894977.1 400 V-D/50 Hz	894977.1 400 V-D/50 Hz
	Siemens	32 A, 3000U	37,5 A, 3000U	53 A, 3000U	53 A, 3000U
Fan motor	-M4	892997.0	892997.0	892997.0	895426.0
Soundproof enclosure	.	W2D300 - 210W	W2D300 - 210W	W2D300 - 210W	W4D420 - 160W
	ebm	400 V-Y/50 Hz 0,43 A	400 V-Y/50 Hz 0,43 A	400 V-Y/50 Hz 0,43 A	400 V-Y/50 Hz 0,55 A
Contactor	-Q1 / -Q2	7.8740.00080 3RT2027-1AL20	7.8740.00080 3RT2027-1AL20	7.8740.00100 3RT2035-1AL20	7.8740.00100 3RT2035-1AL20
Auxiliary switch	.	7.8740.05030 3RH2911-1HA20	7.8740.05030 3RH2911-1HA20	7.8740.05030 3RH2911-1HA20	7.8740.05030 3RH2911-1HA20
Auxiliary switch	.				
Interference suppressor	.	7.8740.05110 3RT2926-1CD00	7.8740.05110 3RT2926-1CD00	7.8740.05120 3RT2936-1CD00	7.8740.05120 3RT2936-1CD00
terminal	.	7.3140.05050 3RV2925-5AB	7.3140.05050 3RV2925-5AB	7.3140.05060 3RV2935-5A	7.3140.05060 3RV2935-5A
Phase rail	.	7.6861.0	7.6861.0	7.3140.05270	7.3140.05270
	Siemens	3RV1915-1AB	3RV1915-1AB	3RA2933-3FA00	3RA2933-3FA00
Contactor	-Q3	7.8740.00060 3RT2025-1AL20	7.8740.00070 3RT2026-1AL20	7.8740.00080 3RT2027-1AL20	7.8740.00080 3RT2027-1AL20
Auxiliary switch	.				
Auxiliary switch	.				
Interference suppressor	.	7.8740.05110 3RT2926-1CD00	7.8740.05110 3RT2926-1CD00	7.8740.05110 3RT2926-1CD00	7.8740.05110 3RT2926-1CD00
star bridge	.	7.3140.02070	7.3140.02070	7.3140.02070	7.3140.02070
	Siemens	3RT1926-4BA31	3RT1926-4BA31	3RT1926-4BA31	3RT1926-4BA31
motor cable	-W19.1/19.2	4G6 mm² 500 V - 70°C	4G10 mm² 500 V - 70°C	4G16 mm² 500 V - 70°C	4G16 mm² 500 V - 70°C
connection	-W11	10 mm2	16 mm2	25 mm2	25 mm2
	-W13	Phase rail	Phase rail	Phase rail	Phase rail
	-W14	6 mm2 500 V - 70°C	6 mm2 500 V - 70°C	6 mm2 500 V - 70°C	6 mm2 500 V - 70°C
supply terminals	-X0: U1/V1/W1/PE	894864.00010 Wieland 2,5-16 mm²	894864.00010 Wieland 2,5-16 mm²	3x 895314.0 3x 895314.00010 4x 895314.00040 Wago 10-50 mm²	3x 895314.0 3x 895314.00010 4x 895314.00040 Wago 10-50 mm²
	Handling	fig. 2, Sht. 11	fig. 2, Sht. 11	fig. 3, Sht. 11	fig. 3, Sht. 11
	Stripped length X	16 mm	16 mm	30 mm	30 mm
supply	connection	fig. 1, Sht. 12	fig. 1, Sht. 12	fig. 2, Sht. 12	fig. 2, Sht. 12

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UXB.STC-03020.05
Equipment parts list
Blower STC+SC2
performance-related components
KAESER KOMPRESSOREN

	Date	Name
Drawn	20.06.2018	M.Zeeh
Released		M.Zeeh
Change	Date	Name
a		
b		
c		

model	performance-related components 37 kW EB+ FB-C	37 kW FB-S	45 kW EB+ FB-C	45 kW FB-S
machine power supply	400 V ±10 %, 50 Hz	400 V ±10 %, 50 Hz	400 V ±10 %, 50 Hz	400 V ±10 %, 50 Hz
Overload protection -B21	7.8741.00100 3RB3036-1WB0 20-80 A / S2	7.8741.00100 3RB3036-1WB0 20-80 A / S2	7.8741.00100 3RB3036-1WB0 20-80 A / S2	7.8741.00100 3RB3036-1WB0 20-80 A / S2
Siemens	setting: 43,2 A	setting: 43,2 A	setting: 52,5 A	setting: 52,5 A
Overload protection switch -F4	7.8237.00110 3RV2011-0GA20 0,45-0,63 A	7.8237.00110 3RV2011-0GA20 0,45-0,63 A	7.8237.00110 3RV2011-0GA20 0,45-0,63 A	7.8237.00110 3RV2011-0GA20 0,45-0,63 A
	setting: 0,49 A	setting: 0,630 A	setting: 0,49 A	setting: 0,63 A
Auxiliary switch .	7.8237.00250 3RV2901-2E	7.8237.00250 3RV2901-2E	7.8237.00250 3RV2901-2E	7.8237.00250 3RV2901-2E
Connecting block .	7.8237.00030	7.8237.00030	7.8237.00030	7.8237.00030
Siemens	3RV2917-5A	3RV2917-5A	3RV2917-5A	3RV2917-5A
Overload protection switch -F11	7.8237.00220 3RV2011-1DA20 2,2-3,2 A	7.8237.00220 3RV2011-1DA20 2,2-3,2 A	7.8237.00220 3RV2011-1DA20 2,2-3,2 A	7.8237.00220 3RV2011-1DA20 2,2-3,2 A
Siemens	setting: 2,5 A	setting: 2,5 A	setting: 2,5 A	setting: 2,5 A
Blower Motor -M1	894978.1	894978.1	894979.1	894979.1
	400 V-D/50 Hz	400 V-D/50 Hz	400 V-D/50 Hz	400 V-D/50 Hz
Siemens	65 A, 3000U	65 A, 3000U	79 A, 3000U	79 A, 3000U
Fan motor -M4	892997.0	895426.0	892997.0	895426.0
Soundproof enclosure .	W2D300 - 210W	W4D420 - 160W	W2D300 - 210W	W4D420 - 160W
ebm	400 V-Y/50 Hz 0,43 A	400 V-Y/50 Hz 0,55 A	400 V-Y/50 Hz 0,43 A	400 V-Y/50 Hz 0,55 A
Contactor -Q1 / -Q2	7.8740.00110 3RT2036-1AL20	7.8740.00110 3RT2036-1AL20	7.8740.00120 3RT2037-1AL20	7.8740.00120 3RT2037-1AL20
Auxiliary switch .	7.8740.05030 3RH2911-1HA20	7.8740.05030 3RH2911-1HA20	7.8740.05030 3RH2911-1HA20	7.8740.05030 3RH2911-1HA20
Auxiliary switch .				
Interference suppressor .	7.8740.05120 3RT2936-1CD00	7.8740.05120 3RT2936-1CD00	7.8740.05120 3RT2936-1CD00	7.8740.05120 3RT2936-1CD00
terminal .	7.3140.05060 3RV2935-5A	7.3140.05060 3RV2935-5A	7.3140.05060 3RV2935-5A	7.3140.05060 3RV2935-5A
Phase rail .	7.3140.05270	7.3140.05270	7.3140.05270	7.3140.05270
Siemens	3RA2933-3FA00	3RA2933-3FA00	3RA2933-3FA00	3RA2933-3FA00
Contactor -Q3	7.8740.00100 3RT2035-1AL20	7.8740.00100 3RT2035-1AL20	7.8740.00100 3RT2035-1AL20	7.8740.00100 3RT2035-1AL20
Auxiliary switch .				
Auxiliary switch .				
Interference suppressor .	7.8740.05120 3RT2936-1CD00	7.8740.05120 3RT2936-1CD00	7.8740.05120 3RT2936-1CD00	7.8740.05120 3RT2936-1CD00
star bridge .	7.3140.01170	7.3140.01170	7.3140.01170	7.3140.01170
Siemens	3RT1936-4BA31	3RT1936-4BA31	3RT1936-4BA31	3RT1936-4BA31
motor cable -W19.1/19.2	4G16 mm² 500 V - 70°C	4G16 mm² 500 V - 70°C	4G25 mm² 500 V - 70°C	4G25 mm² 500 V - 70°C
connection -W11	35 mm2	35 mm2	35 mm2	35 mm2
-W13	Phase rail	Phase rail	Phase rail	Phase rail
-W14	Phase rail 500 V - 70°C	Phase rail 500 V - 70°C	Phase rail 500 V - 70°C	Phase rail 500 V - 70°C
supply terminals -X0:	3x 895314.0	3x 895314.0	3x 895314.0	3x 895314.0
U1/V1/W1/PE	3x 895314.00010 4x 895314.00040	3x 895314.00010 4x 895314.00040	3x 895314.00010 4x 895314.00040	3x 895314.00010 4x 895314.00040
	Wago 10-50 mm²	Wago 10-50 mm²	Wago 10-50 mm²	Wago 10-50 mm²
Handling	fig. 3, Sht. 11	fig. 3, Sht. 11	fig. 3, Sht. 11	fig. 3, Sht. 11
Stripped length X	30 mm	30 mm	30 mm	30 mm
supply connection	fig. 2, Sht. 12	fig. 2, Sht. 12	fig. 2, Sht. 12	fig. 2, Sht. 12

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UXB.STC-03020.05

Equipment parts list
Blower STC+SC2
performance-related components

KAESER KOMPRESSOREN

	Date	Name
Drawn	20.06.2018	
Released	M.Zeeh	
Change	M.Zeeh	

c
b
a

model		performance-related components 55 kW EB+ FB-C	55 kW FB-S	75 kW EB	75 kW FB-C	75 kW FB-S
machine power supply		400 V ±10 %, 50 Hz	400 V ±10 %, 50 Hz	400 V ±10 %, 50 Hz	400 V ±10 %, 50 Hz	400 V ±10 %, 50 Hz
Overload protection	-B21	7.8741.00100 3RB3036-1WB0 20-80 A / S2 setting: 63,1 A	7.8741.00100 3RB3036-1WB0 20-80 A / S2 setting: 63,1 A	7.8741.00140 3RB3046-1XB0 32-115 A / S3 setting: 85,0 A	7.8741.00140 3RB3046-1XB0 32-115 A / S3 setting: 85,0 A	7.8741.00140 3RB3046-1XB0 32-115 A / S3 setting: 85,7 A
Overload protection switch Auxiliary switch Connecting block	-F4 . .	7.8237.00110 3RV2011-0GA20 0,45-0,63 A setting: 0,49 A 7.8237.00250 3RV2901-2E 7.8237.00030	7.8237.00110 3RV2011-0GA20 0,45-0,63 A setting: 0,63 A 7.8237.00250 3RV2901-2E 7.8237.00030	7.8237.00110 3RV2011-0GA20 0,45-0,63 A setting: 0,49 A 7.8237.00250 3RV2901-2E 7.8237.00030	7.8237.00110 3RV2011-0GA20 0,45-0,63 A setting: 0,49 A 7.8237.00250 3RV2901-2E 7.8237.00030	7.8237.00110 3RV2011-0GA20 0,45-0,63 A setting: 0,63 A 7.8237.00250 3RV2901-2E 7.8237.00030
	Siemens	3RV2917-5A	3RV2917-5A	3RV2917-5A	3RV2917-5A	3RV2917-5A
Overload protection switch	-F11	7.8237.00220 3RV2011-1DA20 2,2-3,2 A setting: 2,5 A	7.8237.00220 3RV2011-1DA20 2,2-3,2 A setting: 2,5 A	7.8237.00220 3RV2011-1DA20 2,2-3,2 A setting: 2,5 A	7.8237.00220 3RV2011-1DA20 2,2-3,2 A setting: 2,5 A	7.8237.00220 3RV2011-1DA20 2,2-3,2 A setting: 2,5 A
Blower Motor	-M1	894717.1 400V-D/50 Hz 94 A, 3000U	894717.1 400V-D/50 Hz 95 A, 3000U	894719.1 400V-D/50 Hz 128 A, 3000U	894719.1 400V-D/50 Hz 128 A, 3000U	894719.12010 400V-D/50 Hz 129 A, 3000U
Fan motor Soundproof enclosure	-M4 .	892997.0 W2D300 - 210W	895426.0 W4D420 - 160W	892997.0 W2D300 - 210W	892997.0 W2D300 - 210W	895426.0 W4D420 - 160W
	ebm	400 V-Y/50 Hz 0,43 A	400 V-Y/50 Hz 0,55 A	400 V-Y/50 Hz 0,43 A	400 V-Y/50 Hz 0,43 A	400 V-Y/50 Hz 0,55 A
Contactor Auxiliary switch Interference suppressor terminal Phase rail	-Q1 / -Q2	7.8740.00120 3RT2037-1AL20 7.8740.05030 3RH2911-1HA20 7.8740.05120 3RT2936-1CD00 7.3140.05060 3RV2935-5A 7.3140.05270	7.8740.00120 3RT2037-1AL20 7.8740.05030 3RH2911-1HA20 7.8740.05120 3RT2936-1CD00 7.3140.05060 3RV2935-5A 7.3140.05270	7.8740.00140 3RT2045-1AL20 7.8740.05030 3RH2911-1HA20 7.8740.05160 3RT2946-1CD00 --- --- ---	7.8740.00160 3RT2047-1AL20 7.8740.05030 3RH2911-1HA20 7.8740.05160 3RT2946-1CD00 --- --- ---	7.8740.00160 3RT2047-1AL20 7.8740.05030 3RH2911-1HA20 7.8740.05160 3RT2946-1CD00 --- --- ---
	Siemens	3RA2933-3FA00	3RA2933-3FA00	---	---	---
Contactor Auxiliary switch Interference suppressor star bridge	-Q3 . . .	7.8740.00100 3RT2035-1AL20 7.8740.05120 3RT2936-1CD00 7.3140.01170	7.8740.00100 3RT2035-1AL20 7.8740.05120 3RT2936-1CD00 7.3140.01170	7.8740.00110 3RT2036-1AL20 7.8740.05120 3RT2936-1CD00 7.3140.01170	7.8740.00140 3RT2045-1AL20 7.8740.05160 3RT2946-1CD00 7.3140.00940	7.8740.00140 3RT2045-1AL20 7.8740.05160 3RT2946-1CD00 7.3140.00940
	Siemens	3RT1936-4BA31	3RT1936-4BA31	3RT1936-4BA31	3RT1946-4BA31	3RT1946-4BA31
motor cable	-W19.1/19.2	4G35 mm² 500 V - 70°C	4G35 mm² 500 V - 70°C	4G50 mm² 500 V - 70°C	4G50 mm² 500 V - 70°C	4G50 mm² 500 V - 70°C
connection	-W11 -W13 -W14	50 mm2 Phase rail Phase rail 500 V - 70°C	50 mm2 Phase rail Phase rail 500 V - 70°C	35 mm2 35 mm2 16 mm2 500 V - 70°C	35 mm2 35 mm2 16 mm2 500 V - 70°C	35 mm2 35 mm2 16 mm2 500 V - 70°C
supply terminals	-X0: U1/V1/W1/PE	3x 894385.0 3x 894385.00010 4x 894385.00040 Wago 25-95 mm²	3x 894385.0 3x 894385.00010 4x 894385.00040 Wago 25-95 mm²	6x 894385.0 3x 894385.00030 3x 894385.00040 Wago 25-95 mm²	6x 894385.0 3x 894385.00030 3x 894385.00040 Wago 25-95 mm²	6x 894385.0 3x 894385.00030 3x 894385.00040 Wago 25-95 mm²
	Handling	fig. 3, Sht. 11	fig. 3, Sht. 11	fig. 3, Sht. 11	fig. 3, Sht. 11	fig. 3, Sht. 11
	Torque	---	---	---	---	---
	Stripped length X	36 mm	36 mm	36 mm	36 mm	36 mm
PE-rail	-X0:PE	---	---	832489.00010	832489.00010	832489.00010
	Torque	---	---	15Nm	15Nm	15Nm
	Stripped length X	---	---	25 mm+ Conductor crimp pins	25 mm+ Conductor crimp pins	25 mm+ Conductor crimp pins
supply	-connection	fig. 2, Sht. 12	fig. 2, Sht. 12	fig. 3, Sht. 13	fig. 3, Sht. 13	fig. 3, Sht. 13

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UXB.STC-03020.05
Equipment parts list
Blower STC+SC2
performance-related components
KAESER KOMPRESSOREN

	Date	Name
c		
b	Drawn 20.06.2018	M.Zeeh
a	Released	M.Zeeh
C Change	Date	Name

model	performance-related components 90 kW FB-C	90 kW FB-S	110 kW FB-C	110 kW FB-S	132 kW FB-C
machine power supply	400 V ±10 %, 50 Hz	400 V ±10 %, 50 Hz	400 V ±10 %, 50 Hz	400 V ±10 %, 50 Hz	400 V ±10 %, 50 Hz
Overload protection -B21	7.6873.00240 3RB2056-1FW2 50-200 A / S6	7.6873.00240 3RB2056-1FW2 50-200 A / S6	7.6873.00240 3RB2056-1FW2 50-200 A / S6	7.6873.00240 3RB2056-1FW2 50-200 A / S6	7.6873.00240 3RB2056-1FW2 50-200 A / S6
Siemens	setting: 104,2 A	setting: 100,9 A	setting: 127,5 A	setting: 122,8 A	setting: 152,7 A
Overload protection switch -F4	7.8237.00110 3RV2011-0GA20 0,45-0,63 A setting: 0,49 A	7.8237.00110 3RV2011-0GA20 0,45-0,63 A setting: 0,63 A	7.8237.00110 3RV2011-0GA20 0,45-0,63 A setting: 0,49 A	7.8237.00110 3RV2011-0GA20 0,45-0,63 A setting: 0,63 A	7.8237.00110 3RV2011-0GA20 0,45-0,63 A setting: 0,49 A
Auxiliary switch .	7.8237.00250 3RV2901-2E	7.8237.00250 3RV2901-2E	7.8237.00250 3RV2901-2E	7.8237.00250 3RV2901-2E	7.8237.00250 3RV2901-2E
Connecting block .	7.8237.00030	7.8237.00030	7.8237.00030	7.8237.00030	7.8237.00030
Siemens	3RV2917-5A	3RV2917-5A	3RV2917-5A	3RV2917-5A	3RV2917-5A
Overload protection switch -F11	7.8237.00220 3RV2011-1DA20 2,2-3,2 A	7.8237.00220 3RV2011-1DA20 2,2-3,2 A	7.8237.00220 3RV2011-1DA20 2,2-3,2 A	7.8237.00220 3RV2011-1DA20 2,2-3,2 A	7.8237.00220 3RV2011-1DA20 2,2-3,2 A
Siemens	setting: 2,5 A	setting: 2,5 A	setting: 2,5 A	setting: 2,5 A	setting: 2,5 A
Blower Motor -M1	894723.1	894722.12010	895025.1	894724.1	894726.1
Siemens	400 V-D/50 Hz 157 A, 1500U	400 V-D/50 Hz 154 A, 3000U	400 V-D/50 Hz 192 A, 1500U	400 V-D/50 Hz 185 A, 3000U	400 V-D/50 Hz 230 A, 1500U
Fan motor -M4	892997.0	895426.0	892997.0	895426.0	892997.0
Soundproof enclosure .	W2D300 - 210W	W4D420 - 160W	W2D300 - 210W	W4D420 - 160W	W2D300 - 210W
ebm	400 V-Y/50 Hz 0,43 A	400 V-Y/50 Hz 0,55 A	400 V-Y/50 Hz 0,43 A	400 V-Y/50 Hz 0,55 A	400 V-Y/50 Hz 0,43 A
Contactor -Q1 / -Q2	7.3140.01910 3RT1054-6AP36	7.3140.01910 3RT1054-6AP36	7.3140.01480 3RT1055-6AP36	7.3140.01480 3RT1055-6AP36	7.3140.01480 3RT1055-6AP36
Auxiliary switch .	7.3140.01690 3RH1921-1CA10	7.3140.01690 3RH1921-1CA10	7.3140.01690 3RH1921-1CA10	7.3140.01690 3RH1921-1CA10	7.3140.01690 3RH1921-1CA10
Auxiliary switch .	7.3140.02030 3RH1921-1CA01	7.3140.02030 3RH1921-1CA01	7.3140.02030 3RH1921-1CA01	7.3140.02030 3RH1921-1CA01	7.3140.02030 3RH1921-1CA01
Interference suppressor .	7.3140.01490	7.3140.01490	7.3140.01490	7.3140.01490	7.3140.01490
Siemens	3RT1956-1CD00	3RT1956-1CD00	3RT1956-1CD00	3RT1956-1CD00	3RT1956-1CD00
Contactor -Q3	7.8740.00140 3RT2045-1AL20	7.8740.00140 3RT2045-1AL20	7.8740.00150 3RT2046-1AL20	7.8740.00150 3RT2046-1AL20	7.8740.00140 3RT2045-1AL20
Auxiliary switch .	--- ---	--- ---	--- ---	--- ---	--- ---
Auxiliary switch .	--- ---	--- ---	--- ---	--- ---	--- ---
Interference suppressor .	7.8740.05160 3RT2946-1CD00	7.8740.05160 3RT2946-1CD00	7.8740.05160 3RT2946-1CD00	7.8740.05160 3RT2946-1CD00	7.8740.05160 3RT2946-1CD00
star bridge .	7.3140.00940	7.3140.00940	7.3140.00940	7.3140.00940	7.3140.00940
Siemens	3RT1946-4BA31	3RT1946-4BA31	3RT1946-4BA31	3RT1946-4BA31	3RT1946-4BA31
motor cable -W19.1/19.2	4G70 mm² 500 V - 70°C	4G70 mm² 500 V - 70°C	4G70 mm² 500 V - 70°C	4G70 mm² 500 V - 70°C	4G95 mm² 500 V - 70°C
connection -W11	50 mm2	50 mm2	70 mm2	70 mm2	95 mm2
-W13	50 mm2	50 mm2	70 mm2	70 mm2	95 mm2
-W14	25 mm2 500 V - 70°C	25 mm2 500 V - 70°C	35 mm2 500 V - 70°C	35 mm2 500 V - 70°C	35 mm2 500 V - 70°C
supply terminals -X0:	6x 894385.0	6x 894385.0	6x 894385.0	6x 894385.0	6x 895545.0
U1/V1/W1	3x 894385.00030 3x 894385.00040 Wago 25-95 mm²	3x 894385.00030 3x 894385.00040 Wago 25-95 mm²	3x 894385.00030 3x 894385.00040 Wago 25-95 mm²	3x 894385.00030 3x 894385.00040 Wago 25-95 mm²	3x 895545.00030 3x 895545.00040 Wago 50-185 mm²
Handling	fig. 3, Sht. 11	fig. 3, Sht. 11	fig. 3, Sht. 11	fig. 3, Sht. 11	fig. 3, Sht. 11
Stripped length X	36 mm	36 mm	36 mm	36 mm	45 mm
PE-rail -X0:PE	832489.00010	832489.00010	832489.00010	832489.00010	832489.00010
Torque	15Nm	15Nm	15Nm	15Nm	15Nm
Stripped length X	25 mm+ Conductor crimp pins	25 mm+ Conductor crimp pins	25 mm+ Conductor crimp pins	25 mm+ Conductor crimp pins	27 mm+ Conductor crimp pins
supply -connection	fig. 3, Sht. 13	fig. 3, Sht. 13	fig. 3, Sht. 13	fig. 3, Sht. 13	fig. 3, Sht. 13

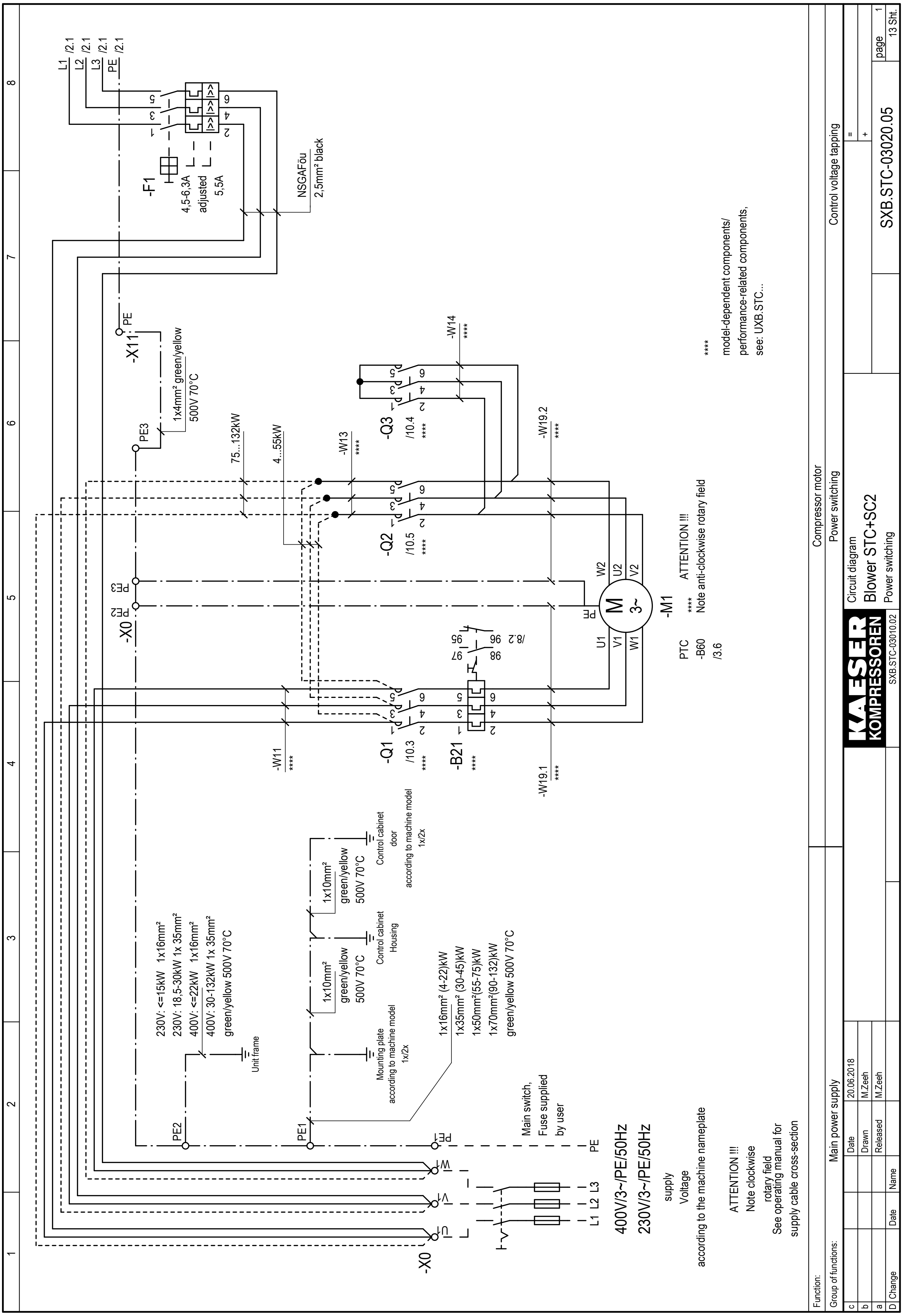
page 15 / 15 Sht.

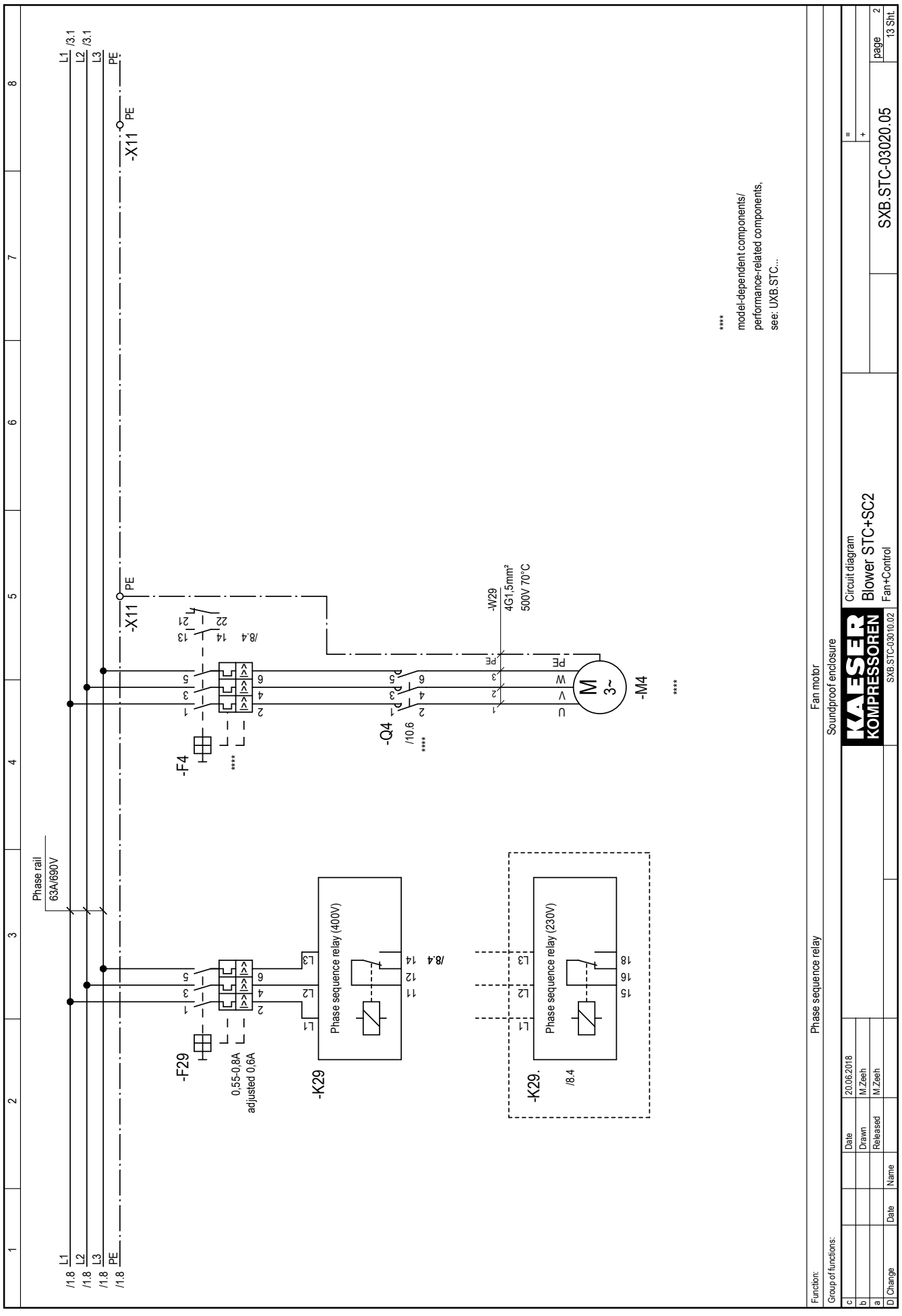
UXB.STC-03020.05

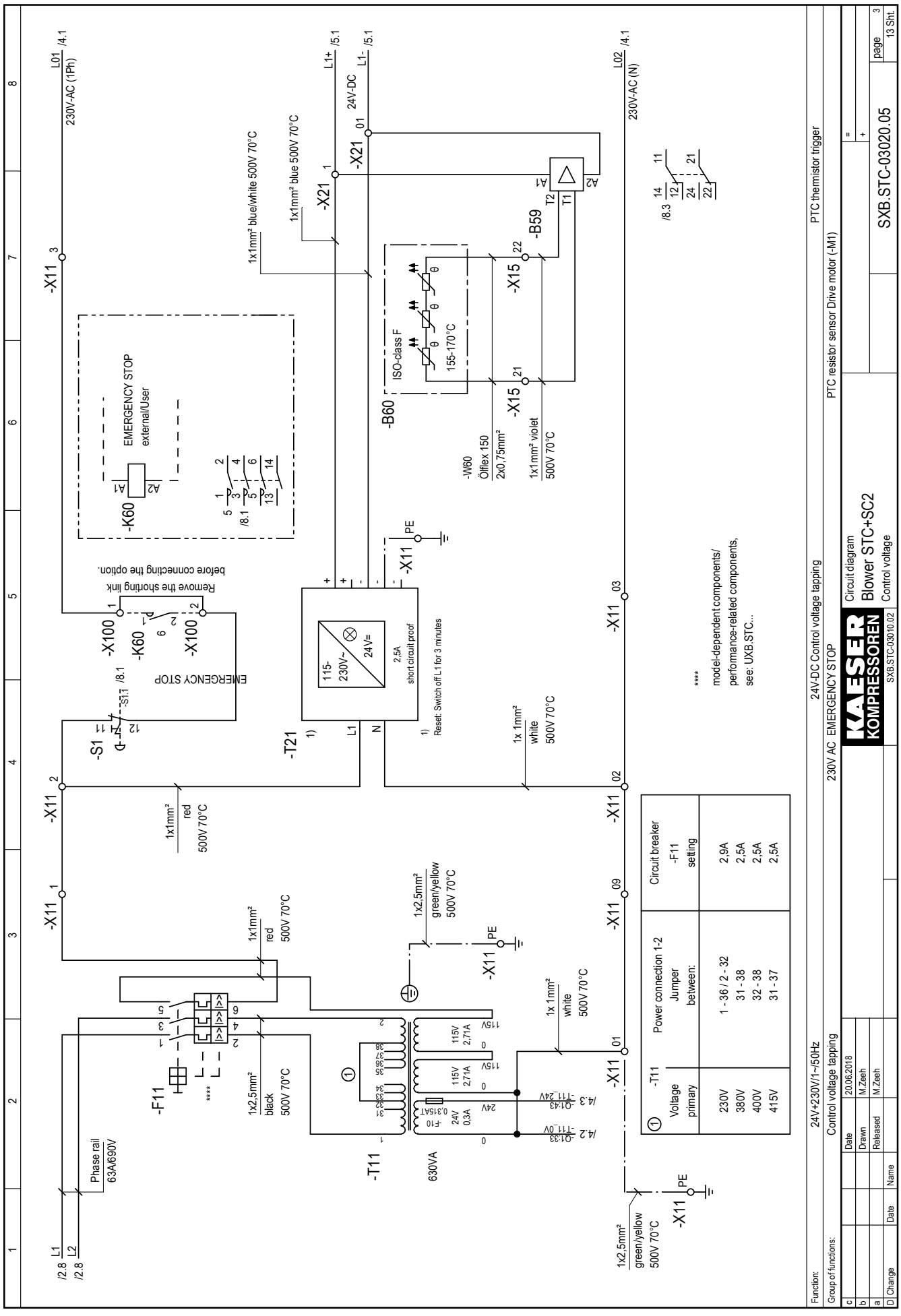
Equipment parts list
Blower STC+SC2
performance-related components

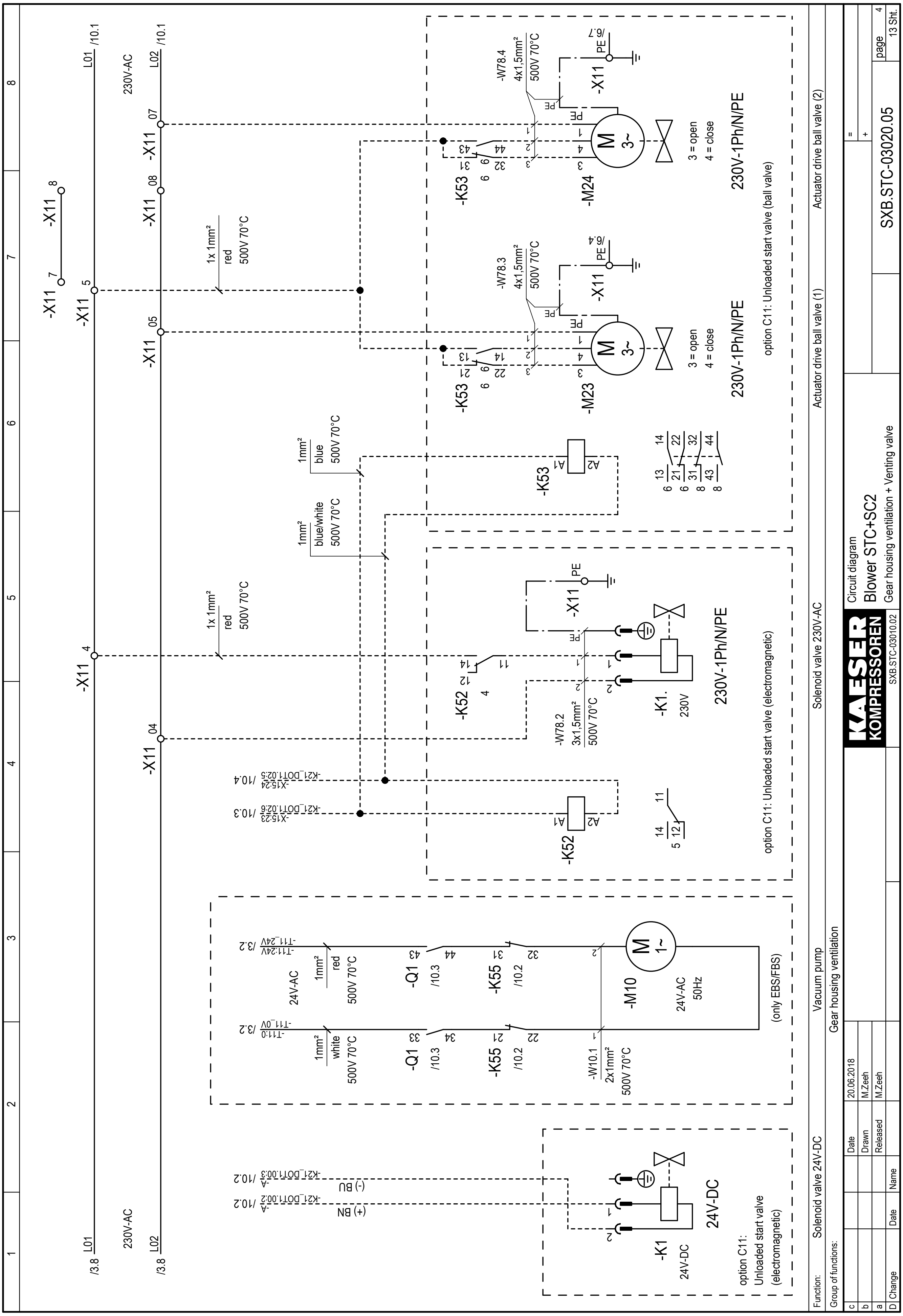
KAESER KOMPRESSOREN

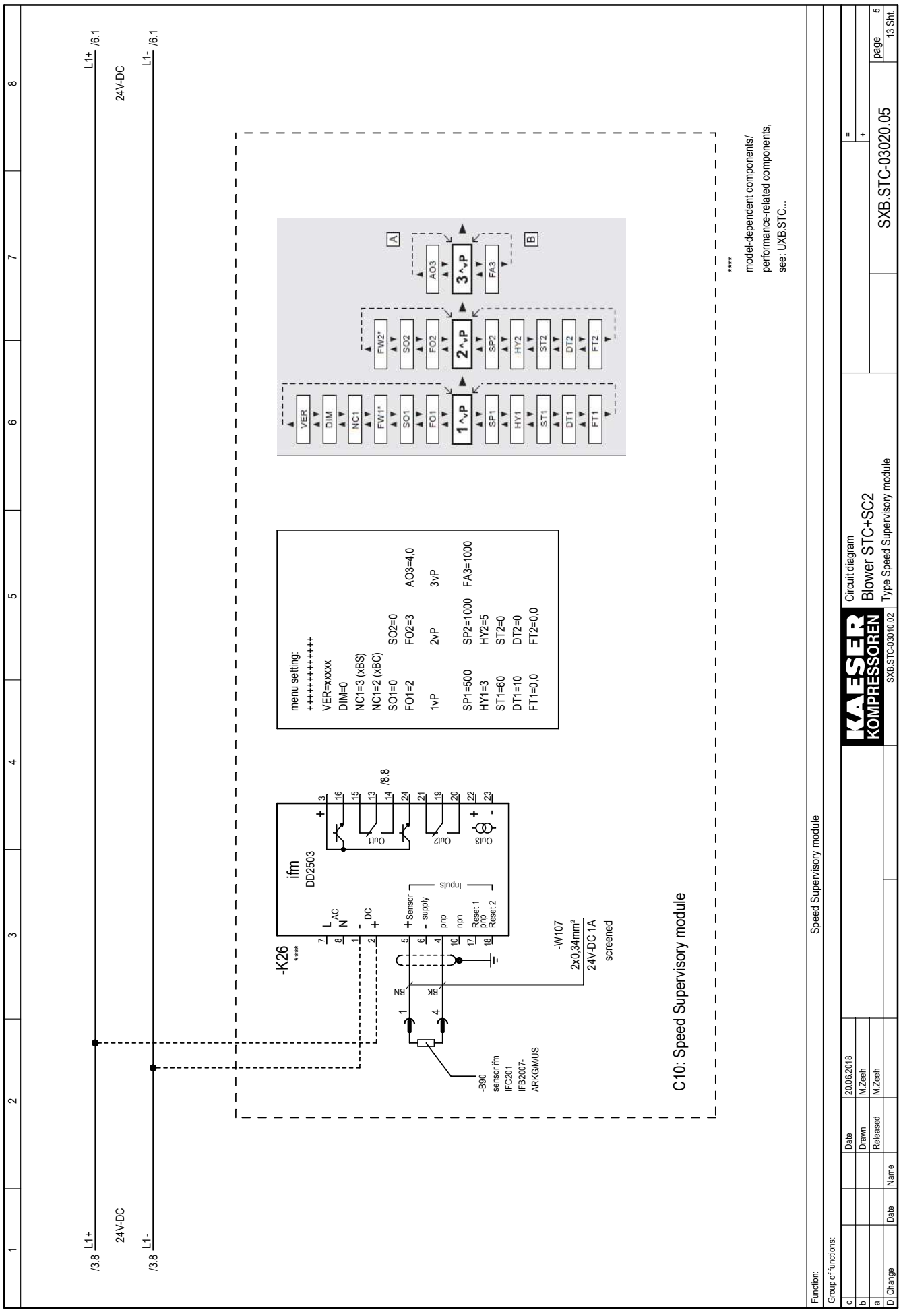
	Date	Name
Drawn	20.06.2018	M.Zeeh
Released		M.Zeeh
Change	Date	Name
a		
b		
c		

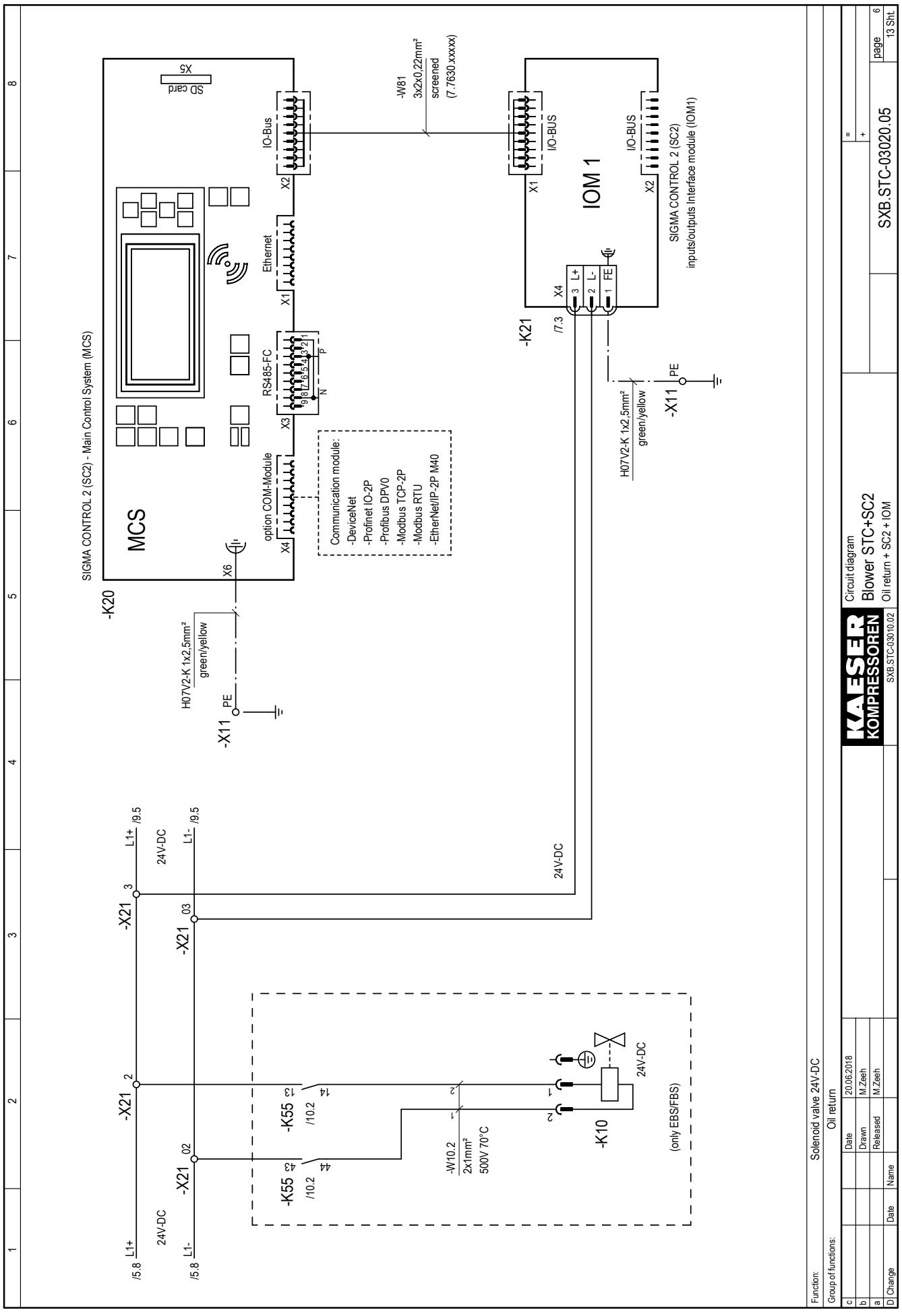

-X0
400V/3~/PE/50Hz
230V/3~/PE/50Hz
supply
Voltage
according to the machine nameplate
ATTENTION !!!
Note clockwise
rotary field
See operating manual for
supply cable cross-section
Main switch,
Fuse supplied
by user
PE1
PE2
PE3
230V: <=15kW 1x16mm²
230V: 18,5-30kW 1x 35mm²
400V: <=22kW 1x16mm²
400V: 30-132kW 1x 35mm²
green/yellow 500V 70°C
Unit frame
1x10mm²
green/yellow
500V 70°C
Mounting plate
according to machine model
1x/2x
Control cabinet
Housing
Control cabinet
door
according to machine model
1x/2x
1x16mm² (4-22)kW
1x35mm² (30-45)kW
1x50mm²(55-75)kW
1x70mm²(90-132)kW
green/yellow 500V 70°C
-W11
-Q1
/10.3
-B21
-W19.1
-X0
75...132kW
4...55kW
-W13
-Q2
/10.5
-Q3
/10.4
-W14
-W19.2
-M1
M
3~
PTC
-B60
/3.6
ATTENTION !!!
Note anti-clockwise rotary field
-X11
1x4mm² green/yellow
500V 70°C
-F1
4,5-6,3A
adjusted
5,5A
NSGAFöu
2,5mm² black
model-dependent components/
performance-related components,
see: UXB.STC...
Function:
Group of functions:
Main power supply
Compressor motor
Power switching
Control voltage tapping
Date 20.06.2018
Drawn M.Zeeh
Released M.Zeeh
Change
Circuit diagram
Blower STC+SC2
Power switching
SXB.STC-03010.02
SXB.STC-03020.05
page 1
13 Sht.

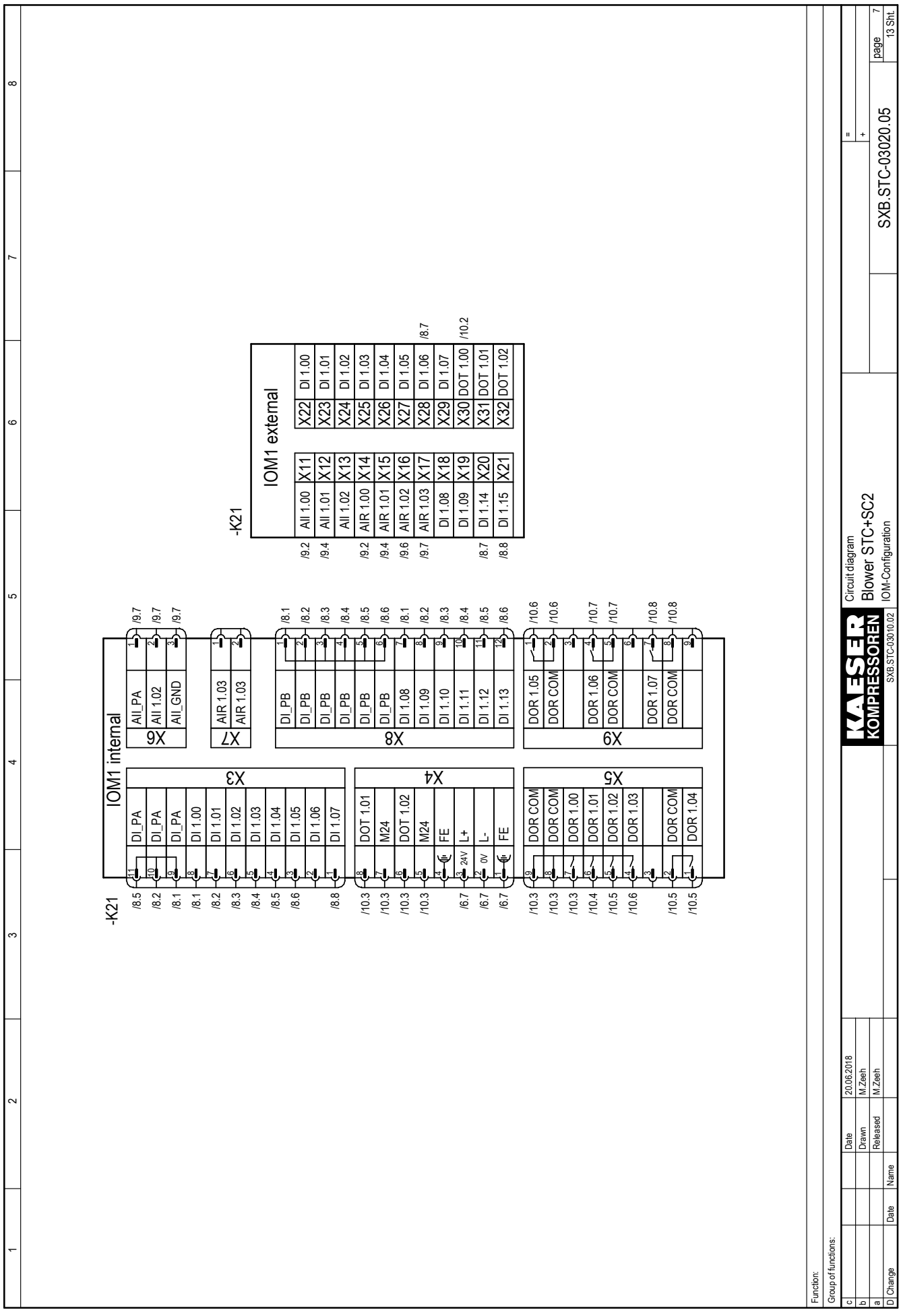

L1 /3.1
L2 /3.1
L3
PE
-X11 PE
Phase rail
63A/690V
-F29
0,55-0,8A
adjusted 0,6A
-K29
Phase sequence relay (400V)
/8.4
-K29.
Phase sequence relay (230V)
/8.4
-F4
-Q4
/10.6
-W29
4G1.5mm²
500V 70°C
-M4
M
3~
U
V
W
PE
****
model-dependent components/
performance-related components,
see: UXB.STC...
Function:
Phase sequence relay
Fan motor
Group of functions:
Soundproof enclosure
Date
Drawn
Released
Name
20.06.2018
M.Zeeh
M.Zeeh
Change
KAESER KOMPRESSOREN
SXB.STC-03010.02
Circuit diagram
Blower STC+SC2
Fan+Control
SXB.STC-03020.05
page 2
13 Sht.

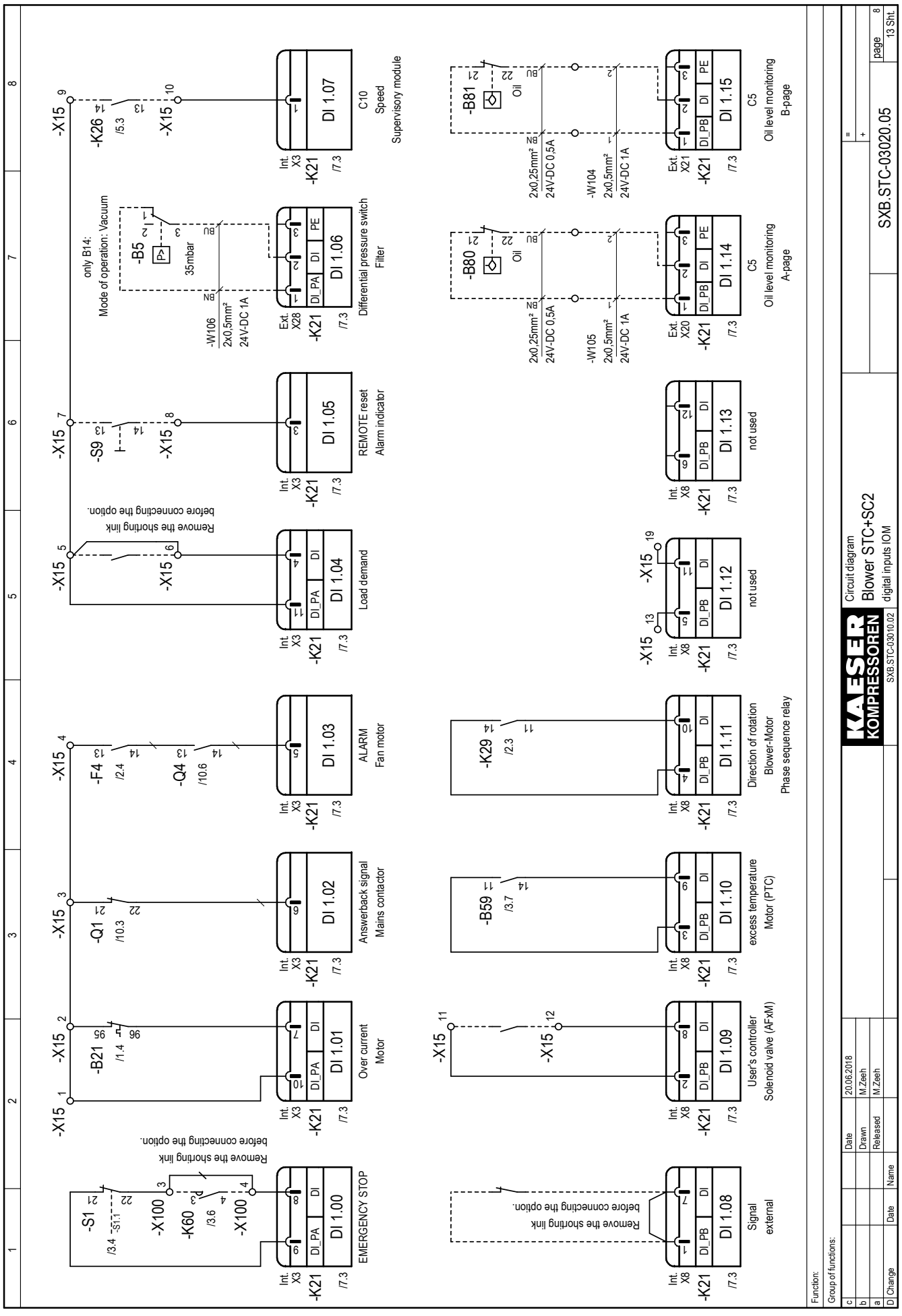

L01 /4.1
230V-AC (1Ph)
L02 /4.1
230V-AC (N)
L1+ /5.1
L1- /5.1
24V-DC
1x1mm² blue/white 500V 70°C
1x1mm² blue 500V 70°C
-X21
-X11
-X15
-B59
-B60
ISO-class F
155-170°C
-W60
Ölflex 150
2x0,75mm²
1x1mm² violet
500V 70°C
EMERGENCY STOP
external/User
-K60
Remove the shorting link
before connecting the option.
-X100
EMERGENCY STOP
-S1
/8.1
-T21
115-
230V~
24V=
2,5A
short circuit proof
1) Reset: Switch off L1 for 3 minutes
PE
1x 1mm²
white
500V 70°C
1x1mm²
red
500V 70°C
1x2,5mm²
green/yellow
500V 70°C
1x2,5mm²
black
500V 70°C
-F11
-T11
630VA
0,315AT
-F10
24V
0,3A
115V
2,71A
/4.3 -Q143 -T11_24V
/4.2 -Q133 -T11_0V
Phase rail
63A/690V
/2.8 L1
/2.8 L2
1x2,5mm²
green/yellow
500V 70°C
**** model-dependent components/ performance-related components, see: UXB.STC...
PTC thermistor trigger
PTC resistor sensor Drive motor (-M1)
/8.3
Power connection 1-2
Jumper between:
Circuit breaker -F11 setting
Voltage primary
230V
380V
400V
415V
1 - 36 / 2 - 32
31 - 38
32 - 38
31 - 37
2,9A
2,5A
2,5A
2,5A
Function: 24V+230V/1~/50Hz 24V-DC Control voltage tapping 230V AC EMERGENCY STOP
Group of functions: Control voltage tapping
KAESER KOMPRESSOREN SXB.STC-03010.02
Circuit diagram
Blower STC+SC2
Control voltage
SXB.STC-03020.05
page 3
13 Sht.
Date 20.06.2018
Drawn M.Zeeh
Released M.Zeeh
Name
Change


Function: Solenoid valve 24V-DC
Vacuum pump
Solenoid valve 230V-AC
Actuator drive ball valve (1)
Actuator drive ball valve (2)
Group of functions: Gear housing ventilation
option C11: Unloaded start valve (electromagnetic)
option C11: Unloaded start valve (ball valve)
230V-1Ph/N/PE
24V-DC
(only EBS/FBS)
3 = open
4 = close
Circuit diagram
Blower STC+SC2
Gear housing ventilation + Venting valve
SXB.STC-03020.05
SXB.STC-03010.02
Date 20.06.2018
Drawn M.Zeeh
Released M.Zeeh
page 4
13 Sht.


L1+ /6.1
24V-DC
L1- /6.1
L1+ /3.8
24V-DC
L1- /3.8
C10: Speed Supervisory module
-K26 ****
ifm
DD2503
menu setting:
++++++++++++
VER=xxxxx
DIM=0
NC1=3 (xBS)
NC1=2 (xBC)
SO1=0 SO2=0
FO1=2 FO2=3 AO3=4,0
1vP 2vP 3vP
SP1=500 SP2=1000 FA3=1000
HY1=3 HY2=5
ST1=60 ST2=0
DT1=10 DT2=0
FT1=0,0 FT2=0,0
-W107
2x0,34mm²
24V-DC 1A
screened
-B90
sensor ifm
IFC201
IFB2007-
ARKG/MUS
BN
BK
**** model-dependent components/ performance-related components, see: UXB.STC...
Speed Supervisory module
Function:
Group of functions:
KAESER KOMPRESSOREN
Circuit diagram
Blower STC+SC2
Type Speed Supervisory module
SXB.STC-03010.02
SXB.STC-03020.05
page 5
13 Sht.
Change Date Name
Date 20.06.2018
Drawn M.Zeeh
Released M.Zeeh


SIGMA CONTROL 2 (SC2) - Main Control System (MCS)
MCS
-K20
SD card
X5
IO-Bus
X2
Ethernet
X1
RS485-FC
X3
option COM-Module
X4
X6
-W81
3x2x0,22mm²
screened
(7.7630.xxxxx)
Communication module:
-DeviceNet
-Profinet IO-2P
-Profibus DPV0
-Modbus TCP-2P
-Modbus RTU
-EtherNet/IP-2P M40
H07V2-K 1x2,5mm²
green/yellow
PE
-X11
IOM 1
I/O-BUS
X1
X2
X4
L+
L-
FE
-K21
/7.3
SIGMA CONTROL 2 (SC2)
inputs/outputs Interface module (IOM1)
24V-DC
-X21
L1+
L1-
/9.5
/5.8
-K55
/10.2
-W10.2
2x1mm²
500V 70°C
-K10
(only EBS/FBS)
Function:
Solenoid valve 24V-DC
Group of functions:
Oil return
Circuit diagram
Blower STC+SC2
Oil return + SC2 + IOM
SXB.STC-03010.02
SXB.STC-03020.05
page 6
13 Sht.
Change
Date
Name
Drawn
Released
20.06.2018
M.Zeeh


IOM1 external
-K21
X11 AII 1.00
X12 AII 1.01
X13 AII 1.02
X14 AIR 1.00
X15 AIR 1.01
X16 AIR 1.02
X17 AIR 1.03
X18 DI 1.08
X19 DI 1.09
X20 DI 1.14
X21 DI 1.15
X22 DI 1.00
X23 DI 1.01
X24 DI 1.02
X25 DI 1.03
X26 DI 1.04
X27 DI 1.05
X28 DI 1.06
X29 DI 1.07
X30 DOT 1.00
X31 DOT 1.01
X32 DOT 1.02
IOM1 internal
X6 AII_PA AII 1.02 AII_GND
X7 AIR 1.03 AIR 1.03
X8 DI_PB DI 1.08 DI 1.09 DI 1.10 DI 1.11 DI 1.12 DI 1.13
X9 DOR 1.05 DOR COM DOR 1.06 DOR COM DOR 1.07 DOR COM
X3 DI_PA DI_PA DI_PA DI 1.00 DI 1.01 DI 1.02 DI 1.03 DI 1.04 DI 1.05 DI 1.06 DI 1.07
X4 DOT 1.01 M24 DOT 1.02 M24 FE L+ L- FE
X5 DOR COM DOR COM DOR 1.00 DOR 1.01 DOR 1.02 DOR 1.03 DOR COM DOR 1.04
KAESER KOMPRESSOREN
Circuit diagram
Blower STC+SC2
IOM-Configuration
SXB.STC-03010.02
SXB.STC-03020.05
page 7
13 Sht.
Function:
Group of functions:
Change Date Name
Released M.Zeeh 20.06.2018
Drawn M.Zeeh
Date


-X15
-S1
-X100
-K60
-B21
-Q1
-F4
-Q4
-S9
-B5
-K26
-B80
-B81
-B59
-K29
DI 1.00
EMERGENCY STOP
DI 1.01
Over current Motor
DI 1.02
Answerback signal Mains contactor
DI 1.03
ALARM Fan motor
DI 1.04
Load demand
DI 1.05
REMOTE reset Alarm indicator
DI 1.06
Differential pressure switch Filter
DI 1.07
C10 Speed Supervisory module
DI 1.08
Signal external
DI 1.09
User's controller Solenoid valve (AFxM)
DI 1.10
excess temperature Motor (PTC)
DI 1.11
Direction of rotation Blower-Motor Phase sequence relay
DI 1.12
not used
DI 1.13
not used
DI 1.14
C5 Oil level monitoring A-page
DI 1.15
C5 Oil level monitoring B-page
Remove the shorting link before connecting the option.
only B14: Mode of operation: Vacuum
35mbar
-W106 2x0,5mm² 24V-DC 1A
-W105 2x0,5mm² 24V-DC 1A
-W104 2x0,5mm² 24V-DC 1A
2x0,25mm² 24V-DC 0,5A
Oil
Int. X3
Int. X8
Ext. X28
Ext. X20
Ext. X21
Function:
Group of functions:
Date 20.06.2018
Drawn M.Zeeh
Released M.Zeeh
Name
Change
KAESER KOMPRESSOREN
SXB.STC-03010.02
Circuit diagram
Blower STC+SC2
digital inputs IOM
SXB.STC-03020.05
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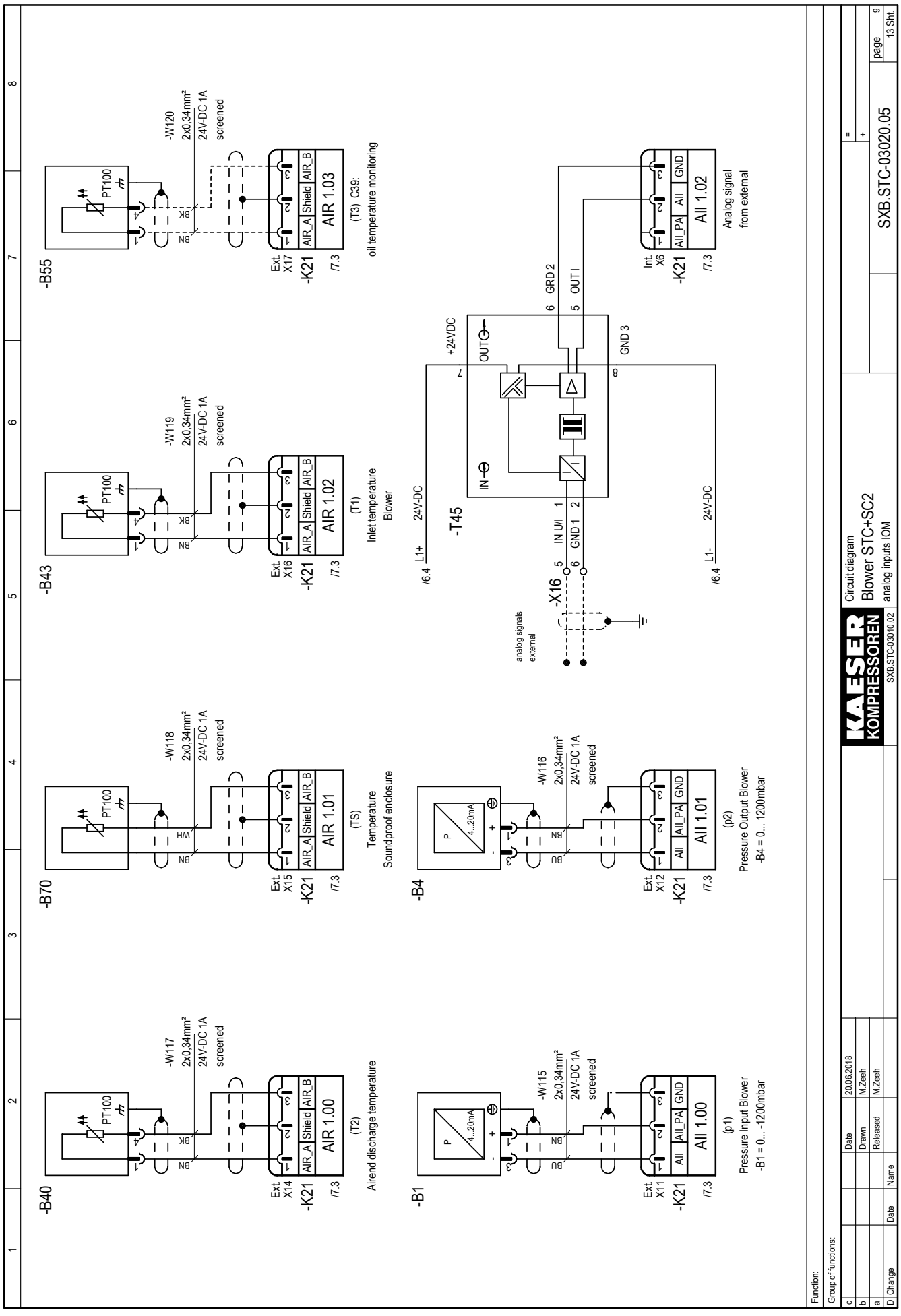
-B40
PT100
-W117
2x0,34mm²
24V-DC 1A
screened
BK
BN
Ext.
X14
-K21
AIR_A
Shield
AIR_B
AIR 1.00
/7.3
(T2)
Airend discharge temperature
-B70
PT100
-W118
2x0,34mm²
24V-DC 1A
screened
WH
BN
Ext.
X15
-K21
AIR_A
Shield
AIR_B
AIR 1.01
/7.3
(TS)
Temperature
Soundproof enclosure
-B43
PT100
-W119
2x0,34mm²
24V-DC 1A
screened
BK
BN
Ext.
X16
-K21
AIR_A
Shield
AIR_B
AIR 1.02
/7.3
(T1)
Inlet temperature
Blower
-B55
PT100
-W120
2x0,34mm²
24V-DC 1A
screened
BK
BN
Ext.
X17
-K21
AIR_A
Shield
AIR_B
AIR 1.03
/7.3
(T3) C39:
oil temperature monitoring
-B1
P
4...20mA
-W115
2x0,34mm²
24V-DC 1A
screened
BU
BN
Ext.
X11
-K21
All
All_PA
GND
All 1.00
/7.3
(p1)
Pressure Input Blower
-B1 = 0... -1200mbar
-B4
P
4...20mA
-W116
2x0,34mm²
24V-DC 1A
screened
BU
BN
Ext.
X12
-K21
All
All_PA
GND
All 1.01
/7.3
(p2)
Pressure Output Blower
-B4 = 0... 1200mbar
-T45
+24VDC
OUT
IN
24V-DC
/6.4 L1+
/6.4 L1-
GND 3
6 GRD 2
5 OUT I
IN U/I 1
GND 1 2
-X16
5
6
analog signals
external
Int.
X6
-K21
All_PA
All
GND
All 1.02
/7.3
Analog signal
from external
Function:
Group of functions:
c
b
a
D Change
Date
Name
Date 20.06.2018
Drawn M.Zeeh
Released M.Zeeh
KAESER KOMPRESSOREN
SXB.STC-03010.02
Circuit diagram
Blower STC+SC2
analog inputs IOM
SXB.STC-03020.05
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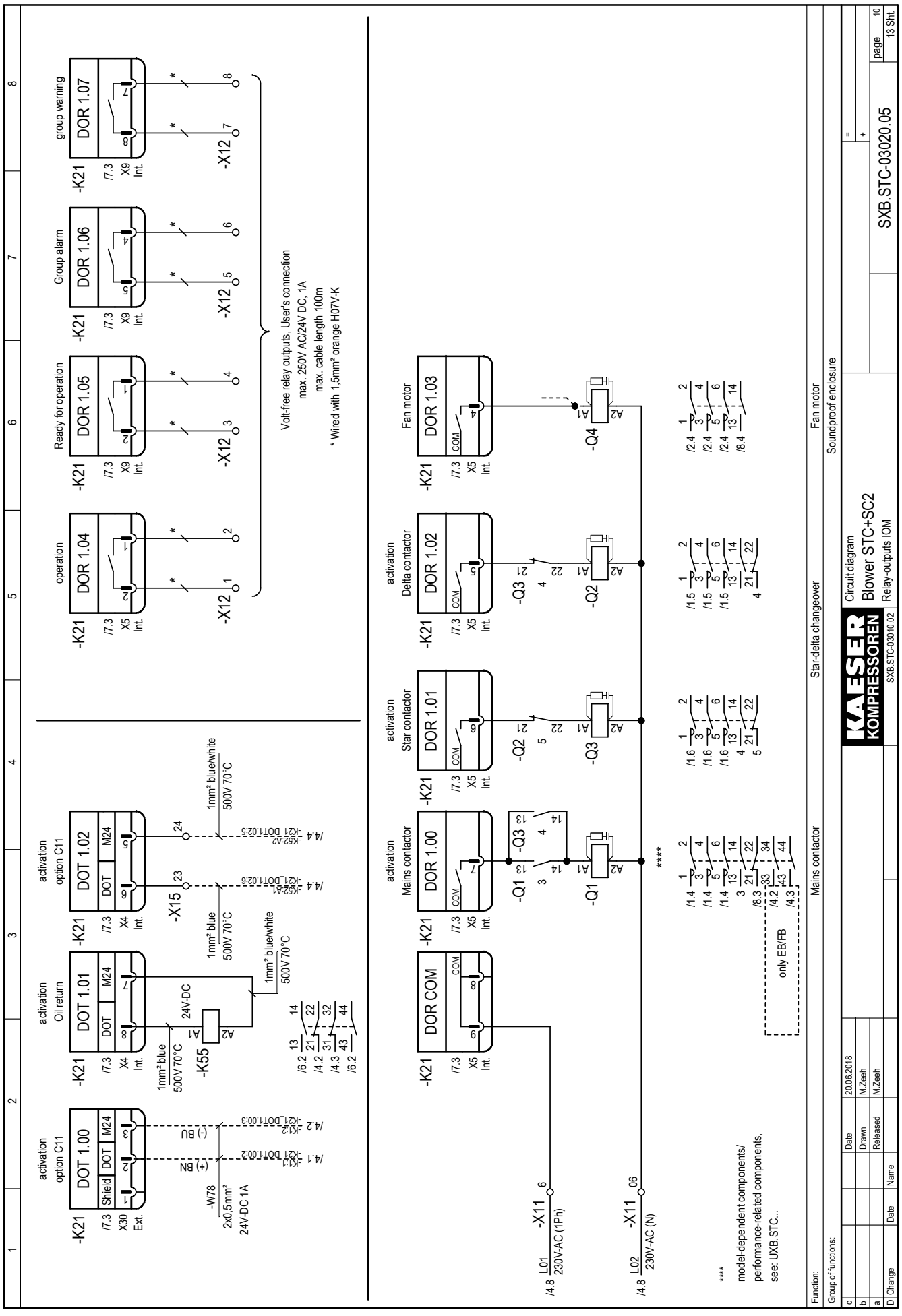
activation option C11
activation Oil return
activation Mains contactor
activation Star contactor
activation Delta contactor
Fan motor
operation
Ready for operation
Group alarm
group warning
Volt-free relay outputs, User's connection
max. 250V AC/24V DC, 1A
max. cable length 100m
* Wired with 1,5mm² orange H07V-K
model-dependent components/
performance-related components,
see: UXB.STC...
only EB/FB
Star-delta changeover
Mains contactor
Fan motor
Soundproof enclosure
Circuit diagram
Blower STC+SC2
Relay-outputs IOM
SXB.STC-03020.05
SXB.STC-03010.02
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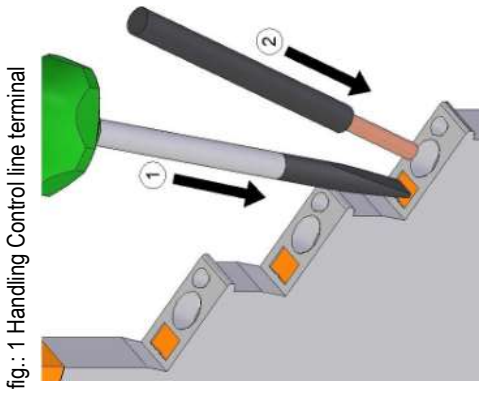


fig.: 1 Handling Control line terminal

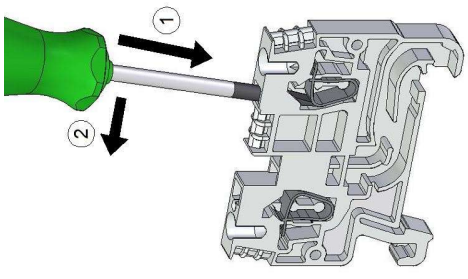
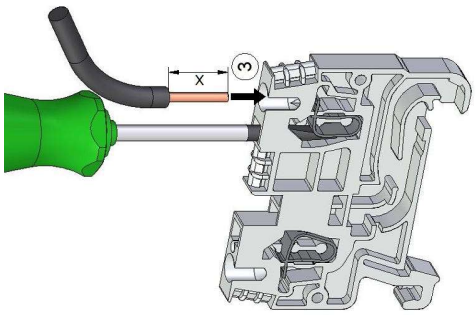
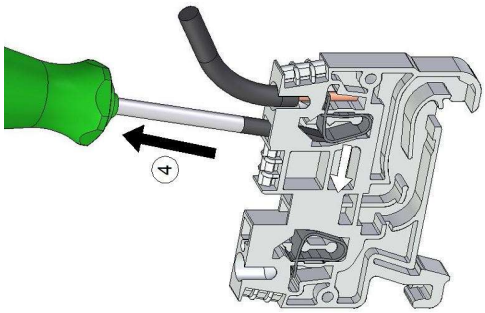


fig.: 2 Handling supply terminals





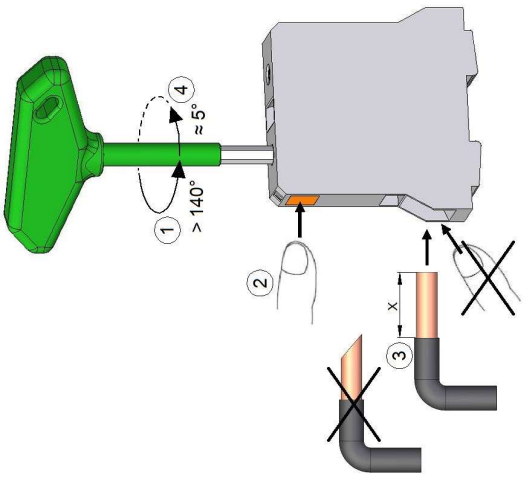


fig.: 3 Handling supply terminals

Function:
Group of functions:

c				
b		Date	20.06.2018	
a		Drawn	M.Zeeh	
D	Change	Released	M.Zeeh	
	Date	Name		

KAESER KOMPRESSOREN SXB.STC-03010.02
Circuit diagram
Blower STC+SC2
Handling Terminals
SXB.STC-03020.05
page 11
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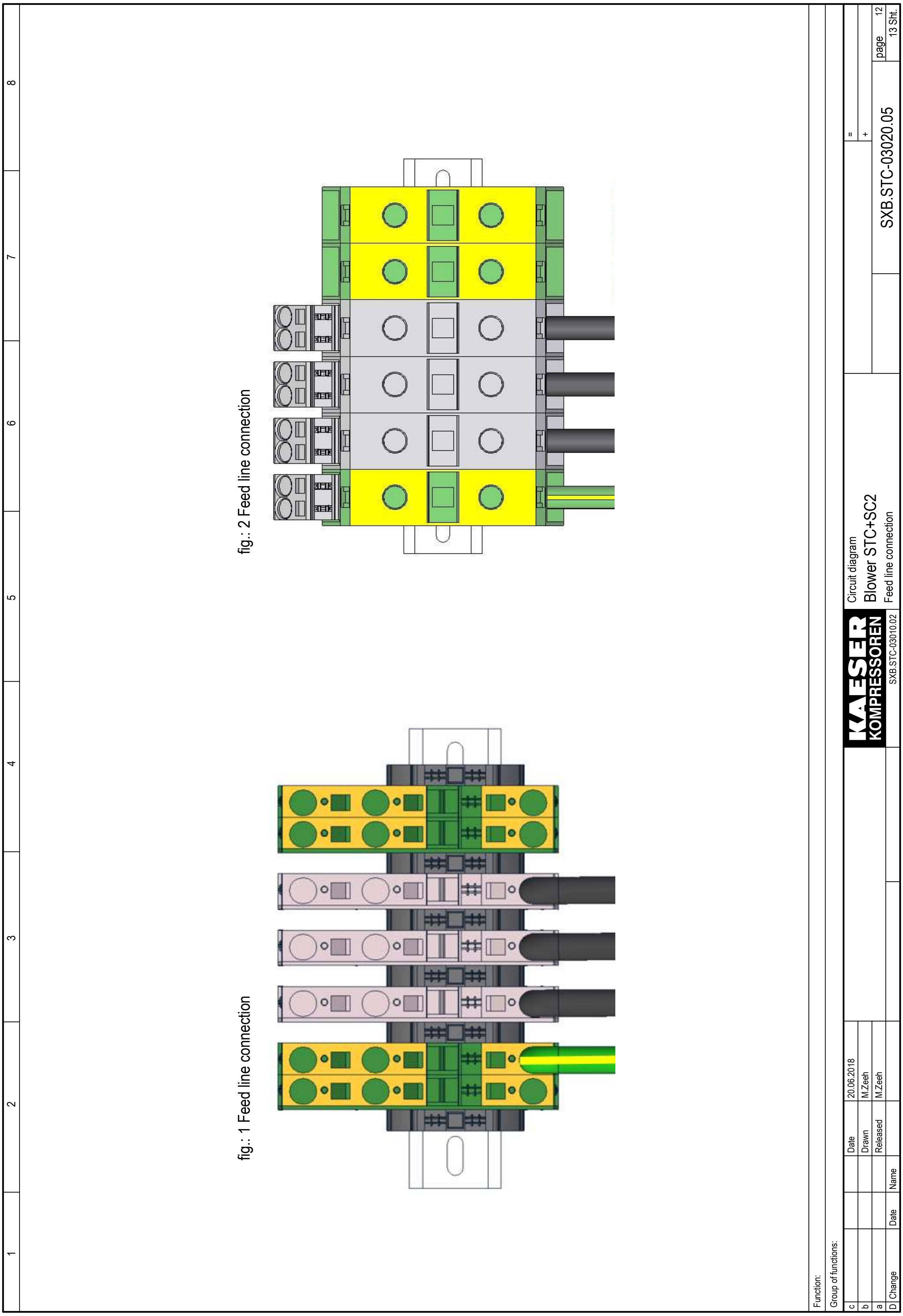


fig.: 1 Feed line connection
fig.: 2 Feed line connection
Circuit diagram
Blower STC+SC2
Feed line connection
KAESER KOMPRESSOREN
SXB.STC-03010.02
SXB.STC-03020.05
page 12
13 Sht.
Date 20.06.2018
Drawn M.Zeeh
Released M.Zeeh
Function:
Group of functions:
D Change Date Name

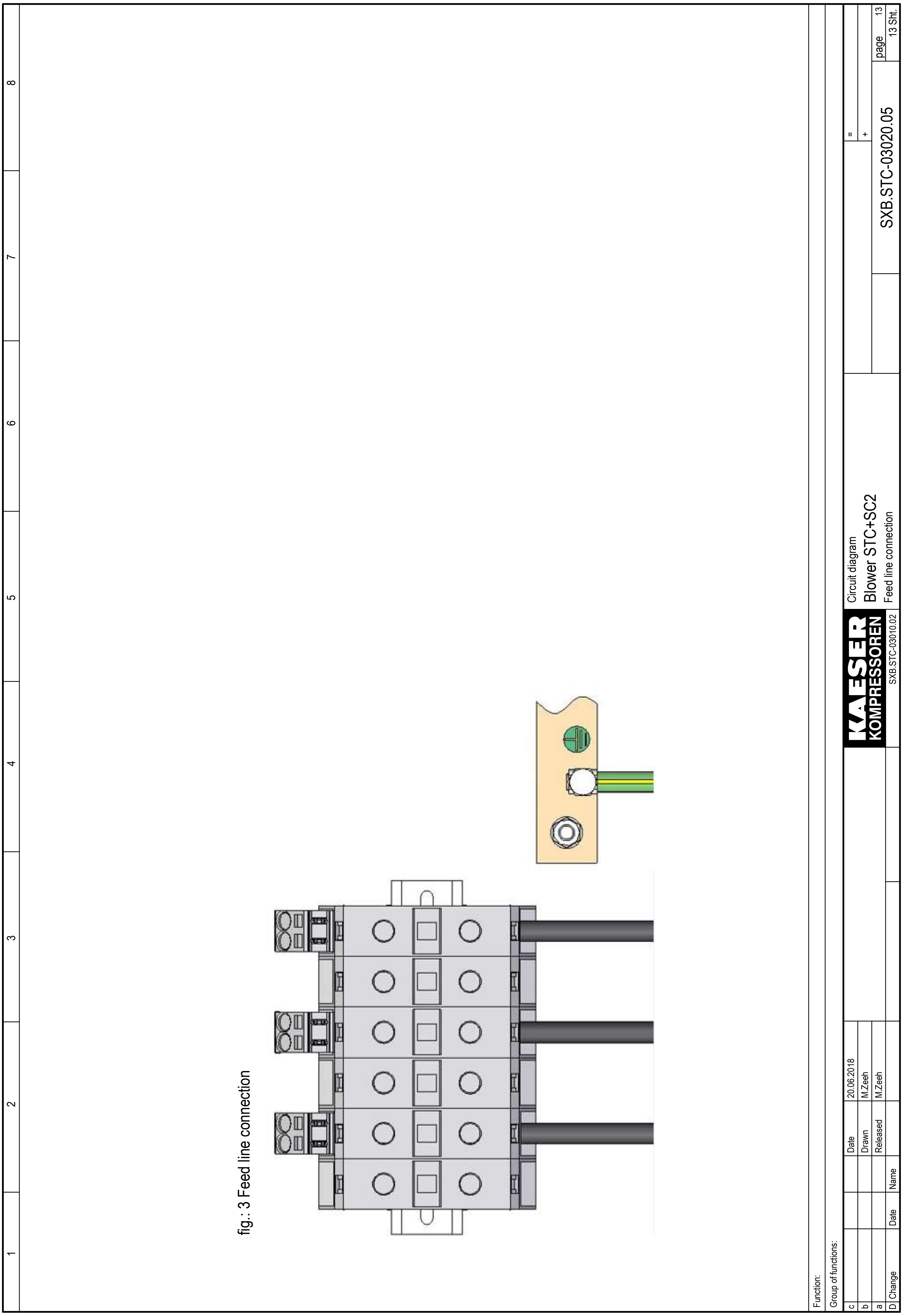
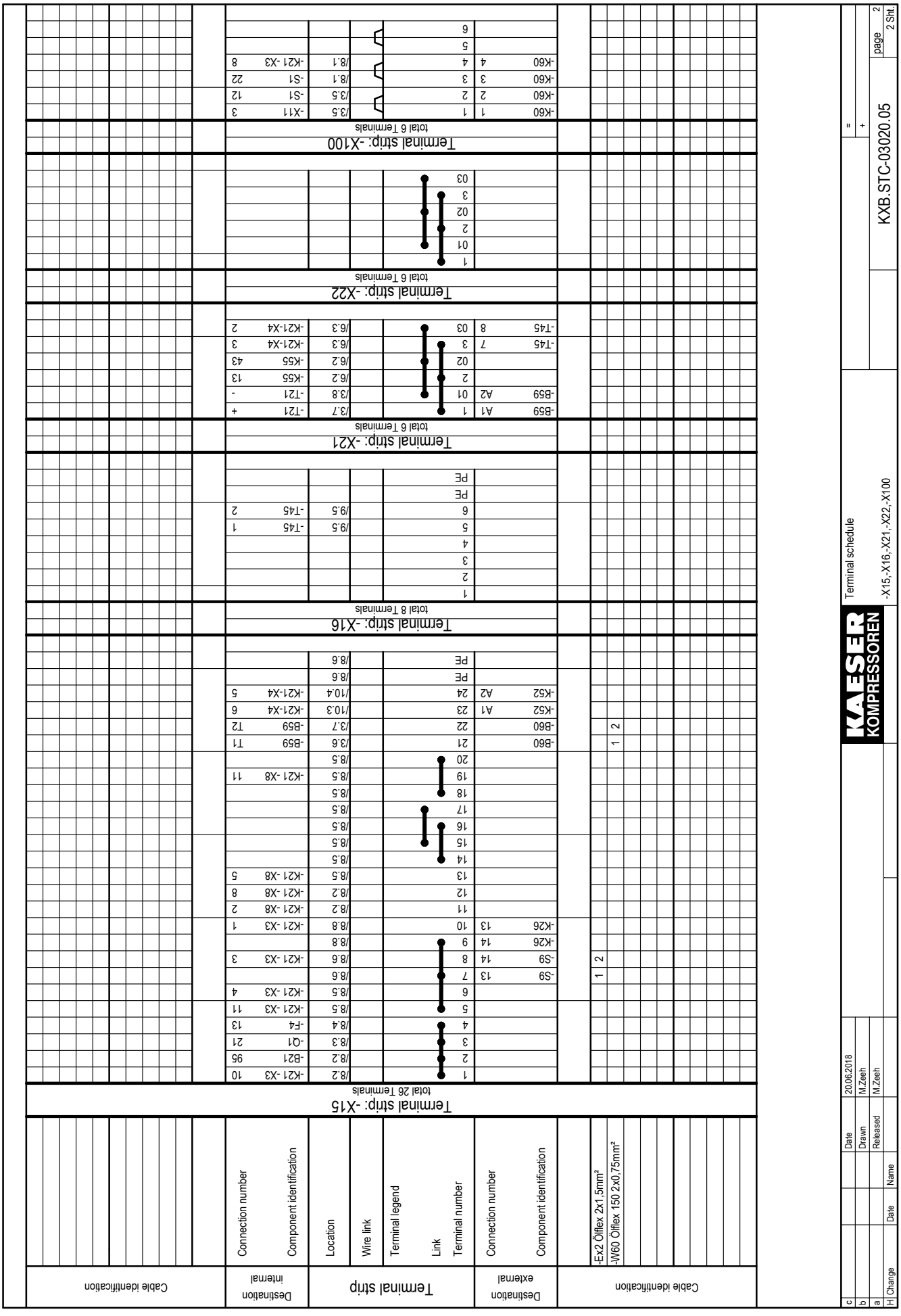
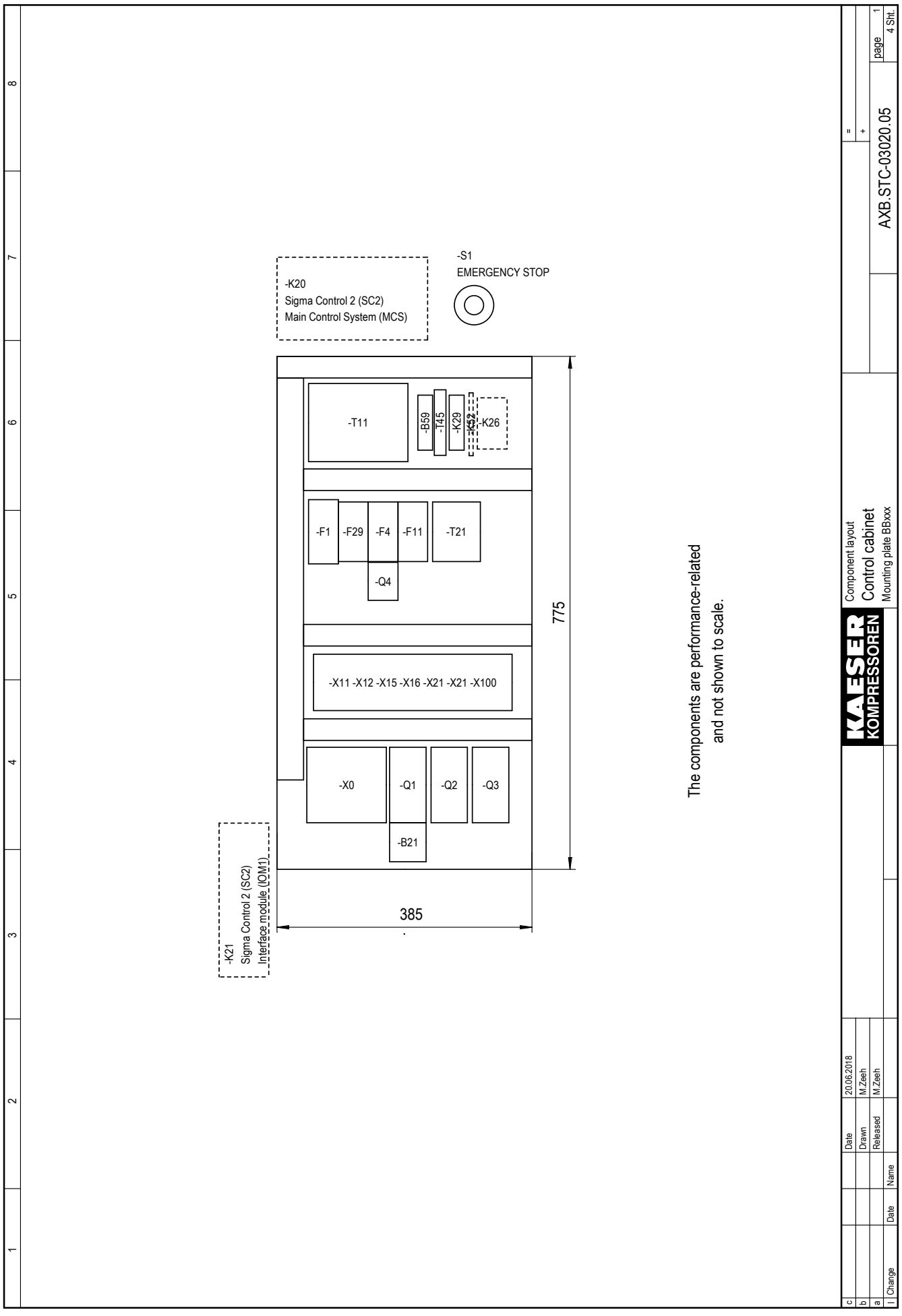
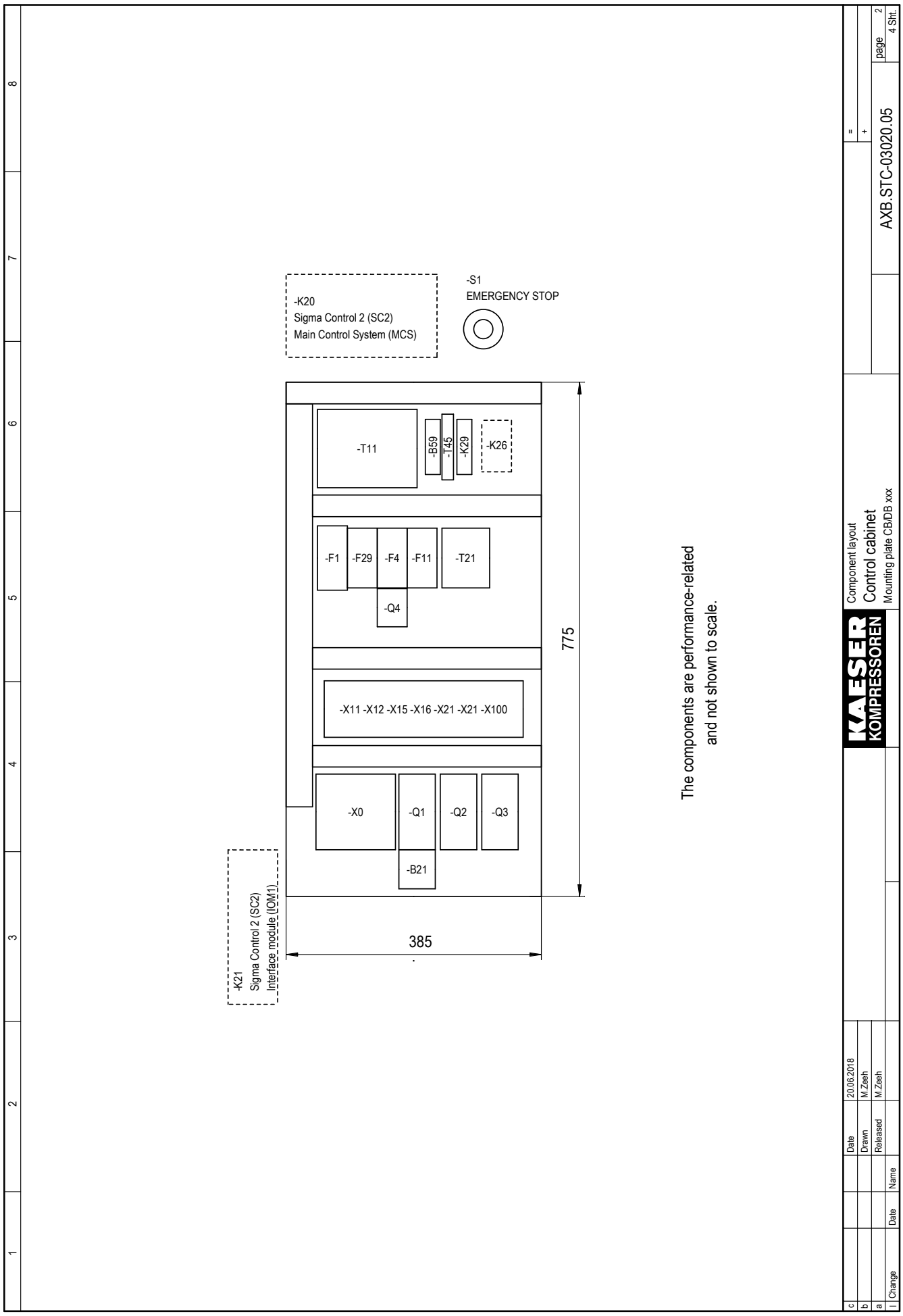


fig.: 3 Feed line connection

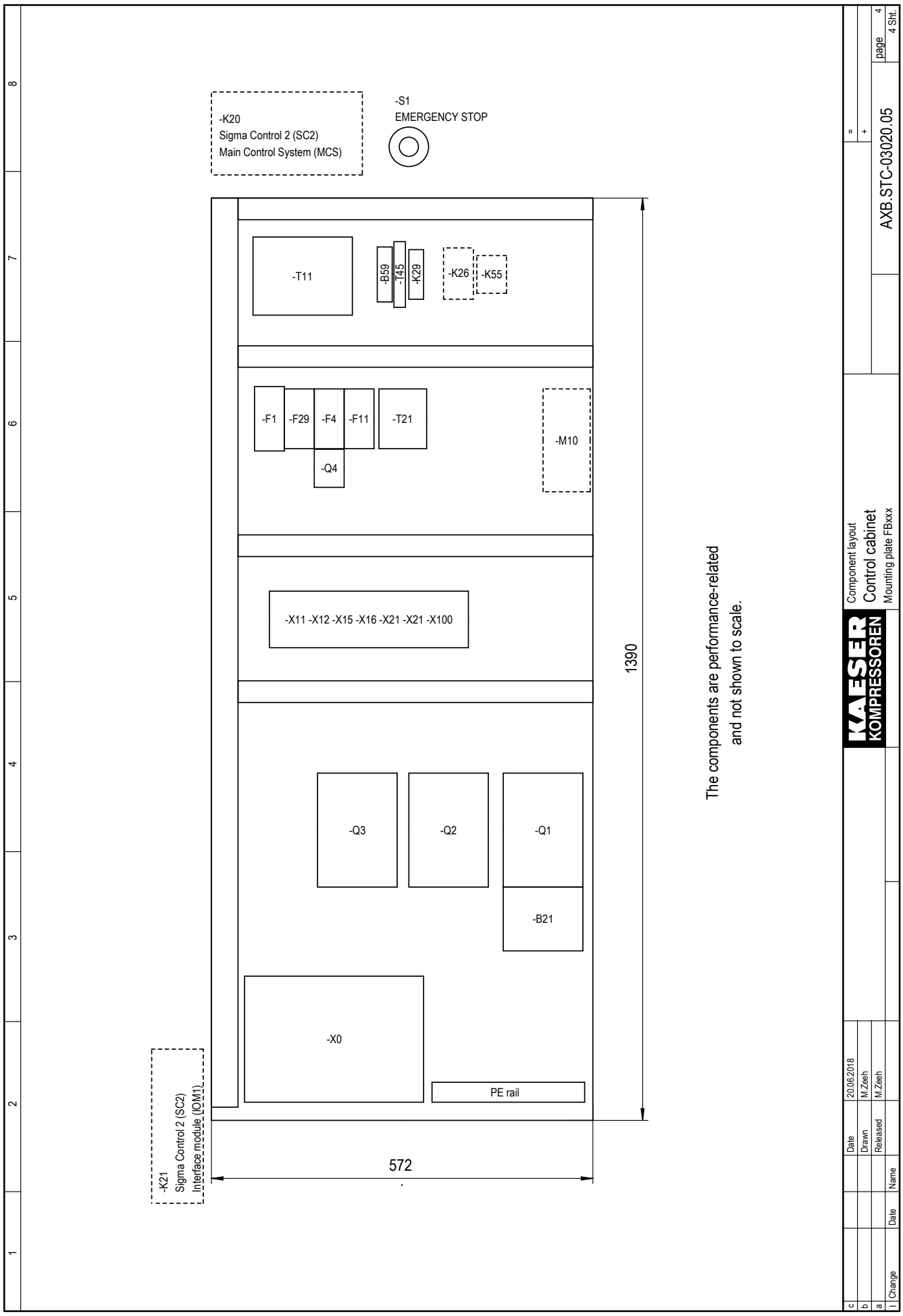

Terminal strip: -X0
total 6 Terminals
Terminal strip: -X11
total 26 Terminals
Terminal strip: -X12
total 8 Terminals
Cable identification
Destination internal
Terminal strip
Destination external
Cable identification
Connection number
Component identification
Location
Wire link
Terminal legend
Link
Terminal number
Connection number
Component identification
H07V2-K 2,5mm² green/yellow
-W19.1 Öflex ****
-W19.2 Öflex ****
-W29 Öflex 4x1,5mm²
-W78.2 Öflex 3x1,5mm²
-W78.3 Öflex 4x1,5mm²
-W78.4 Öflex 4x1,5mm²
-s.b.c. **
-M1 PE PE3 /1.6 -X11 PE
PE2 /1.2 Unit frame
-supply U1 /1.1 -Q1 1
-supply V1 /1.1 -Q1 3
-supply W1 /1.2 -Q1 5
-supply PE1 /1.2 Mounting plate
-X0 PE3 PE /1.7 -M4 PE PE /2.5 -T11 PE /3.3 -T21 - /3.5 PE /2.8 -K20 X6 /6.4 -K21-X4 1 /6.6 -M24 PE PE /6.4 -M23 PE PE /3.1 PE /3.3 -F11 6 /3.2 -T11 0 /3.4 -T21 L1 /3.4 -T21 N /3.7 -X100 1 3 /3.5 03 /4.5 -K52 14 4 /4.4 -K1. 2 04 /4.7 -K53 43 5 /4.7 -M23 1 05 /10.1 -K21-X5 6 /10.1 -Q4 A2 06 /4.7 7 /4.8 -M24 1 07 /4.7 8 /4.7 08 /2.6 9 /3.3 09
-K21-X5 2 /10.5 1 2
-K21-X9 2 /10.6 3
-K21-X9 1 /10.6 4
-K21-X9 5 /10.7 5
-K21-X9 4 /10.7 6
-K21-X9 8 /10.8 7
-K21-X9 7 /10.8 8
Terminal schedule
-X0.-X11.-X12
KXB.STC-03020.05
page 1
2 Sht.
Change Date Name
Drawn M.Zeeh 20.06.2018
Released M.Zeeh


Terminal strip: -X15
total 26 Terminals
Terminal strip: -X16
total 8 Terminals
Terminal strip: -X21
total 6 Terminals
Terminal strip: -X22
total 6 Terminals
Terminal strip: -X100
total 6 Terminals
Cable identification
Destination external
Terminal strip
Destination internal
Connection number
Component identification
Location
Wire link
Terminal legend
Link
Terminal number
Date
Drawn
Released
Name
20.06.2018
M.Zeeh
M.Zeeh
Terminal schedule
-X15,-X16,-X21,-X22,-X100
KXB.STC-03020.05
page 2
2 Sht.


-K20
Sigma Control 2 (SC2)
Main Control System (MCS)
-S1
EMERGENCY STOP
-T11
-B59
-T45
-K29
-K32
-K26
-F1
-F29
-F4
-F11
-T21
-Q4
-X11 -X12 -X15 -X16 -X21 -X21 -X100
-X0
-Q1
-Q2
-Q3
-B21
775
385
-K21
Sigma Control 2 (SC2)
Interface module (IOM1)
The components are performance-related
and not shown to scale.
Component layout
Control cabinet
Mounting plate BBxxx
KAESER KOMPRESSOREN
AXB.STC-03020.05
page 1
4 Sht.
Date 20.06.2018
Drawn M.Zeeh
Released M.Zeeh
Name
Change


-K20
Sigma Control 2 (SC2)
Main Control System (MCS)
-S1
EMERGENCY STOP
-T11
-B59
-T45
-K29
-K26
-F1
-F29
-F4
-F11
-T21
-Q4
775
-X11 -X12 -X15 -X16 -X21 -X21 -X100
-X0
-Q1
-Q2
-Q3
-B21
385
-K21
Sigma Control 2 (SC2)
Interface module (IOM1)
The components are performance-related
and not shown to scale.
KAESER KOMPRESSOREN
Component layout
Control cabinet
Mounting plate CB/DB xxx
AXB.STC-03020.05
page 2
4 Sht.
Date
Drawn
Released
20.06.2018
M.Zeeh
M.Zeeh
Change
Name


-K20
Sigma Control 2 (SC2)
Main Control System (MCS)
-S1
EMERGENCY STOP
-T11
-B59
-T45
-K29
-K26
-K55
-F1
-F29
-F4
-F11
-T21
-K53
-M10
-Q4
-X11 -X12 -X15 -X16 -X21 -X21 -X100
1150
-X0
-Q3
-Q2
-Q1
-B21
PE rail
-K21
Sigma Control 2 (SC2)
Interface module (IOM1)
482
The components are performance-related
and not shown to scale.
KAESER KOMPRESSOREN
Component layout
Control cabinet
Mounting plate EBxxx
AXB.STC-03020.05
page 3
4 Sht.
Date 20.06.2018
Drawn M.Zeeh
Released M.Zeeh
Name
Change


-K20
Sigma Control 2 (SC2)
Main Control System (MCS)
-S1
EMERGENCY STOP
-T11
-B59
-T45
-K29
-K26
-K55
-F1
-F29
-F4
-F11
-T21
-Q4
-M10
-X11 -X12 -X15 -X16 -X21 -X21 -X100
-Q3
-Q2
-Q1
-B21
-X0
PE rail
-K21
Sigma Control 2 (SC2)
Interface module (IOM1)
1390
572
The components are performance-related
and not shown to scale.
Component layout
Control cabinet
Mounting plate FBxxx
KAESER KOMPRESSOREN
AXB.STC-03020.05
page 4
4 Sht.
Date
Drawn
Released
20.06.2018
M.Zeeh
M.Zeeh
Name
Change

13.4.2 Option C34, OMEGA FREQUENCY CONTROL (OFC)

Electrical diagrams

Blower with Frequency converter

Siemens Sinamics G120 PM240-2
+ SIGMA CONTROL 2 (SC2)

400V/50Hz 4kW-132kW

TT/TN power supply with common point grounding

ATTENTION !!!
The document gives collective information on
power supply voltages and frequencies for all machines.
The voltage and frequency and local conditions under
which any particular machine may be used
are given on the nameplate of the machine
and in the accompanying service manual.

Manufacturer: KAESER KOMPRESSOREN SE
Postfach 2143
96410 Coburg

c				Datum	05.02.2018 E		KAESER KOMPRESSOREN	Cover page		=
b				Bearbeiter	M.Zeeh			Blower xFC+SC2		+
a			M.Zeeh	Geprüft	M.Zeeh				DXB.XFC-03020.04	page 1
A	Änderung	Datum	Name	Norm		Ersatz durch:	Ursprung: SXB.OFC-03010.02			1 Bl.

Lfd. Nr. No.	Benennung Name		Zeichnungsnummer (Kunde) Drawing No. (customer)	Zeichnungsnummer (Hersteller) Drawing No. (manufacturer)	Blatt Page	Anlagenkennzeichen Unit designation
1	Cover page			DXB.XFC-03020.04	1	
2	List of contents			ZXB.XFC-03020.04	1	
3	general instructions	Instructions + option		UXB.XFC-03020.04	1	
4	Electrical equipment identification	Electrical equipment identification		UXB.XFC-03020.04	2	
5	Equipment parts list	Common parts		UXB.XFC-03020.04	3	
6	Equipment parts list	Common parts		UXB.XFC-03020.04	4	
7	Equipment parts list	option		UXB.XFC-03020.04	5	
8	Equipment parts list	performance-related components		UXB.XFC-03020.04	6	
9	Equipment parts list	performance-related components		UXB.XFC-03020.04	7	
10	Equipment parts list	performance-related components		UXB.XFC-03020.04	8	
11	Equipment parts list	performance-related components		UXB.XFC-03020.04	9	
12	Equipment parts list	performance-related components		UXB.XFC-03020.04	10	
13	Equipment parts list	performance-related components		UXB.XFC-03020.04	11	
14	Circuit diagram	Power switching		SXB.XFC-03020.04	1	
15	Circuit diagram	Power switching		SXB.XFC-03020.04	2	
16	Circuit diagram	Power switching Fan		SXB.XFC-03020.04	3	
17	Circuit diagram	Control voltage		SXB.XFC-03020.04	4	
18	Circuit diagram	Gear housing ventilation+Control		SXB.XFC-03020.04	5	
19	Circuit diagram	Type Speed Supervisory module		SXB.XFC-03020.04	6	
20	Circuit diagram	SC2 + IOM		SXB.XFC-03020.04	7	
21	Circuit diagram	IOM-Configuration		SXB.XFC-03020.04	8	
22	Circuit diagram	digital inputs IOM		SXB.XFC-03020.04	9	
23	Circuit diagram	analog inputs IOM		SXB.XFC-03020.04	10	
24	Circuit diagram	Relay-outputs IOM		SXB.XFC-03020.04	11	
25	Circuit diagram	Frequency converter		SXB.XFC-03020.04	12	
26	Circuit diagram	Handling Terminals		SXB.XFC-03020.04	13	
27	Circuit diagram	Feed line connection		SXB.XFC-03020.04	14	
28	Circuit diagram	Feed line connection		SXB.XFC-03020.04	15	
29	Terminal schedule	-X0,-X11,-X12		KXB.XFC-03020.04	1	
30	Terminal schedule	-X15,-X16,-X21,-X22,-X100		KXB.XFC-03020.04	2	
31	Component layout	Mounting plate BBxxx		AXB.XFC-03020.04	1	
32	Component layout	Mounting plate CB/DBxxx		AXB.XFC-03020.04	2	
33	Component layout	Mounting plate EBxxx Control unit		AXB.XFC-03020.04	3	
34	Component layout	Mounting plate EBxxx Power switching		AXB.XFC-03020.04	4	
35	Component layout	Mounting plate FBxxx Control unit		AXB.XFC-03020.04	5	
36	Component layout	Mounting plate FBxxx Power switching		AXB.XFC-03020.04	6	

c				Datum	05.02.2018		KAESER KOMPRESSOREN	List of contents		=
b				Bearbeiter	M.Zeeh					+
a				Geprüft	M.Zeeh				ZXB.XFC-03020.04	page 1
B	Änderung	Datum	Name	Norm		Ersatz durch:	Ersatz für:	Ursprung:		1 Bl.

general instructions

ATTENTION !!!
Install supplies, grounding and shock protection
to local safety regulations.
Do not make or break
live plug-in connectors.

control cabinet wiring for non-designated conductors
with multi-standard stranded conductors

primary circuits:	black 2,5mm² H07V-K, 14AWG UL-Style 1015, CSA-TEW
Control voltage AC 24/230V:	red 1mm² H05V-K, 18AWG UL-Style 1015, CSA-TEW
Control voltage AC 24/230V grounded:	white 1mm² H05V-K, 18AWG UL-Style 1015, CSA-TEW
Control voltage DC 24V(+):	blue 1mm² H05V-K, 18AWG UL-Style 1015, CSA-TEW
Control voltage DC 24V(-) grounded:	blue/white 1mm² H05V-K, 18AWG UL-Style 1015, CSA-TEW
external voltage:	orange 1,5mm² H07V-K, 16AWG UL-Style 1015, CSA-TEW
earth conductor:	green/yellow H07V-K, UL-Style 1015, CSA-TEW

Type model-dependent components

B13 = Mode of operation Overpressure
B14 = Mode of operation Vacuum

C5 = option Oil level monitoring (-B80/-B81) (standard by Screw blowers)
C10 = option Speed monitoring (-K26+sensor -B90)
C11 = option Unloaded start valve (only BBC.2)
C34 = OMEGA FREQUENCY CONTROL
C38 = SIGMA FREQUENCY CONTROL
C39 = option oil temperature monitoring (-B55) (standard by Screw blowers)

xxx = Gear housing ventilation+Oil return (only EBS/FBS)

-B1/-B4	Pressure transducer (4...20mA)
-B5	Differential pressure switch filter clogging
-B40/-B43	Temperature probe Blower (PT100)
-B55	Temperature probe PT100 (option)
-B60	PTC resistor sensor/compressor motor
-B70	Temperature probe Soundproof enclosure
-B80/-B81	Oil level switch
-B90	Speed sensor
-F1	Overload protection switch Control voltage tapping
-F4	Overload protection switch Fan Soundproof enclosure
-F10	Fuse 24V-AC
-F11	Overload protection switch Control transformer
-F29	Overload protection switch Phase sequence relay
-K1	Solenoid valve
-K10	Solenoid valve Oil return
-K20	SIGMA CONTROL 2 (SC2) (MCS)
-K21	SIGMA CONTROL 2 (SC2) (IOM-Modul)
-K26	Speed Supervisory module
-K29	Phase sequence relay
-K50	Coupling relay Control cabinet ventilator
-K51	Coupling relay Fan
-K52	Coupling relay Solenoid valve
-K55	Coupling relay Oil return
-K60	EMERGENCY STOP (external/User)
-M1	Motor Blower
-M4	Fan Soundproof enclosure
-M8	Control cabinet ventilator (1)
-M9	Control cabinet ventilator (2)
-M10	Vacuum pump Gear housing ventilation
-Q4	Contactor Fan Soundproof enclosure
-R1	Mains choke
-R3.1	Ferrit bead Power supply
-R3.2	Ferrit bead Motor cable
-R11	Power supply filter
-S1	EMERGENCY STOP pushbutton
-S9	REMOTE reset Alarm indicator

-T1	Frequency converter
-T11	Control transformer 230V-AC
-T21	control voltage supply 24V-DC
-T45	Isolating amplifier
-X0	Terminal strip, Power supply
-X11	Terminal strip, Control
-X12	SC2-IOM digital outputs
-X15	SC2-IOM digital inputs
-X16	Frequency converter analog signals
-X21	Control voltage 24V-DC
-X22	Frequency converter 24V-DC
-X100	EMERGENCY STOP (external/User)
-K20	*Main Control System SC2 MCS*
-X1	Ethernet
-X2	IO-BUS
-X3	RS485-FC (USS-Bus)
-X4	Communication module
-X5	SD card slot
-X6	Earth connection
-K21	*IO-Modul SC2 IOM-1*
	internal
-X1	*IO-Bus Input*
-X2	*IO-Bus Output*
-X3	digital inputs
-X4	Power supply unit and Transistor outputs
-X5,-X9	Relay outputs
-X6	Analog input 0-20mA
-X7	Analog input PT100
-X8	digital inputs
	external
-X11...-X13	analog inputs 0-20mA
-X14...-X17	analog inputs PT100
-X18...-X29	digital inputs
-X30...-X32	digital outputs

c				Datum	05.02.2018		KAESER KOMPRESSOREN	Electrical equipment identification	=
b				Bearbeiter	M.Zeeh			Blower xFC+SC2	+
a				Geprüft	M.Zeeh			Electrical equipment identification	page 2
C	Änderung	Datum	Name	Norm		Ersatz durch:	Ersatz für:	Ursprung:	UXB.XFC-03020.04	11 Bl.

model	Common parts 4 - 132 kW
machine power supply	**400 V ±10 %, 50 Hz**
Pressure transducer **-B1** **Huba Control**	894786.0 0.-1200mbar
Pressure transducer **-B4** **Huba Control**	894787.0 0.1200mbar
Differential pressure switch **-B5** **Dungs**	893307.0 setting: 35mbar
Temperature probe **-B40/-B43** **WIKA**	895251.10010 (BB/CB/DB) 895251.10040 (EB-C/FB) 895603.00040 (EB-S) Pt100
Temperature probe **-B55**	895251.10100 895603.00100 (EB-S) Pt100
Temperature probe **-B70** **Wieland**	7.7631.0-P21 Pt100
Overload protection switch **-F1** Connecting block . **Siemens**	7.8237.01100 3RV2021-1GA20 4,5-6,3 A setting: 5,5 A 7.8237.00080 3RV2927-5A
Fuse **-F10**	895637.0 5x20 0,315 A-T 250 VAC
Overload protection switch **-F29** Connecting block . **Siemens**	7.8237.00200 3RV2011-0HA20 0,55-0,80 A setting: 0,6 A 7.8237.00030 3RV2917-5A
Solenoid valve **-K10** **bürkert**	895601.0 24V-DC 8W
Blower **-K20** Control **Prodrive**	7.7601.0 SC2MCS
Blower **-K21** Control **Prodrive**	7.7602.1 SC2IOM-1
Phase sequence relay **-K29** **Siemens**	7.7830.00600 3UG4615
Coupling relay **-K50** Control cabinet ventilator **Wieland**	7.3149.00660 24DC-1W-250V6A
Coupling relay **-K51** Fan **Wieland**	7.3149.00660 24DC-1W-250V6A
Coupling relay **-K55** **Siemens**	7.8237.00340 3RH2122-2JB40 DC 17-30 V AC-15: 240 V/10 A
Vacuum pump **-M10** **Schwarzer**	895612.0 24V-AC 50 Hz, 4W
Contactor **-Q4** **Siemens** Interference suppressor . **Siemens** Connecting block . **Siemens**	7.8237.00410 3RT2016-2AP01 7.8740.05100 3RT2916-1CD00 7.8237.00040 3RA2911-2A

= + page 3 11 Bl.
UXB.XFC-03020.04
Equipment parts list
Blower xFC+SC2
Common parts
KAESER KOMPRESSOREN
Ursprung:
Ersatz für:
Ersatz durch:
Datum Name
Bearbeiter 05.02.2018
Geprüft M.Zeeh
Norm M.Zeeh
Datum
Name
Änderung
c
b
a
C

model	Common parts 4 - 132 kW
machine power supply	**400 V ±10 %, 50 Hz**
Control transformer **-T11** **Block**	7.2238.10090 USTE630 - 630 VA 208-600 V/2x 115 V+ 24 V
Power supply **-T21** **Prodrive**	7.7605P0 PSDC24/2.5 100-240 V-AC/24 V-DC 2,5 A
Isolating amplifier **-T45** **Phoenix**	7.2892.00040 MCR-C-I/I-00-DC
Control line terminal **-X.** **11/12/15/16/21/22/100** **Handling**	895635.0 Wieland WTP fig. 1, Sht. 13

= +
page 4
11 Bl.
UXB.XFC-03020.04

Equipment parts list
Blower xFC+SC2
Common parts

KAESER KOMPRESSOREN
Ursprung:
Ersatz für:
Ersatz durch:

c	Änderung	Datum	Name	
b		Datum	Norm	
a		Geprüft	M.Zeeh	
		Bearbeiter	M.Zeeh	
		Datum	05.02.2018	

model	option BB	CB	DB	EB	FB
machine power supply	400 V ±10 %, 50 Hz	400 V ±10 %, 50 Hz	400 V ±10 %, 50 Hz	400 V ±10 %, 50 Hz	400 V ±10 %, 50 Hz
option C5/C39: Oil Function monitors					
Oil level switch -B80/-B81	---	---	894631.00010	894631.00010	894631.00010
(option C5) Elobau	---	---			
Oil temperature -B55	---	---	---	895251.10100 (EB-C) 895603.00100 (EB-S)	895251.10100
(option C39) Wika	---	---	---	Pt100	Pt100
option C10: Speed monitoring					
Supervisory module -K26	895323.0	895323.0	895323.0	895323.0	895323.0
ifm	FR1 - DD2503	FR1 - DD2503	FR1 - DD2503	FR1 - DD2503	FR1 - DD2503
Speed sensor -B90	895039.0	895039.0	895039.0	895039.0	895039.0
ifm	IFC201	IFC201	IFC201	IFC201	IFC201
option C11: Unloaded start valve 24 V-DC (electromagnetic)					
Solenoid valve -K1	---	---	---	---	---
Riegler	---	---	---	---	---
option C11: Unloaded start valve 230 V-AC (electromagnetic)					
Solenoid valve -K1	893584.1	---	---	---	---
bürkert	230V-AC 1/N/PE	---	---	---	---
Coupling relay -K52	7.3149.00660	---	---	---	---
	FLARE 24 V-DC	---	---	---	---
Wieland	1W-250 V/6 A	---	---	---	---

= + page 5 11 Bl.
UXB.XFC-03020.04
Equipment parts list
Blower xFC+SC2
option
KAESER KOMPRESSOREN
Ursprung:
Ersatz für:
Ersatz durch:
Datum 05.02.2018
Bearbeiter M.Zeeh
Geprüft M.Zeeh
Norm
Name
Datum
c
b
a
C Änderung

performance-related components

model	4 kW BB	5,5 kW BB+ CB+DB	7,5 kW BB+ CB+DB	11 kW BB+ CB+DB	15 kW BB+ CB+DB
machine power supply	400 V ±10 %, 50 Hz	400 V ±10 %, 50 Hz	400 V ±10 %, 50 Hz	400 V ±10 %, 50 Hz	400 V ±10 %, 50 Hz
Overload protection switch -F4 Auxiliary switch . Connecting block . Siemens	7.8237.00100 3RV2011-0DA20 0,22-0,32 A setting: 0,25 A 7.8237.00250 3RV2901-2E 7.8237.00030 3RV2917-5A	7.8237.00100 3RV2011-0DA20 0,22-0,32 A setting: 0,25 A 7.8237.00250 3RV2901-2E 7.8237.00030 3RV2917-5A	7.8237.00100 3RV2011-0DA20 0,22-0,32 A setting: 0,25 A 7.8237.00250 3RV2901-2E 7.8237.00030 3RV2917-5A	7.8237.00100 3RV2011-0DA20 0,22-0,32 A setting: 0,25 A 7.8237.00250 3RV2901-2E 7.8237.00030 3RV2917-5A	7.8237.00100 3RV2011-0DA20 0,22-0,32 A setting: 0,25 A 7.8237.00250 3RV2901-2E 7.8237.00030 3RV2917-5A
Overload protection switch -F11 Siemens	7.8237.00220 3RV2011-1DA20 2,2-3,2 A setting: 2,5 A	7.8237.00220 3RV2011-1DA20 2,2-3,2 A setting: 2,5 A	7.8237.00220 3RV2011-1DA20 2,2-3,2 A setting: 2,5 A	7.8237.00220 3RV2011-1DA20 2,2-3,2 A setting: 2,5 A	7.8237.00220 3RV2011-1DA20 2,2-3,2 A setting: 2,5 A
Blower Motor -M1 Siemens	894969.0 400 V-D/50 Hz 7,4 A, 3000U	894970.0 400 V-D/50 Hz 10 A, 3000U	894971.0 400 V-D/50 Hz 13,2 A, 3000U	894972.0 400 V-D/50 Hz 20,5 A, 3000U	895161.0 (BB) 894973.0 (CB/DB) 400 V-D/50 Hz 28 A, 3000U
Fan motor -M4 Soundproof enclosure . ebm	895240.0 W2D250 400 V-Y/50 Hz 110W - 0,22 A	895240.0 W2D250 400 V-Y/50 Hz 110W - 0,22 A	895240.0 W2D250 400 V-Y/50 Hz 110W - 0,22 A	895240.0 W2D250 400 V-Y/50 Hz 110W - 0,22 A	895240.0 W2D250 400 V-Y/50 Hz 110W - 0,22 A
Fan motor -M8 (-M9) Control cabinet . Ruebsamen	7.2751.00480 LV410 230 V/50 Hz, 1/N/PE 45W 0,3 A	7.2751.00480 LV410 230 V/50 Hz, 1/N/PE 45W 0,3 A	7.2751.00480 LV410 230 V/50 Hz, 1/N/PE 45W 0,3 A	7.2751.00480 LV410 230 V/50 Hz, 1/N/PE 45W 0,3 A	7.2751.00480 LV410 230 V/50 Hz, 1/N/PE 45W 0,3 A
Mains choke -R1 Siemens	7.7831.00310 6SL3203-0CE21-8AA0	7.7831.00310 6SL3203-0CE21-8AA0	7.7831.00310 6SL3203-0CE21-8AA0	7.7831.00320 6SL3203-0CE23-8AA0	7.7831.00320 6SL3203-0CE23-8AA0
Ferrit bead -R3.1 -R3.2 Magnetec	7.8538.0 (M112) 1x 7.8538.0 (M112)	7.8538.0 (M112) 1x 7.8538.0 (M112)	7.8538.0 (M112) 1x 7.8538.0 (M112)	7.8538.0 (M112) 1x 7.8538.0 (M112)	7.8538.0 (M112) 1x 7.8538.0 (M112)
Power supply filter -R11 Siemens	integrated ---	integrated ---	integrated ---	7.8832.10030 Schaffner FS33891-50-07	7.8832.10030 Schaffner FS33891-50-07
Frequency converter -T1 Control unit . Control panel . Siemens	7.8833.01070 6SL3210-1PE21-1AL0 7.7830.00710 6SL3244-0BB12-1BAx 7.7830.00100 6SL3255-0AA00-4CA1	7.8833.01080 6SL3210-1PE21-4AL0 7.7830.00710 6SL3244-0BB12-1BAx 7.7830.00100 6SL3255-0AA00-4CA1	7.8833.01090 6SL3210-1PE21-8AL0 7.7830.00710 6SL3244-0BB12-1BAx 7.7830.00100 6SL3255-0AA00-4CA1	7.8833.00100 6SL3210-1PE22-7UL0 7.7830.00710 6SL3244-0BB12-1BAx 7.7830.00100 6SL3255-0AA00-4CA1	7.8833.00110 6SL3210-1PE23-3UL0 7.7830.00710 6SL3244-0BB12-1BAx 7.7830.00100 6SL3255-0AA00-4CA1
motor cable -W211	4G6 mm² EMV 500 V - 70°C	4G6 mm² EMV 500 V - 70°C	4G6 mm² EMV 500 V - 70°C	4G10 mm² EMV 500 V - 70°C	4G10 mm² EMV 500 V - 70°C
connection -W280 -W281 -W282	6 mm2 6 mm2 6 mm2 500 V - 70°C	6 mm2 6 mm2 6 mm2 500 V - 70°C	6 mm2 6 mm2 6 mm2 500 V - 70°C	10 mm2 10 mm2 10 mm2 500 V - 70°C	10 mm2 10 mm2 10 mm2 500 V - 70°C
supply terminals -X0: U1/V1/W1/PE Handling Stripped length X supply connection	894864.00010 Wieland 2,5-16 mm² fig. 2, Sht. 13 16 mm fig. 1, Sht. 14	894864.00010 Wieland 2,5-16 mm² fig. 2, Sht. 13 16 mm fig. 1, Sht. 14	894864.00010 Wieland 2,5-16 mm² fig. 2, Sht. 13 16 mm fig. 1, Sht. 14	894864.00010 Wieland 2,5-16 mm² fig. 2, Sht. 13 16 mm fig. 1, Sht. 14	894864.00010 Wieland 2,5-16 mm² fig. 2, Sht. 13 16 mm fig. 1, Sht. 14

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Equipment parts list
Blower xFC+SC2
performance-related components
KAESER KOMPRESSOREN
Ursprung:
Ersatz für:
Ersatz durch:
Datum 05.02.2018
Bearbeiter M.Zeeh
Geprüft M.Zeeh
Norm
Änderung Datum Name

performance-related components

model	18,5 kW	22 kW	30 kW	37 kW	45 kW
	CB+ DB	CB+ DB	CB+ DB	DB	DB
machine power supply	400 V ±10 %, 50 Hz	400 V ±10 %, 50 Hz	400 V ±10 %, 50 Hz	400 V ±10 %, 50 Hz	400 V ±10 %, 50 Hz
Overload protection switch -F4	7.8237.00100 3RV2011-0DA20 0,22-0,32 A setting: 0,25 A	7.8237.00100 3RV2011-0DA20 0,22-0,32 A setting: 0,25 A	7.8237.00100 3RV2011-0DA20 0,22-0,32 A setting: 0,25 A	7.8237.00100 3RV2011-0DA20 0,22-0,32 A setting: 0,25 A	7.8237.00100 3RV2011-0DA20 0,22-0,32 A setting: 0,25 A
Auxiliary switch .	7.8237.00250 3RV2901-2E	7.8237.00250 3RV2901-2E	7.8237.00250 3RV2901-2E	7.8237.00250 3RV2901-2E	7.8237.00250 3RV2901-2E
Connecting block .	7.8237.00030	7.8237.00030	7.8237.00030	7.8237.00030	7.8237.00030
Siemens	3RV2917-5A	3RV2917-5A	3RV2917-5A	3RV2917-5A	3RV2917-5A
Overload protection switch -F11	7.8237.00220 3RV2011-1DA20 2,2-3,2 A	7.8237.00220 3RV2011-1DA20 2,2-3,2 A	7.8237.00220 3RV2011-1DA20 2,2-3,2 A	7.8237.00220 3RV2011-1DA20 2,2-3,2 A	7.8237.00220 3RV2011-1DA20 2,2-3,2 A
Siemens	setting: 2,5 A	setting: 2,5 A	setting: 2,5 A	setting: 2,5 A	setting: 2,5 A
Blower Motor -M1	894974.0 400 V-D/50 Hz	894975.0 400 V-D/50 Hz	894976.1 (CB) 894977.1 (DB) 400 V-D/50 Hz	894978.1 400 V-D/50 Hz	894979.1 400 V-D/50 Hz
Siemens	32 A, 3000U	37,5 A, 3000U	53 A, 3000U	65 A, 3000U	79 A, 3000U
Fan motor -M4	895240.0	895240.0	895240.0	895240.0	895240.0
Soundproof enclosure .	W2D250 400 V-Y/50 Hz	W2D250 400 V-Y/50 Hz	W2D250 400 V-Y/50 Hz	W2D250 400 V-Y/50 Hz	W2D250 400 V-Y/50 Hz
ebm	110W - 0,22 A	110W - 0,22 A	110W - 0,22 A	110W - 0,22 A	110W - 0,22 A
Fan motor -M8 (-M9)	7.2751.00480	7.2751.00480	7.2751.00480	7.2751.00480	7.2751.00480
Control cabinet .	LV410 230 V/50 Hz, 1/N/PE	LV410 230 V/50 Hz, 1/N/PE	LV410 230 V/50 Hz, 1/N/PE	LV410 230 V/50 Hz, 1/N/PE	LV410 230 V/50 Hz, 1/N/PE
Ruebsamen	45W 0,3 A	45W 0,3 A	45W 0,3 A	45W 0,3 A	45W 0,3 A
Mains choke -R1	integrated	integrated	integrated	integrated	integrated
Siemens	---	---	---	---	---
Ferrit bead -R3.1	7.8538.0 (M112)	7.8538.0 (M112)	7.8538.0 (M112)	7.8538.0 (M112)	7.8538.0 (M112)
-R3.2	1x 7.8538.0 (M112)	1x 7.8538.0 (M112)	1x 7.8538.0 (M112)	2x 7.8538.0 (M112)	2x 7.8538.0 (M112)
Magnetec					
Power supply filter -R11	integrated	integrated	integrated	integrated	integrated
Siemens	---	---	---	---	---
Frequency converter -T1	7.8833.01120 6SL3210-1PE23-8AL0	7.8833.01130 6SL3210-1PE24-5AL0	7.8833.01140 6SL3210-1PE26-0AL0	7.8833.01150 6SL3210-1PE27-5AL0	7.8833.01160 6SL3210-1PE28-8AL0
Control unit .	7.7830.00710 6SL3244-0BB12-1BAx	7.7830.00710 6SL3244-0BB12-1BAx	7.7830.00710 6SL3244-0BB12-1BAx	7.7830.00710 6SL3244-0BB12-1BAx	7.7830.00710 6SL3244-0BB12-1BAx
Control panel .	7.7830.00100	7.7830.00100	7.7830.00100	7.7830.00100	7.7830.00100
Siemens	6SL3255-0AA00-4CA1	6SL3255-0AA00-4CA1	6SL3255-0AA00-4CA1	6SL3255-0AA00-4CA1	6SL3255-0AA00-4CA1
motor cable -W211	4G16 mm² EMV 500 V - 70°C	4G16 mm² EMV 500 V - 70°C	4G25 mm² EMV 500 V - 70°C	4G35 mm² EMV 500 V - 70°C	3x 50 mm² 25 mm² 500 V - 70°C
connection -W280	10 mm2	16 mm2	25 mm2	25 mm2	35 mm2
-W281	10 mm2	16 mm2	25 mm2	25 mm2	35 mm2
-W282	10 mm2 500 V - 70°C	16 mm2 500 V - 70°C	25 mm2 500 V - 70°C	25 mm2 500 V - 70°C	35 mm2 500 V - 70°C
supply terminals -X0:	894864.00010	3x 895314.0	3x 895314.0	3x 895314.0	3x 895314.0
U1/V1/W1/PE		3x 895314.00010	3x 895314.00010	3x 895314.00010	3x 895314.00010
		4x 895314.00040	4x 895314.00040	4x 895314.00040	4x 895314.00040
	Wieland	Wago	Wago	Wago	Wago
	2,5-16 mm²	10-50 mm²	10-50 mm²	10-50 mm²	10-50 mm²
Handling	fig. 2, Sht. 13	fig. 3, Sht. 13	fig. 3, Sht. 13	fig. 3, Sht. 13	fig. 3, Sht. 13
Stripped length X	16 mm	30 mm	30 mm	30 mm	30 mm
supply connection	fig. 1, Sht. 14	fig. 2, Sht. 14	fig. 2, Sht. 14	fig. 2, Sht. 14	fig. 2, Sht. 14

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Equipment parts list
Blower xFC+SC2
performance-related components

KAESER KOMPRESSOREN

Ursprung:
Ersatz für:
Ersatz durch:

	Datum	Name
Bearbeitet	05.02.2018	M.Zeeh
Geprüft		M.Zeeh
Norm		

	Änderung	Datum	Name
c			
b			
a			

		performance-related components			
model		18,5 kW	22 kW	30 kW	30 kW
		EB	EB	EB+ FB-C	FB-S
machine power supply		400 V ±10 %, 50 Hz	400 V ±10 %, 50 Hz	400 V ±10 %, 50 Hz	400 V ±10 %, 50 Hz
Overload protection switch	-F4	7.8237.00110	7.8237.00110	7.8237.00110	7.8237.00110
		3RV2011-0GA20	3RV2011-0GA20	3RV2011-0GA20	3RV2011-0GA20
		0,45-0,63 A	0,45-0,63 A	0,45-0,63 A	0,45-0,63 A
		setting: 0,49 A	setting: 0,49 A	setting: 0,49 A	setting: 0,60 A
Auxiliary switch	.	7.8237.00250	7.8237.00250	7.8237.00250	7.8237.00250
		3RV2901-2E	3RV2901-2E	3RV2901-2E	3RV2901-2E
Connecting block	.	7.8237.00030	7.8237.00030	7.8237.00030	7.8237.00030
	Siemens	3RV2917-5A	3RV2917-5A	3RV2917-5A	3RV2917-5A
Overload protection switch	-F11	7.8237.00220	7.8237.00220	7.8237.00220	7.8237.00220
		3RV2011-1DA20	3RV2011-1DA20	3RV2011-1DA20	3RV2011-1DA20
		2,2-3,2 A	2,2-3,2 A	2,2-3,2 A	2,2-3,2 A
	Siemens	setting: 2,5 A	setting: 2,5 A	setting: 2,5 A	setting: 2,5 A
Blower Motor	-M1	894974.0	894975.0	894977.1	894977.1
		400 V-D/50 Hz	400 V-D/50 Hz	400 V-D/50 Hz	400 V-D/50 Hz
	Siemens	32 A, 3000U	37,5 A, 3000U	53 A, 3000U	53 A, 3000U
Fan motor	-M4	892997.0	892997.0	892997.0	895426.0
Soundproof enclosure	.	W2D300	W2D300	W2D300	W4D420
		400 V-Y/50 Hz	400 V-Y/50 Hz	400 V-Y/50 Hz	400 V-Y/50 Hz
	ebm	210W 0,43 A	210W 0,43 A	210W 0,43 A	160W 0,55 A
Fan motor	-M8 (-M9)	7.2751.00370	7.2751.00370	7.2751.00370	7.2751.00370
Control cabinet	.	LV600	LV600	LV600	LV600
		230 V/50 Hz	230 V/50 Hz	230 V/50 Hz	230 V/50 Hz
	Ruebsamen	64W 0,29 A	64W 0,29 A	64W 0,29 A	64W 0,29 A
Mains choke	-R1	integrated	integrated	integrated	integrated
	Siemens	---	---	---	---
Ferrit bead	-R3.1	7.8538.0 (M112)	7.8538.0 (M112)	7.8538.0 (M112)	7.8538.0 (M112)
	-R3.2	1x 7.8538.0 (M112)	1x 7.8538.0 (M112)	1x 7.8538.0 (M112)	1x 7.8538.0 (M112)
	Magnetec				
Power supply filter	-R11	integrated	integrated	integrated	integrated
	Siemens	---	---	---	---
Frequency converter	-T1	7.8833.01120	7.8833.01130	7.8833.01140	7.8833.01140
		6SL3210-1PE23-8AL0	6SL3210-1PE24-5AL0	6SL3210-1PE26-0AL0	6SL3210-1PE26-0AL0
Control unit	.	7.7830.00710	7.7830.00710	7.7830.00710	7.7830.00710
		6SL3244-0BB12-1BAx	6SL3244-0BB12-1BAx	6SL3244-0BB12-1BAx	6SL3244-0BB12-1BAx
Control panel	.	7.7830.00100	7.7830.00100	7.7830.00100	7.7830.00100
	Siemens	6SL3255-0AA00-4CA1	6SL3255-0AA00-4CA1	6SL3255-0AA00-4CA1	6SL3255-0AA00-4CA1
motor cable	-W211	4G16 mm² EMV	4G16 mm² EMV	4G25 mm² EMV	4G25 mm² EMV
		500 V - 70°C	500 V - 70°C	500 V - 70°C	500 V - 70°C
connection	-W280	10 mm2	16 mm2	25 mm2	25 mm2
	-W281	10 mm2	16 mm2	25 mm2	25 mm2
	-W282	10 mm2	16 mm2	25 mm2	25 mm2
		500 V - 70°C	500 V - 70°C	500 V - 70°C	500 V - 70°C
supply terminals	-X0:	894864.00010	3x 895314.0	3x 895314.0	3x 895314.0
	U1/V1/W1/PE		3x 895314.00010	3x 895314.00010	3x 895314.00010
			4x 895314.00040	4x 895314.00040	4x 895314.00040
		Wieland	Wago	Wago	Wago
		2,5-16 mm²	10-50 mm²	10-50 mm²	10-50 mm²
	Handling	fig. 2, Sht. 13	fig. 3, Sht. 13	fig. 3, Sht. 13	fig. 3, Sht. 13
	Stripped length X	16 mm	30 mm	30 mm	30 mm
supply	connection	fig. 1, Sht. 14	fig. 2, Sht. 14	fig. 2, Sht. 14	fig. 2, Sht. 14

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Equipment parts list
Blower xFC+SC2
performance-related components

KAESER KOMPRESSOREN

Ursprung:
Ersatz für:
Ersatz durch:

		Datum	Name
c	Änderung	Datum	Name
b			
a		Datum	Norm
	Bearbeiter	05.02.2018	
	Geprüft	M.Zeeh	
		M.Zeeh	

performance-related components

model	37 kW EB+ FB-C	37 kW FB-S	45 kW EB+ FB-C	45 kW FB-S
machine power supply	**400 V ±10 %, 50 Hz**	**400 V ±10 %, 50 Hz**	**400 V ±10 %, 50 Hz**	**400 V ±10 %, 50 Hz**
Overload protection switch -F4 Auxiliary switch . Connecting block . Siemens	7.8237.00110 3RV2011-0GA20 0,45-0,63 A setting: 0,50 A 7.8237.00250 3RV2901-2E 7.8237.00030 3RV2917-5A	7.8237.00110 3RV2011-0GA20 0,45-0,63 A setting: 0,60 A 7.8237.00250 3RV2901-2E 7.8237.00030 3RV2917-5A	7.8237.00110 3RV2011-0GA20 0,45-0,63 A setting: 0,50 A 7.8237.00250 3RV2901-2E 7.8237.00030 3RV2917-5A	7.8237.00110 3RV2011-0GA20 0,45-0,63 A setting: 0,60 A 7.8237.00250 3RV2901-2E 7.8237.00030 3RV2917-5A
Overload protection switch -F11 Siemens	7.8237.00220 3RV2011-1DA20 2,2-3,2 A setting: 2,5 A	7.8237.00220 3RV2011-1DA20 2,2-3,2 A setting: 2,5 A	7.8237.00220 3RV2011-1DA20 2,2-3,2 A setting: 2,5 A	7.8237.00220 3RV2011-1DA20 2,2-3,2 A setting: 2,5 A
Blower Motor -M1 Siemens	894978.1 400 V-D/50 Hz 65 A, 3000U	894978.1 400 V-D/50 Hz 65 A, 3000U	894979.1 400 V-D/50 Hz 79 A, 3000U	894979.1 400 V-D/50 Hz 79 A, 3000U
Fan motor -M4 Soundproof enclosure . ebm	892997.0 W2D300 400 V-Y/50 Hz 210W 0,43 A	895426.0 W4D420 400 V-Y/50 Hz 160W 0,55 A	892997.0 W2D300 400 V-Y/50 Hz 210W 0,43 A	895426.0 W4D420 400 V-Y/50 Hz 160W 0,55 A
Fan motor -M8 (-M9) Control cabinet . Ruebsamen	7.2751.00370 LV600 230 V/50 Hz 64W 0,29 A	7.2751.00370 LV600 230 V/50 Hz 64W 0,29 A	7.2751.00370 LV600 230 V/50 Hz 64W 0,29 A	7.2751.00370 LV600 230 V/50 Hz 64W 0,29 A
Mains choke -R1 Siemens	integrated ---	integrated ---	integrated ---	integrated ---
Ferrit bead -R3.1 -R3.2 Magnetec	7.8538.0 (M112) 2x 7.8538.0 (M112)	7.8538.0 (M112) 2x 7.8538.0 (M112)	7.8538.0 (M112) 2x 7.8538.0 (M112)	7.8538.0 (M112) 2x 7.8538.0 (M112)
Power supply filter -R11 Siemens	integrated ---	integrated ---	integrated ---	integrated ---
Frequency converter -T1 Control unit . Control panel . Siemens	7.8833.01150 6SL3210-1PE27-5AL0 7.7830.00710 6SL3244-0BB12-1BAx 7.7830.00100 6SL3255-0AA00-4CA1	7.8833.01150 6SL3210-1PE27-5AL0 7.7830.00710 6SL3244-0BB12-1BAx 7.7830.00100 6SL3255-0AA00-4CA1	7.8833.01160 6SL3210-1PE28-8AL0 7.7830.00710 6SL3244-0BB12-1BAx 7.7830.00100 6SL3255-0AA00-4CA1	7.8833.01160 6SL3210-1PE28-8AL0 7.7830.00710 6SL3244-0BB12-1BAx 7.7830.00100 6SL3255-0AA00-4CA1
motor cable -W211	4G35 mm² EMV 500 V - 70°C	4G35 mm² EMV 500 V - 70°C	3x 50 mm² 25 mm² 500 V - 70°C	3x 50 mm² 25 mm² 500 V - 70°C
connection -W280 -W281 -W282	35 mm2 35 mm2 35 mm2 500 V - 70°C	35 mm2 35 mm2 35 mm2 500 V - 70°C	35 mm2 35 mm2 35 mm2 500 V - 70°C	35 mm2 35 mm2 35 mm2 500 V - 70°C
supply terminals -X0: U1/V1/W1/PE Handling Stripped length X supply connection	3x 895314.0 3x 895314.00010 4x 895314.00040 Wago 10-50 mm² fig. 3, Sht. 13 30 mm fig. 2, Sht. 14	3x 895314.0 3x 895314.00010 4x 895314.00040 Wago 10-50 mm² fig. 3, Sht. 13 30 mm fig. 2, Sht. 14	3x 895314.0 3x 895314.00010 4x 895314.00040 Wago 10-50 mm² fig. 3, Sht. 13 30 mm fig. 2, Sht. 14	3x 895314.0 3x 895314.00010 4x 895314.00040 Wago 10-50 mm² fig. 3, Sht. 13 30 mm fig. 2, Sht. 14

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Equipment parts list
Blower xFC+SC2
performance-related components
KAESER KOMPRESSOREN
Ursprung: Ersatz für: Ersatz durch:
Datum 05.02.2018 Bearbeiter M.Zeeh Geprüft M.Zeeh Norm
c b a C Änderung Datum Name

model		performance-related components 55 kW EB+ FB-C	55 kW FB-S	75 kW EB+ FB-C	75 kW FB-S
machine power supply		**400 V ±10 %, 50 Hz**	**400 V ±10 %, 50 Hz**	**400 V ±10 %, 50 Hz**	**400 V ±10 %, 50 Hz**
Overload protection switch	-F4	7.8237.00110 3RV2011-0GA20 0,45-0,63 A setting: 0,50 A	7.8237.00110 3RV2011-0GA20 0,45-0,63 A setting: 0,60 A	7.8237.00110 3RV2011-0GA20 0,45-0,63 A setting: 0,50 A	7.8237.00110 3RV2011-0GA20 0,45-0,63 A setting: 0,60 A
Auxiliary switch	.	7.8237.00250 3RV2901-2E	7.8237.00250 3RV2901-2E	7.8237.00250 3RV2901-2E	7.8237.00250 3RV2901-2E
Connecting block	.	7.8237.00030	7.8237.00030	7.8237.00030	7.8237.00030
	Siemens	3RV2917-5A	3RV2917-5A	3RV2917-5A	3RV2917-5A
Overload protection switch	-F11	7.8237.00220 3RV2011-1DA20 2,2-3,2 A	7.8237.00220 3RV2011-1DA20 2,2-3,2 A	7.8237.00220 3RV2011-1DA20 2,2-3,2 A	7.8237.00220 3RV2011-1DA20 2,2-3,2 A
	Siemens	setting: 2,5 A	setting: 2,5 A	setting: 2,5 A	setting: 2,5 A
Blower Motor	-M1	894717.11000	894717.11000	894719.11000	894719.11000
		400 V-D/50 Hz	400 V-D/50 Hz	400 V-D/50 Hz	400 V-D/50 Hz
	Siemens	95 A, 3000U	95 A, 3000U	128 A, 3000U	128 A, 3000U
Fan motor	-M4	892997.0	895426.0	892997.0	895426.0
Soundproof enclosure	.	W2D300 400 V-Y/50 Hz	W4D420 400 V-Y/50 Hz	W2D300-CP02-16 400 V-Y/50 Hz	W4D420 400 V-Y/50 Hz
	ebm	210W 0,43 A	160W 0,55 A	210W 0,43 A	160W 0,55 A
Fan motor	-M8 (-M9)	7.2751.00370	7.2751.00370	7.2751.00370	7.2751.00370
Control cabinet	.	LV600 230 V/50 Hz	LV600 230 V/50 Hz	LV600 230 V/50 Hz	LV600 230 V/50 Hz
	Ruebsamen	64W 0,29 A	64W 0,29 A	64W 0,29 A	64W 0,29 A
Mains choke	-R1	integrated	integrated	integrated	integrated
	Siemens	---	---	---	---
Ferrit bead	-R3.1	7.8538.00020 (M113)	7.8538.00020 (M113)	7.8538.00020 (M113)	7.8538.00020 (M113)
	-R3.2	2x 7.8538.00020 (M113)	2x 7.8538.00020 (M113)	1x 7.8538.00020 (M113)	1x 7.8538.00020 (M113)
	Magnetec				
Power supply filter	-R11	integrated	integrated	integrated	integrated
	Siemens	---	---	---	---
Frequency converter	-T1	7.8833.01170 6SL3210-1PE31-1AL0	7.8833.01170 6SL3210-1PE31-1AL0	7.8833.01180 6SL3210-1PE31-5AL0	7.8833.01180 6SL3210-1PE31-5AL0
Control unit	.	7.7830.00710 6SL3244-0BB12-1BAx	7.7830.00710 6SL3244-0BB12-1BAx	7.7830.00710 6SL3244-0BB12-1BAx	7.7830.00710 6SL3244-0BB12-1BAx
Control panel	.	7.7830.00100	7.7830.00100	7.7830.00100	7.7830.00100
	Siemens	6SL3255-0AA00-4CA1	6SL3255-0AA00-4CA1	6SL3255-0AA00-4CA1	6SL3255-0AA00-4CA1
motor cable	-W211	3x 70 mm² 35 mm² 500 V - 70°C	3x 70 mm² 35 mm² 500 V - 70°C	3x 95 mm² 50 mm² 500 V - 70°C	3x 95 mm² 50 mm² 500 V - 70°C
connection	-W280	50 mm2	50 mm2	70 mm2	70 mm2
	-W281	50 mm2	50 mm2	70 mm2	70 mm2
	-W282	50 mm2 500 V - 70°C	50 mm2 500 V - 70°C	70 mm2 500 V - 70°C	70 mm2 500 V - 70°C
supply terminals	-X0:	3x 894385.0	3x 894385.0	3x 894385.0	3x 894385.0
	U1/V1/W1/PE	3x 894385.00010 4x 894385.00040 Wago 25-95 mm²	3x 894385.00010 4x 894385.00040 Wago 25-95 mm²	3x 894385.00010 4x 894385.00040 Wago 25-95 mm²	3x 894385.00010 4x 894385.00040 Wago 25-95 mm²
	Handling	fig. 3, Sht. 13	fig. 3, Sht. 13	fig. 3, Sht. 13	fig. 3, Sht. 13
	Stripped length X	36 mm	36 mm	36 mm	36 mm
supply	connection	fig. 2, Sht. 14	fig. 2, Sht. 14	fig. 2, Sht. 14	fig. 2, Sht. 14

UXB.XFC-03020.04

page 10 11 Bl.

Equipment parts list
Blower xFC+SC2
performance-related components

KAESER KOMPRESSOREN

Ursprung:
Ersatz für:
Ersatz durch:

	Datum	Name
Bearbeiter	05.02.2018	M.Zeeh
Geprüft		M.Zeeh
Norm		

	Änderung	Datum	Name
c			
b			
a			

model	performance-related components 90 kW FB-C	90 kW FB-S	110 kW FB-C	110 kW FB-S	132 kW FB-C
machine power supply	400 V ±10 %, 50 Hz	400 V ±10 %, 50 Hz	400 V ±10 %, 50 Hz	400 V ±10 %, 50 Hz	400 V ±10 %, 50 Hz
Overload protection switch -F4 Auxiliary switch . Connecting block . Siemens	7.8237.00110 3RV2011-0GA20 0,45-0,63 A setting: 0,50 A 7.8237.00250 3RV2901-2E 7.8237.00030 3RV2917-5A	7.8237.00110 3RV2011-0GA20 0,45-0,63 A setting: 0,60 A 7.8237.00250 3RV2901-2E 7.8237.00030 3RV2917-5A	7.8237.00110 3RV2011-0GA20 0,45-0,63 A setting: 0,50 A 7.8237.00250 3RV2901-2E 7.8237.00030 3RV2917-5A	7.8237.00110 3RV2011-0GA20 0,45-0,63 A setting: 0,60 A 7.8237.00250 3RV2901-2E 7.8237.00030 3RV2917-5A	7.8237.00110 3RV2011-0GA20 0,45-0,63 A setting: 0,50 A 7.8237.00250 3RV2901-2E 7.8237.00030 3RV2917-5A
Overload protection switch -F11 Siemens	7.8237.00220 3RV2011-1DA20 2,2-3,2 A setting: 2,5 A	7.8237.00220 3RV2011-1DA20 2,2-3,2 A setting: 2,5 A	7.8237.00220 3RV2011-1DA20 2,2-3,2 A setting: 2,5 A	7.8237.00220 3RV2011-1DA20 2,2-3,2 A setting: 2,5 A	7.8237.00220 3RV2011-1DA20 2,2-3,2 A setting: 2,5 A
Blower Motor -M1 Siemens	894723.11000 400 V-D/50 Hz 157 A, 1500U	894722.11000 400 V-D/50 Hz 152 A, 3000U	895025.11000 400 V-D/50 Hz 192 A, 1500U	894724.11000 400 V-D/50 Hz 185 A, 3000U	894726.11000 400 V-D/50 Hz 230 A, 1500U
Fan motor -M4 Soundproof enclosure . ebm	892997.0 W2D300-CP02-16 400 V-Y/50 Hz 210W 0,43 A	895426.0 W4D420 400 V-Y/50 Hz 160W 0,55 A	892997.0 W2D300-CP02-16 400 V-Y/50 Hz 210W 0,43 A	895426.0 W4D420 400 V-Y/50 Hz 160W 0,55 A	892997.0 W2D300-CP02-16 400 V-Y/50 Hz 210W 0,43 A
Fan motor -M8 (-M9) Control cabinet . Ruebsamen	7.2751.00370 LV600 230 V/50 Hz 64W 0,29 A	7.2751.00370 LV600 230 V/50 Hz 64W 0,29 A	7.2751.00370 LV600 230 V/50 Hz 64W 0,29 A	7.2751.00370 LV600 230 V/50 Hz 64W 0,29 A	7.2751.00370 LV600 230 V/50 Hz 64W 0,29 A
Mains choke -R1 Siemens	integrated ---	integrated ---	integrated ---	integrated ---	integrated ---
Ferrit bead -R3.1 -R3.2 Magnetec	7.8538.00020 (M113) 1x 7.8538.00020 (M113)	7.8538.00020 (M113) 1x 7.8538.00020 (M113)	7.8538.00020 (M113) 1x 7.8538.00020 (M113)	7.8538.00020 (M113) 1x 7.8538.00020 (M113)	7.8538.00020 (M113) 1x 7.8538.00020 (M113)
Power supply filter -R11 Siemens	integrated ---	integrated ---	integrated ---	integrated ---	integrated ---
Frequency converter -T1 Control unit . Control panel . Siemens	7.8833.01190 6SL3210-1PE31-8AL0 7.7830.00710 6SL3244-0BB12-1BAx 7.7830.00100 6SL3255-0AA00-4CA1	7.8833.01190 6SL3210-1PE31-8AL0 7.7830.00710 6SL3244-0BB12-1BAx 7.7830.00100 6SL3255-0AA00-4CA1	7.8833.01200 6SL3210-1PE32-1AL0 7.7830.00710 6SL3244-0BB12-1BAx 7.7830.00100 6SL3255-0AA00-4CA1	7.8833.01200 6SL3210-1PE32-1AL0 7.7830.00710 6SL3244-0BB12-1BAx 7.7830.00100 6SL3255-0AA00-4CA1	7.8833.01210 6SL3210-1PE32-5AL0 7.7830.00710 6SL3244-0BB12-1BAx 7.7830.00100 6SL3255-0AA00-4CA1
motor cable -W211	3x 120 mm² 70 mm² 500 V - 70°C	3x 120 mm² 70 mm² 500 V - 70°C	3x 120 mm² 70 mm² 500 V - 70°C	3x 120 mm² 70 mm² 500 V - 70°C	3x 120 mm² 70 mm² 500 V - 70°C
connection -W280 -W281 -W282	95 mm² 95 mm2 95 mm2 500 V - 70°C	95 mm² 95 mm2 95 mm2 500 V - 70°C	120 mm² 120 mm2 120 mm2 500 V - 70°C	120 mm² 120 mm2 120 mm2 500 V - 70°C	120 mm² 120 mm2 120 mm2 500 V - 70°C
supply terminals -X0: U1/V1/W1 Handling Stripped length X	6x 894385.0 3x 894385.00030 3x 894385.00040 Wago 25-95 mm² fig. 3, Sht. 13 36 mm	6x 894385.0 3x 894385.00030 3x 894385.00040 Wago 25-95 mm² fig. 3, Sht. 13 36 mm	6x 895545.0 3x 895545.00030 3x 895545.00040 Wago 50-185 mm² fig. 3, Sht. 13 45 mm	6x 895545.0 3x 895545.00030 3x 895545.00040 Wago 50-185 mm² fig. 3, Sht. 13 45 mm	6x 895545.0 3x 895545.00030 3x 895545.00040 Wago 50-185 mm² fig. 3, Sht. 13 45 mm
PE-rail -X0:PE Torque Stripped length X	832489.00010 15Nm 25 mm+ Conductor crimp pins	832489.00010 15Nm 25 mm+ Conductor crimp pins	832489.00010 15Nm 27 mm+ Conductor crimp pins	832489.00010 15Nm 27 mm+ Conductor crimp pins	832489.00010 15Nm 27 mm+ Conductor crimp pins
supply -connection	fig. 3, Sht. 15	fig. 3, Sht. 15	fig. 3, Sht. 15	fig. 3, Sht. 15	fig. 3, Sht. 15

UXB.XFC-03020.04

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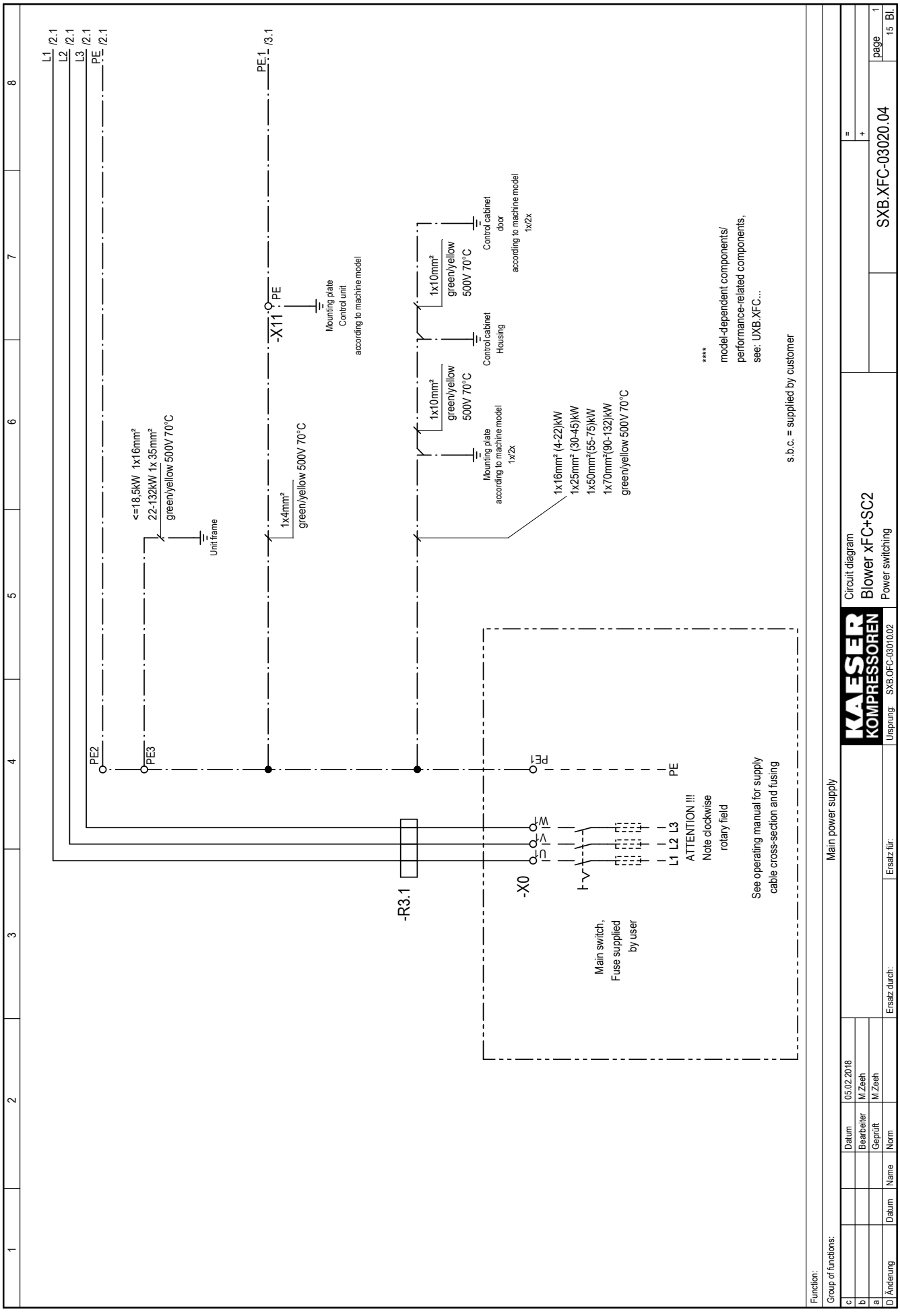
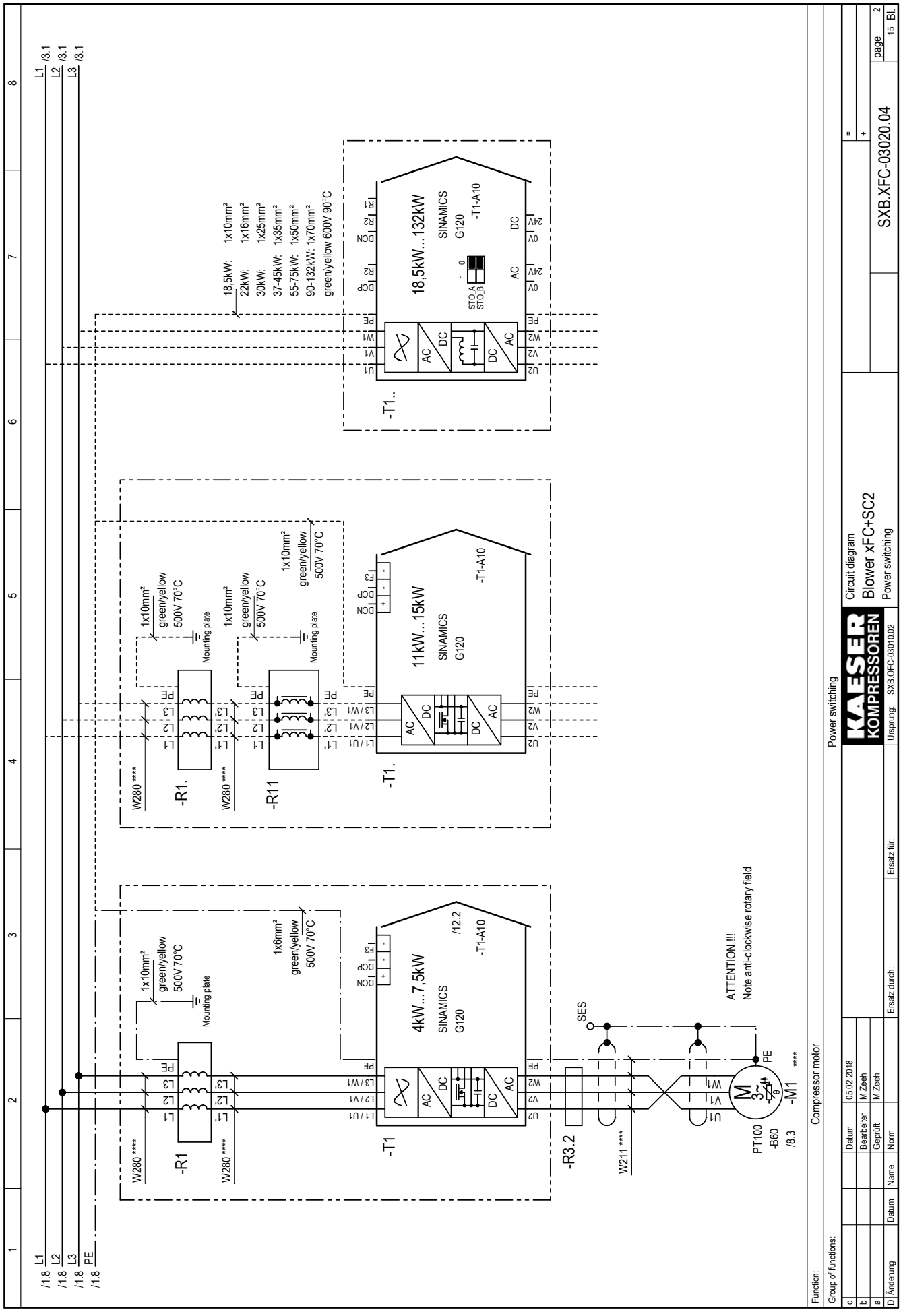
Equipment parts list
Blower xFC+SC2
performance-related components

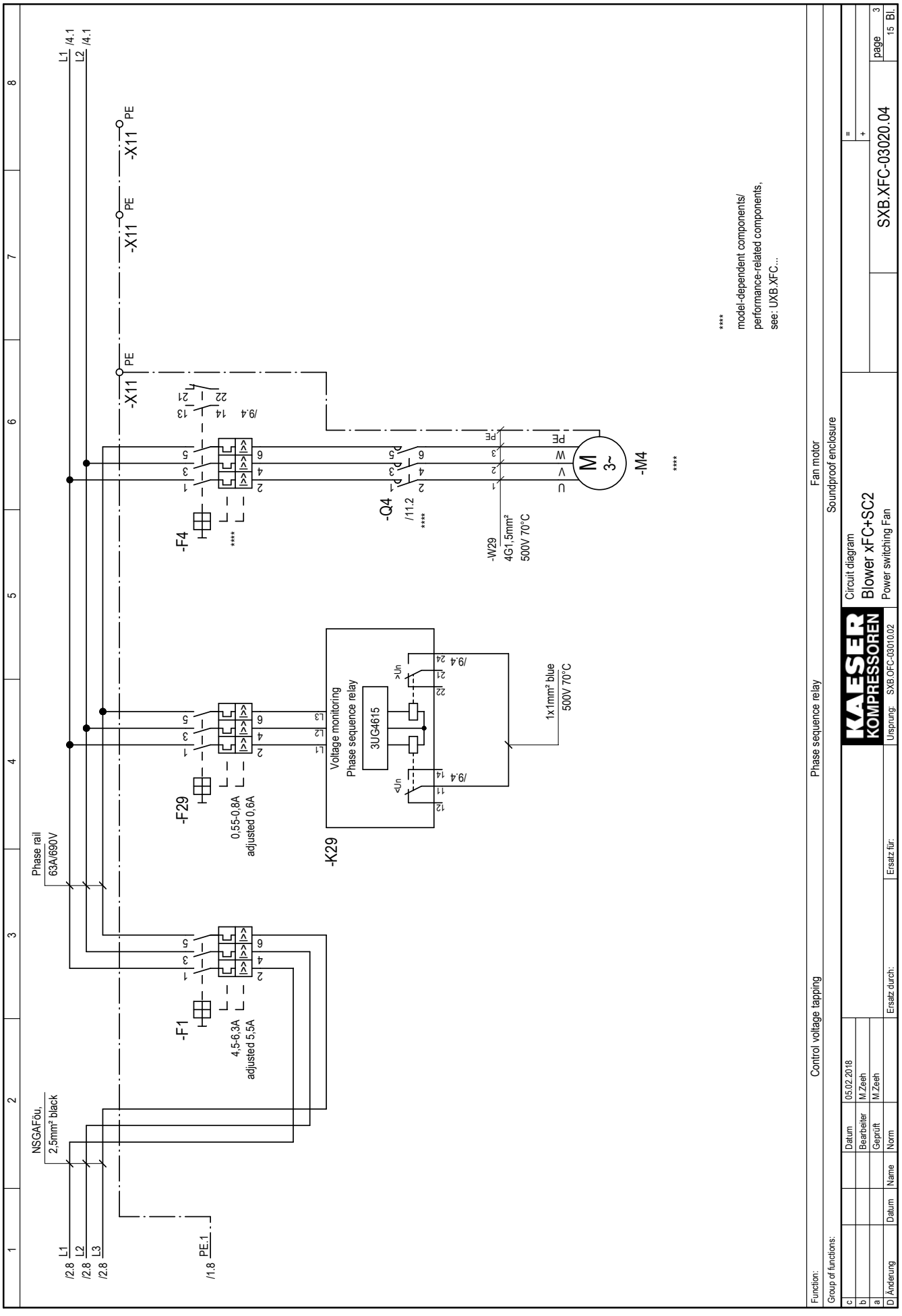
KAESER KOMPRESSOREN

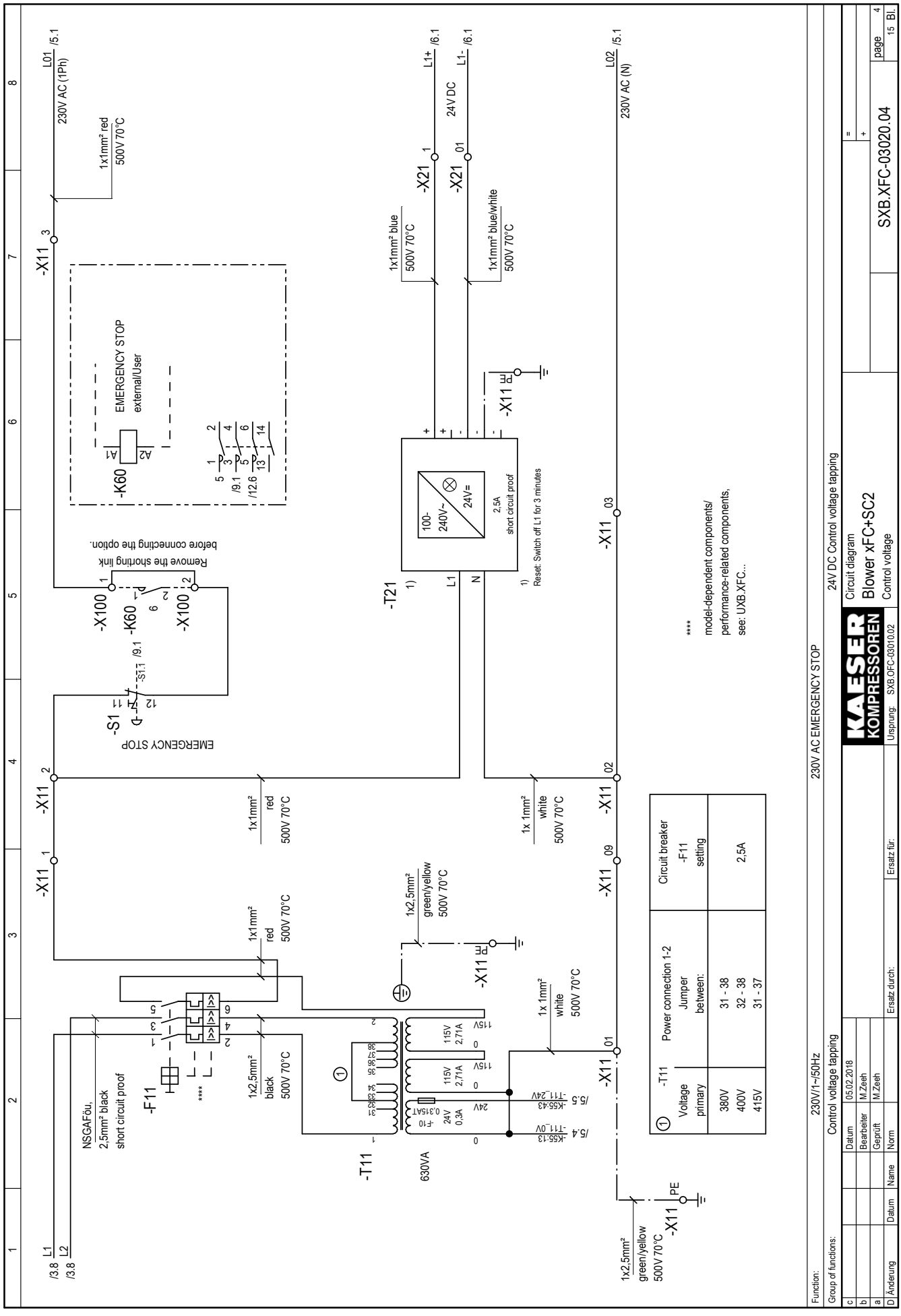
Ursprung:
Ersatz für:
Ersatz durch:

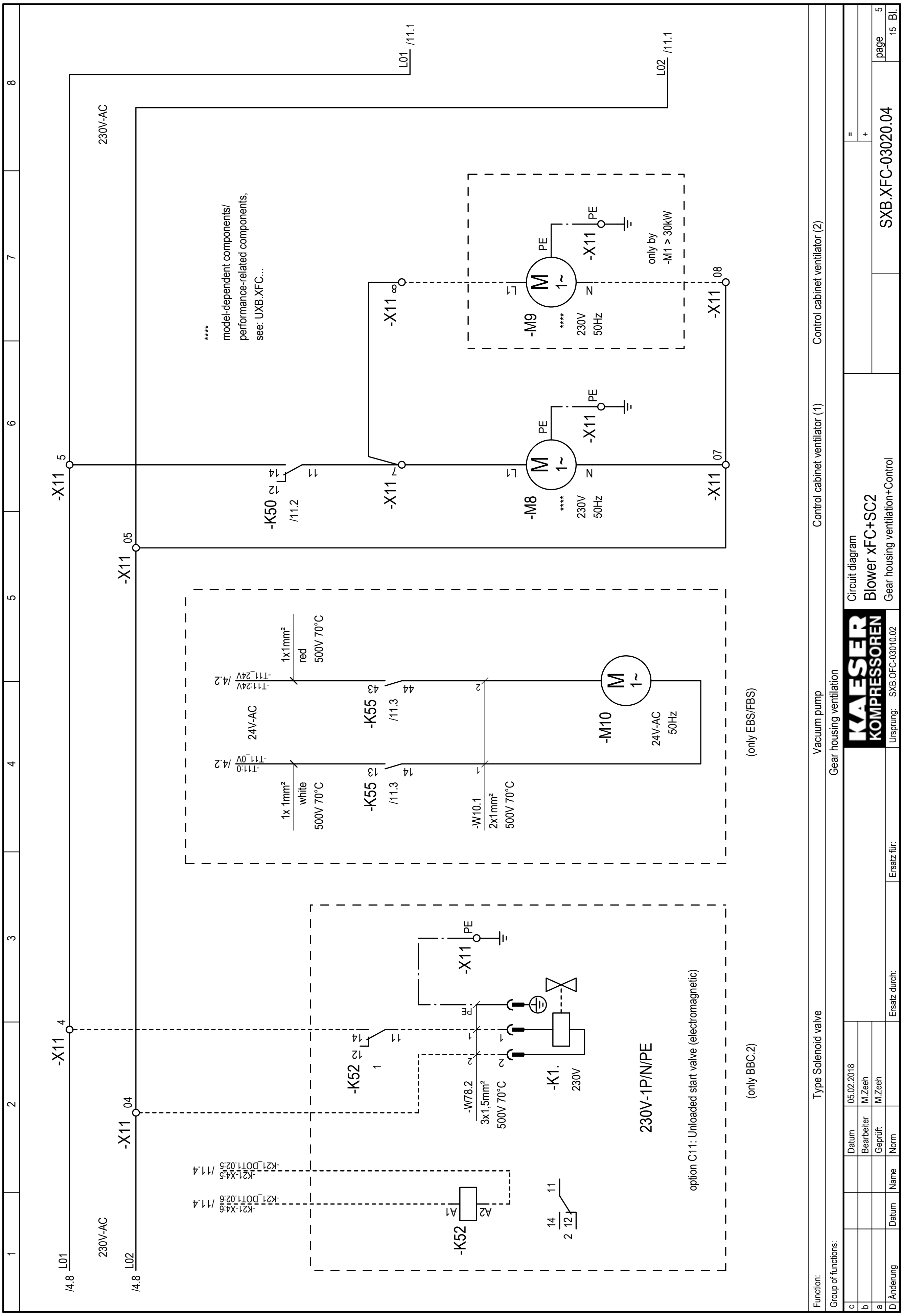
	Datum	Name
c	05.02.2018	
b	M.Zeeh	
a	M.Zeeh	
C Änderung	Norm	Datum


L1 /2.1
L2 /2.1
L3 /2.1
PE /2.1
PE:1 /3.1
-X11 PE
Mounting plate
Control unit
according to machine model
<=18,5kW 1x16mm²
22-132kW 1x 35mm²
green/yellow 500V 70°C
Unit frame
1x4mm²
green/yellow 500V 70°C
1x10mm²
green/yellow
500V 70°C
Control cabinet
Housing
Control cabinet
door
according to machine model
1x/2x
Mounting plate
according to machine model
1x/2x
1x16mm² (4-22)kW
1x25mm² (30-45)kW
1x50mm²(55-75)kW
1x70mm²(90-132)kW
green/yellow 500V 70°C
****
model-dependent components/
performance-related components,
see: UXB.XFC...
s.b.c. = supplied by customer
PE2
PE3
PE1
PE
-R3.1
-X0
L1 L2 L3
ATTENTION !!!
Note clockwise
rotary field
Main switch,
Fuse supplied
by user
See operating manual for supply
cable cross-section and fusing
Function:
Group of functions:
Main power supply
KAESER KOMPRESSOREN
Circuit diagram
Blower xFC+SC2
Power switching
SXB.XFC-03020.04
page 1
Datum 05.02.2018
Bearbeiter M.Zeeh
Geprüft M.Zeeh
Name Norm
Ersatz durch:
Ersatz für:
Ursprung: SXB.OFC-03010.02
Änderung Datum Name
15 Bl.


L1 /3.1
L2 /3.1
L3 /3.1
L1 /1.8
L2 /1.8
L3 /1.8
PE /1.8
-T1..
18,5kW...132kW
SINAMICS G120
-T1-A10
18,5kW: 1x10mm²
22kW: 1x16mm²
30kW: 1x25mm²
37-45kW: 1x35mm²
55-75kW: 1x50mm²
90-132kW: 1x70mm²
green/yellow 600V 90°C
STO_A
STO_B
-T1.
11kW...15kW
SINAMICS G120
-T1-A10
W280 ****
-R1.
-R11
1x10mm²
green/yellow
500V 70°C
Mounting plate
-T1
4kW...7,5kW
SINAMICS G120
/12.2
-T1-A10
1x6mm²
green/yellow
500V 70°C
-R3.2
W211 ****
SES
ATTENTION !!!
Note anti-clockwise rotary field
PT100
-B60
/8.3
-M1
PE
Power switching
Compressor motor
Function:
Group of functions:
Datum 05.02.2018
Bearbeiter M.Zeeh
Geprüft M.Zeeh
Name
Norm
Ersatz durch:
Ersatz für:
Ursprung: SXB.OFC-03010.02
KAESER KOMPRESSOREN
Circuit diagram
Blower xFC+SC2
Power switching
SXB.XFC-03020.04
page 2
15 Bl.


L1 /4.1
L2 /4.1
-X11 PE
-X11 PE
-X11 PE
-F4
-Q4
/11.2
****
-W29
4G1,5mm²
500V 70°C
-M4
M
3~
U
V
W
PE
****
model-dependent components/
performance-related components,
see: UXB.XFC...
Phase rail
63A/690V
-F29
0,55-0,8A
adjusted 0,6A
-K29
Voltage monitoring
Phase sequence relay
3UG4615
1x1mm² blue
500V 70°C
-F1
4,5-6,3A
adjusted 5,5A
NSGAFöu,
2,5mm² black
L1 /2.8
L2 /2.8
L3 /2.8
PE.1 /1.8
Function: Control voltage tapping
Phase sequence relay
Fan motor
Group of functions:
Soundproof enclosure
KAESER KOMPRESSOREN
Circuit diagram
Blower xFC+SC2
Power switching Fan
SXB.XFC-03020.04
page 3
Datum 05.02.2018
Bearbeiter M.Zeeh
Geprüft M.Zeeh
Norm
Ersatz durch:
Ersatz für:
Ursprung: SXB.OFC-03010.02
Änderung Datum Name


L01 /5.1
230V AC (1Ph)
1x1mm² red
500V 70°C
-X11
EMERGENCY STOP
external//User
-K60
A1
A2
/9.1
/12.6
Remove the shorting link
before connecting the option.
-X100
-K60
-X100
-S1
EMERGENCY STOP
-S1.1
/9.1
1x1mm² blue
500V 70°C
-X21
L1+ /6.1
L1- /6.1
24V DC
1x1mm² blue/white
500V 70°C
-X11 PE
-T21
100-240V~
24V=
2,5A
short circuit proof
L1
N
1) Reset: Switch off L1 for 3 minutes
L02 /5.1
230V AC (N)
-X11 03
-X11 02
-X11 09
-X11 01
1x1mm² red 500V 70°C
1x2,5mm² green/yellow 500V 70°C
1x 1mm² white 500V 70°C
1x2,5mm² black 500V 70°C
NSGAFöu, 2,5mm² black short circuit proof
-F11
****
-T11
630VA
115V 2,71A
24V 0,3A
-F10 0,315AT
/5.5 -K55:43 -T11_24V
/5.4 -K55:13 -T11_0V
① -T11 Voltage primary
Power connection 1-2 Jumper between:
Circuit breaker -F11 setting
380V 400V 415V
31 - 38 32 - 38 31 - 37
2,5A
PE
1x2,5mm² green/yellow 500V 70°C
-X11 PE
**** model-dependent components/ performance-related components, see: UXB.XFC...
Function: 230V/1~/50Hz 230V AC EMERGENCY STOP 24V DC Control voltage tapping
Group of functions: Control voltage tapping
KAESER KOMPRESSOREN
Circuit diagram
Blower xFC+SC2
Control voltage
SXB.XFC-03020.04
page 4
15 BL
Datum 05.02.2018
Bearbeiter M.Zeeh
Geprüft M.Zeeh
Norm
Ersatz durch:
Ersatz für:
Ursprung: SXB.OFC-03010.02
D Änderung Datum Name


230V-AC
L01
L02
-X11
-K50
-K55
-K52
-M8
-M9
-M10
-K1.
230V-1P/N/PE
option C11: Unloaded start valve (electromagnetic)
(only BBC.2)
(only EBS/FBS)
24V-AC
50Hz
only by
-M1 > 30kW
****
model-dependent components/
performance-related components,
see: UXB.XFC...
-W10.1
2x1mm²
500V 70°C
-W78.2
3x1,5mm²
500V 70°C
1x 1mm²
white
1x1mm²
red
Type Solenoid valve
Vacuum pump
Gear housing ventilation
Control cabinet ventilator (1)
Control cabinet ventilator (2)
Circuit diagram
Blower xFC+SC2
Gear housing ventilation+Control
KAESER KOMPRESSOREN
Ursprung: SXB.OFC-03010.02
Datum 05.02.2018
Bearbeiter M.Zeeh
Geprüft M.Zeeh
SXB.XFC-03020.04
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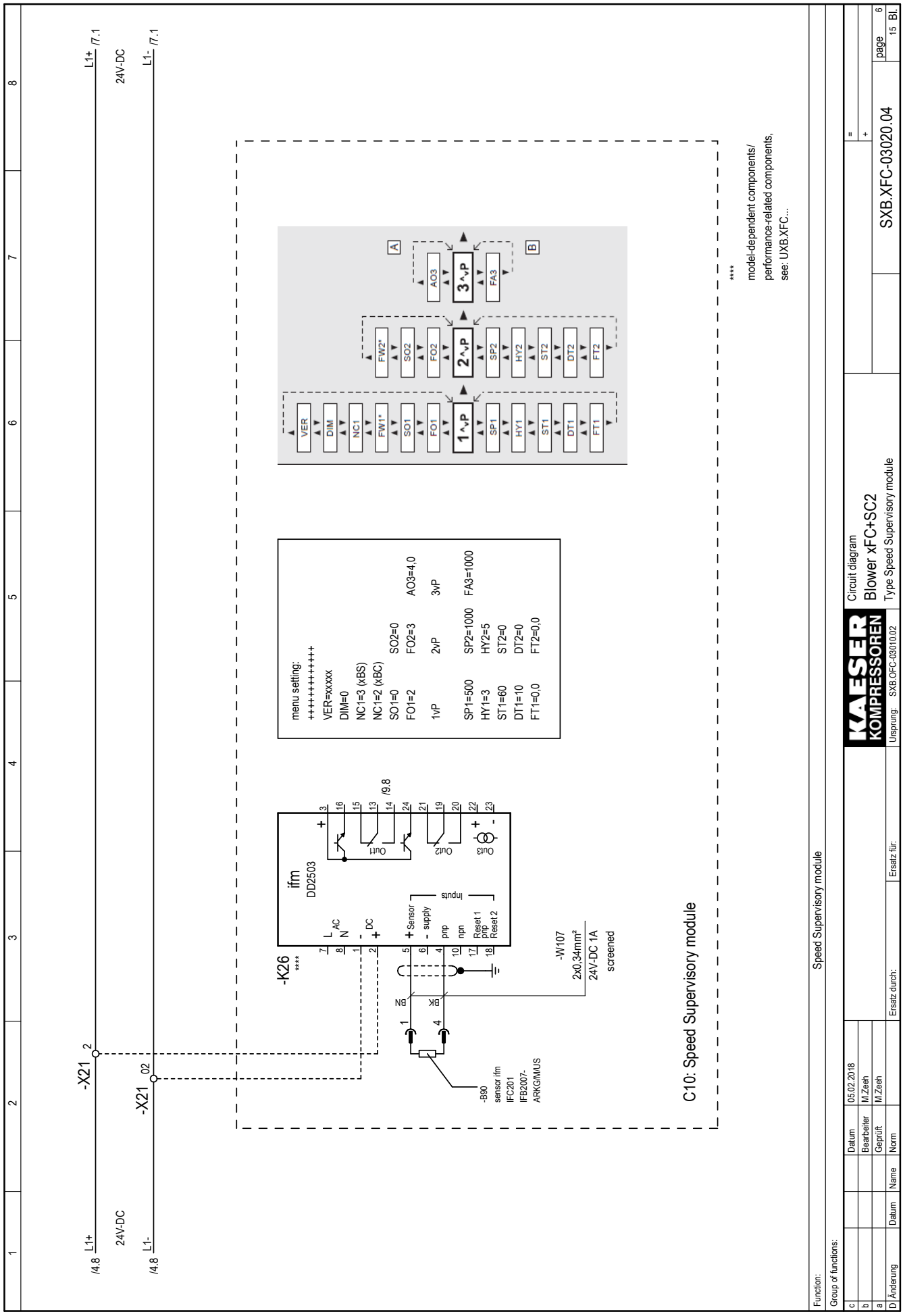
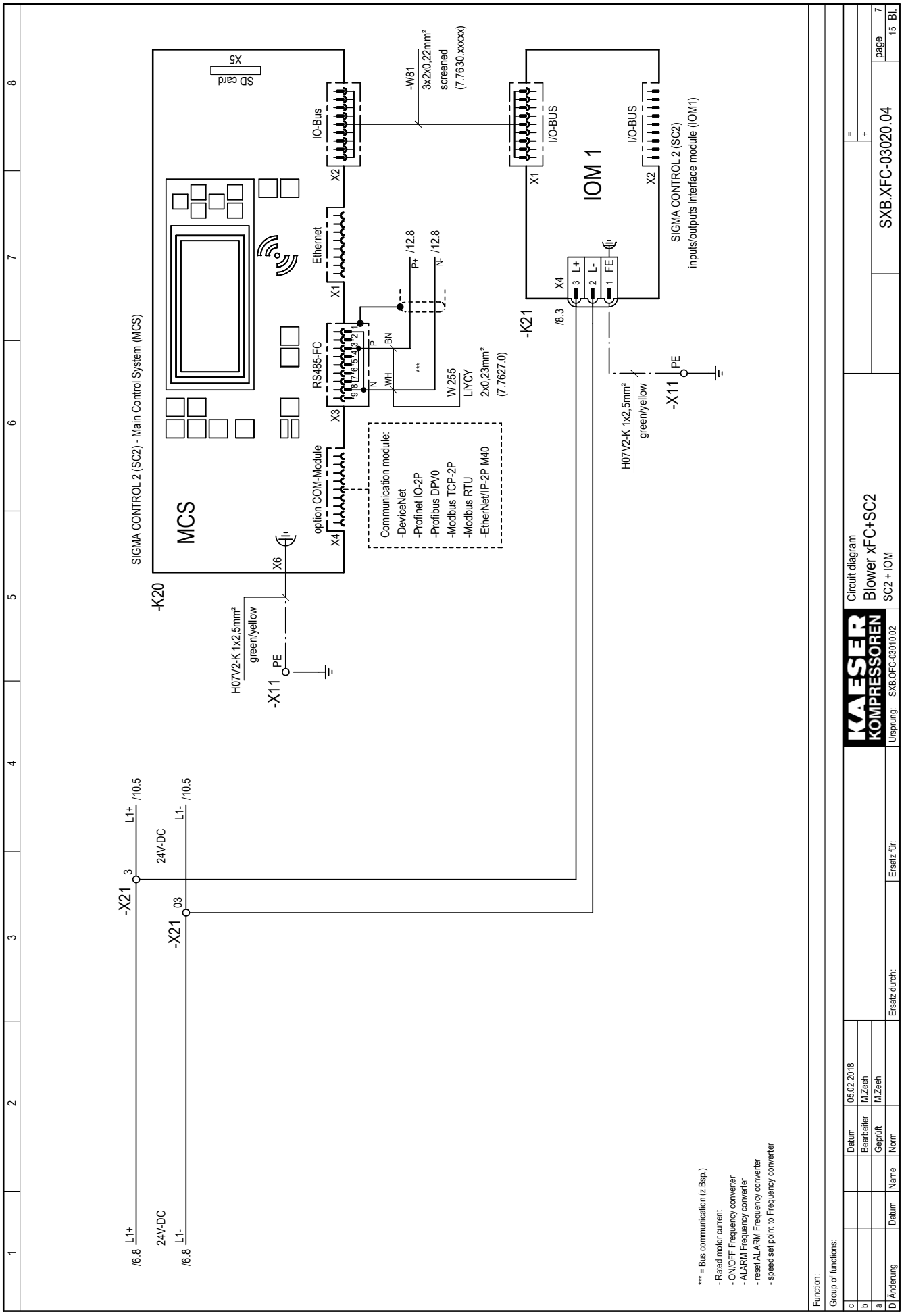
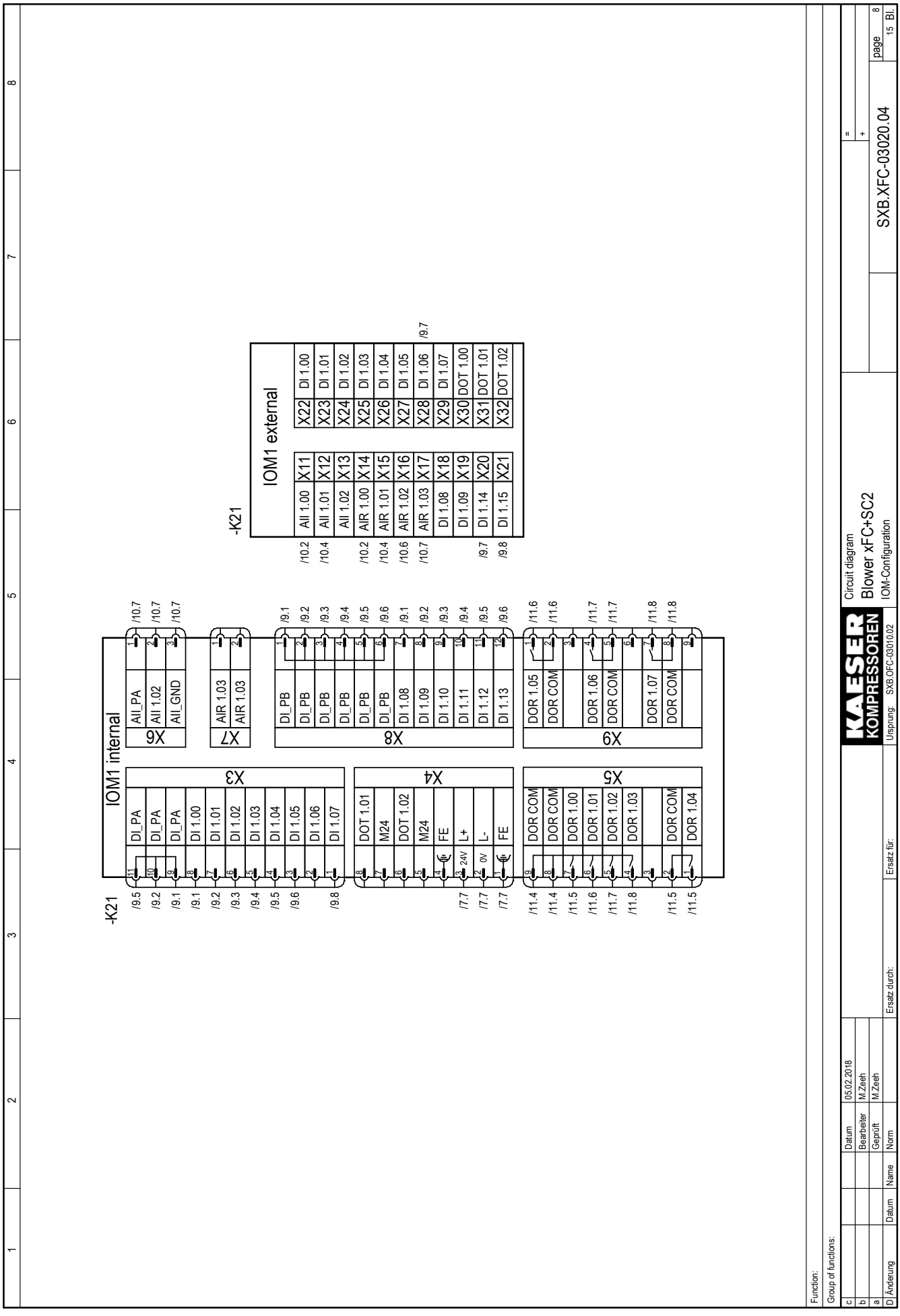
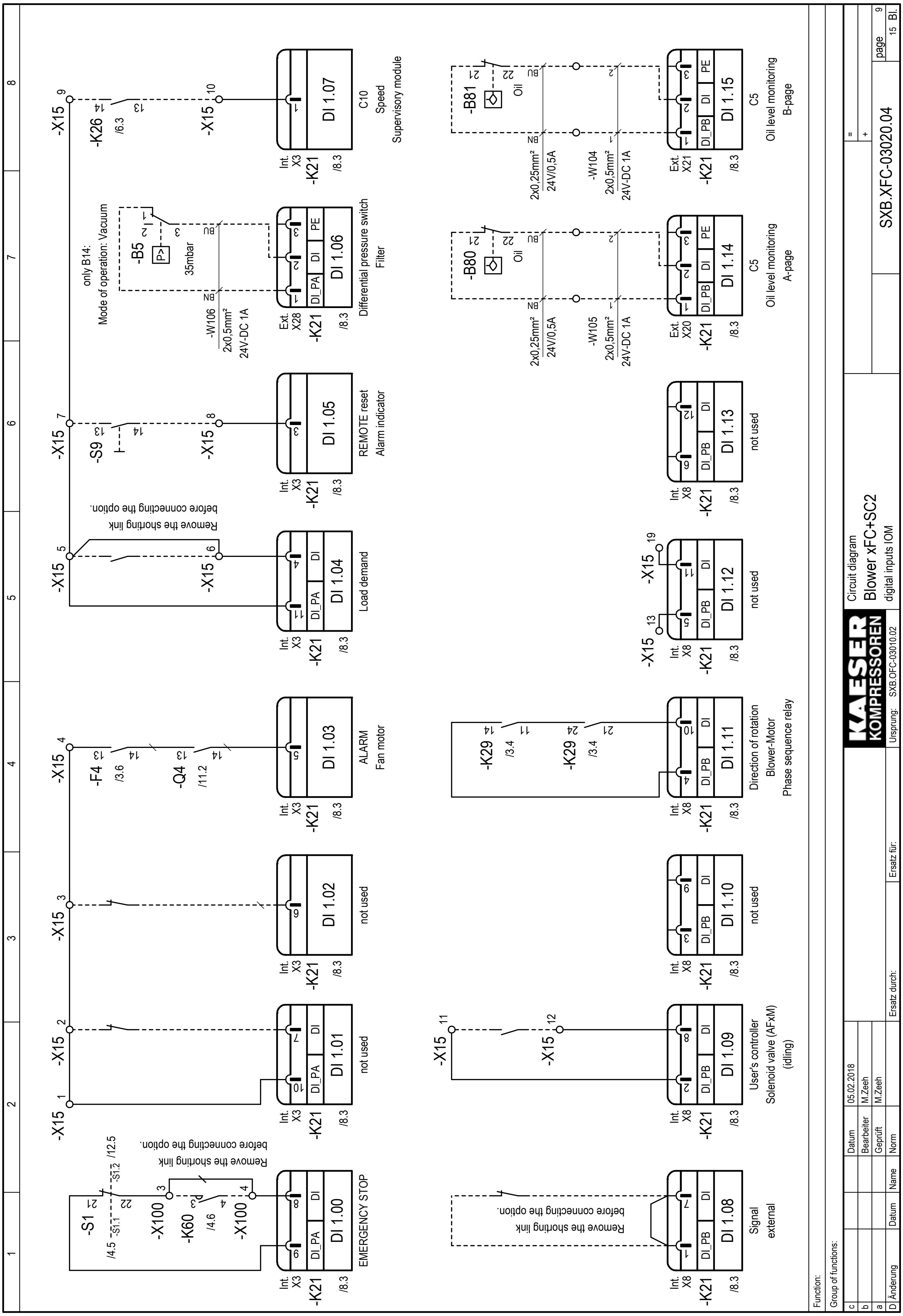
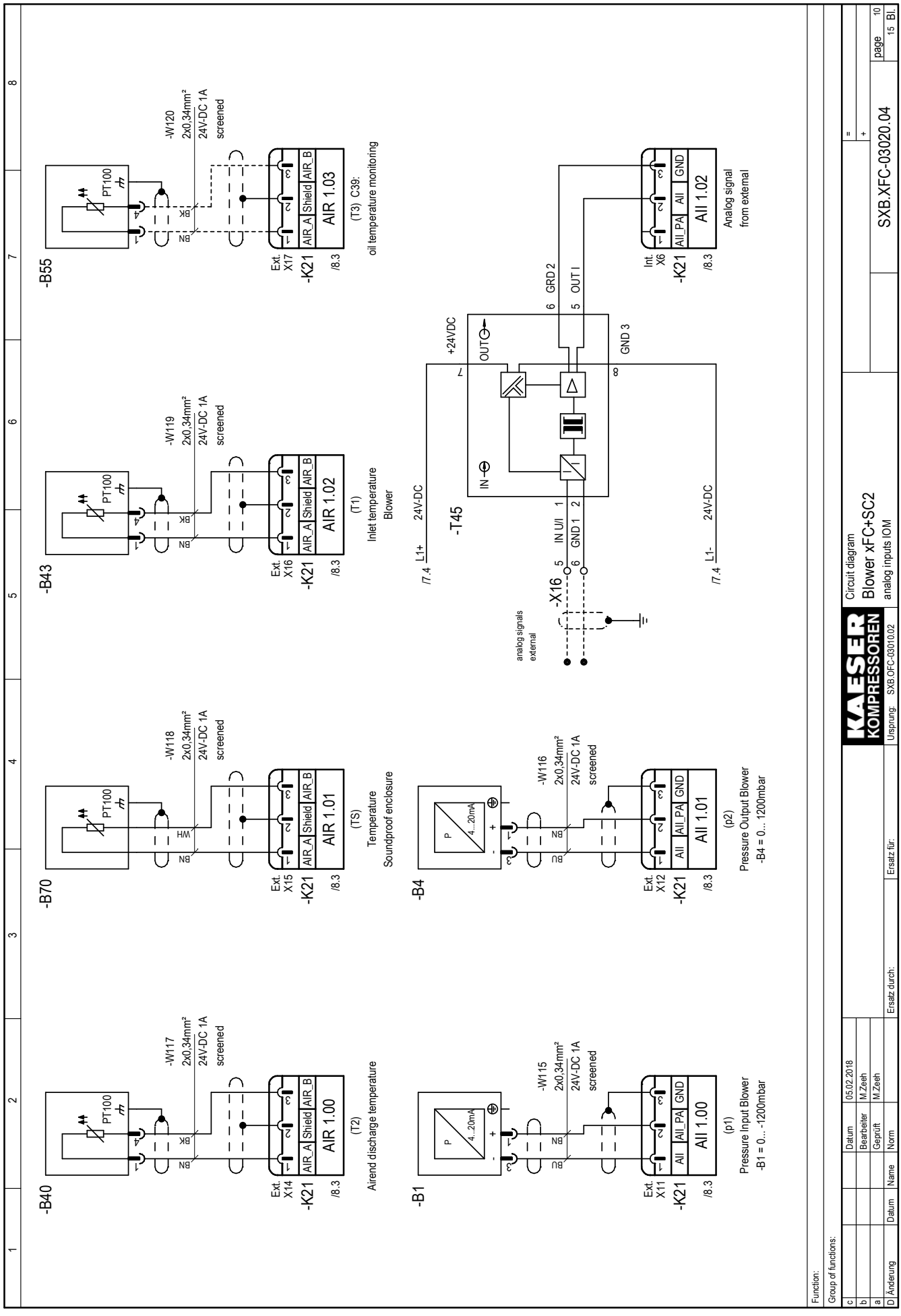
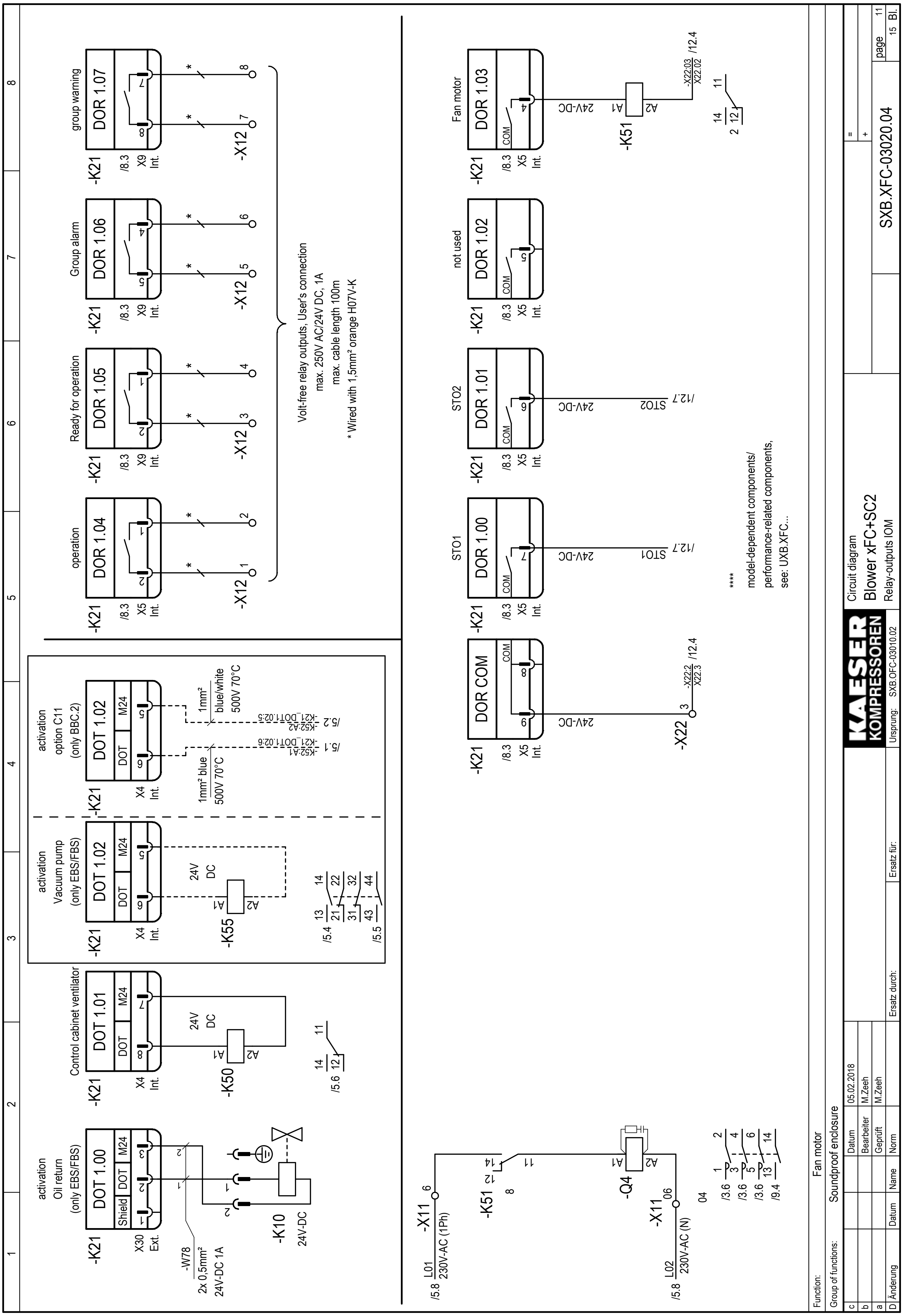

L1+ /7.1
24V-DC
L1- /7.1
-X21 2
-X21 02
L1+ /4.8
24V-DC
L1- /4.8
C10: Speed Supervisory module
-K26 ****
ifm
DD2503
menu setting:
++++++++++++
VER=xxxxx
DIM=0
NC1=3 (xBS)
NC1=2 (xBC)
SO1=0 SO2=0
FO1=2 FO2=3 AO3=4,0
1vP 2vP 3vP
SP1=500 SP2=1000 FA3=1000
HY1=3 HY2=5
ST1=60 ST2=0
DT1=10 DT2=0
FT1=0,0 FT2=0,0
-W107
2x0,34mm²
24V-DC 1A
screened
-B90
sensor ifm
IFC201
IFB2007-
ARKG/M/US
BN
BK
VER
DIM
NC1
FW1*
SO1
FO1
1^vP
SP1
HY1
ST1
DT1
FT1
FW2*
SO2
FO2
2^vP
SP2
HY2
ST2
DT2
FT2
3^vP
AO3
FA3
A
B
****
model-dependent components/
performance-related components,
see: UXB.XFC...
Function:
Speed Supervisory module
Group of functions:
KAESER KOMPRESSOREN
Circuit diagram
Blower xFC+SC2
Type Speed Supervisory module
Ursprung: SXB.OFC-03010.02
Ersatz für:
Ersatz durch:
SXB.XFC-03020.04
page 6
15 Bl.
Datum 05.02.2018
Bearbeiter M.Zeeh
Geprüft M.Zeeh
Norm
Name
Datum
Änderung

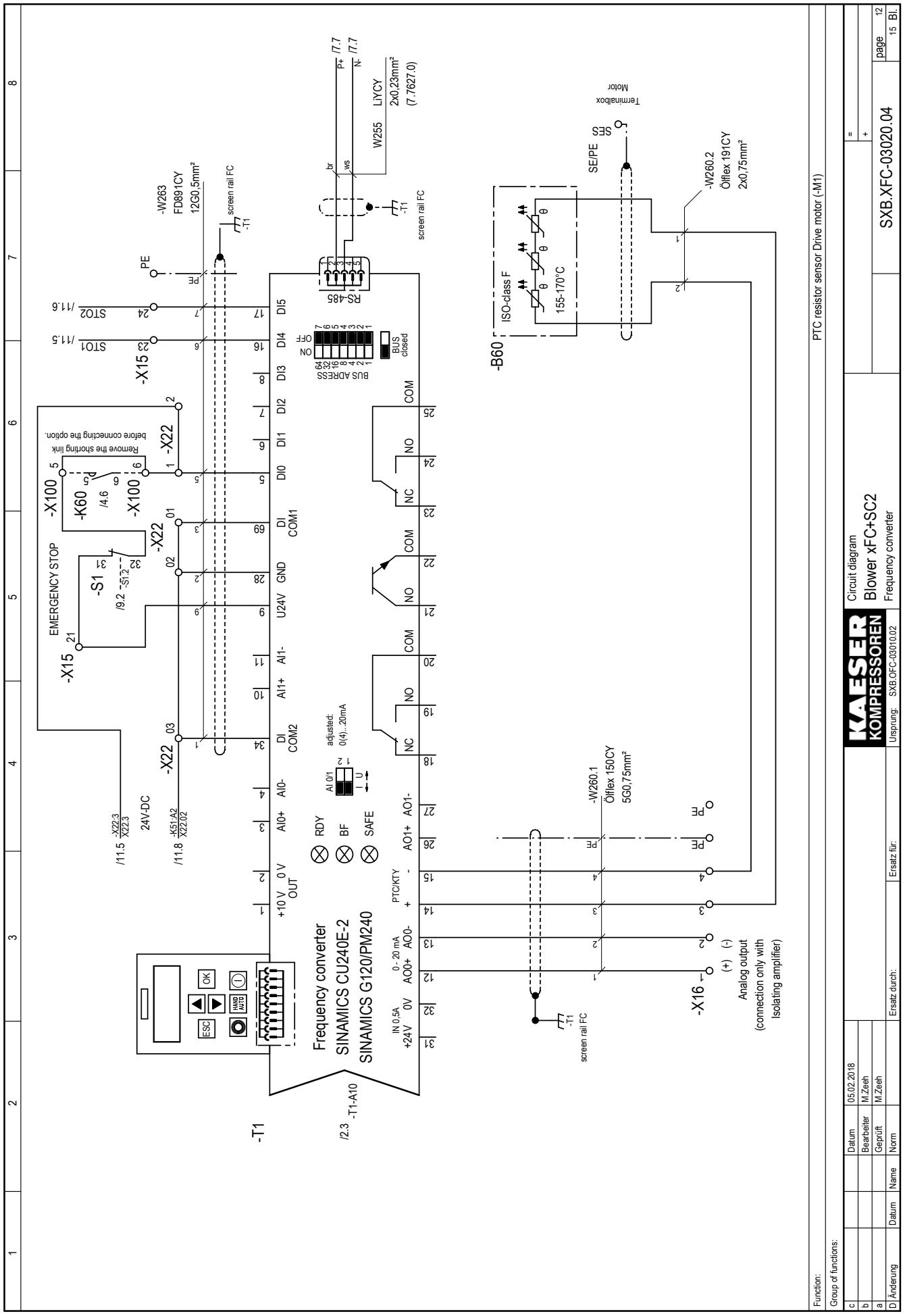

SIGMA CONTROL 2 (SC2) - Main Control System (MCS)
MCS
-K20
SD card
X5
IO-Bus
X2
-W81
3x2x0,22mm²
screened
(7.7630.xxxxx)
Ethernet
X1
RS485-FC
X3
option COM-Module
X4
X6
P+ /12.8
N- /12.8
W 255
LiYCY
2x0,23mm²
(7.7627.0)
Communication module:
-DeviceNet
-Profinet IO-2P
-Profibus DPV0
-Modbus TCP-2P
-Modbus RTU
-EtherNet/IP-2P M40
H07V2-K 1x2.5mm²
green/yellow
-X11
PE
-K21
/8.3
X4
3 L+
2 L-
1 FE
IOM 1
I/O-BUS
X1
I/O-BUS
X2
SIGMA CONTROL 2 (SC2)
inputs/outputs Interface module (IOM1)
H07V2-K 1x2,5mm²
green/yellow
-X11
PE
-X21
3
03
24V-DC
L1+ /10.5
L1- /10.5
/6.8 L1+
/6.8 L1-
24V-DC
*** = Bus communication (z.Bsp.)
- Rated motor current
- ON/OFF Frequency converter
- ALARM Frequency converter
- reset ALARM Frequency converter
- speed set point to Frequency converter
Function:
Group of functions:
KAESER KOMPRESSOREN
Circuit diagram
Blower xFC+SC2
SC2 + IOM
SXB.XFC-03020.04
page 7
15 Bl.
Datum 05.02.2018
Bearbeiter M.Zeeh
Geprüft M.Zeeh
Norm
Ersatz durch:
Ersatz für:
Ursprung: SXB.OFC-03010.02
Änderung Datum Name


IOM1 internal
-K21
X6
AII_PA
AII 1.02
AII_GND
X7
AIR 1.03
AIR 1.03
X8
DI_PB
DI 1.08
DI 1.09
DI 1.10
DI 1.11
DI 1.12
DI 1.13
X9
DOR 1.05
DOR COM
DOR 1.06
DOR COM
DOR 1.07
DOR COM
X3
DI_PA
DI_PA
DI_PA
DI 1.00
DI 1.01
DI 1.02
DI 1.03
DI 1.04
DI 1.05
DI 1.06
DI 1.07
X4
DOT 1.01
M24
DOT 1.02
M24
FE
L+
L-
FE
X5
DOR COM
DOR COM
DOR 1.00
DOR 1.01
DOR 1.02
DOR 1.03
DOR COM
DOR 1.04
IOM1 external
-K21
X11 AII 1.00
X12 AII 1.01
X13 AII 1.02
X14 AIR 1.00
X15 AIR 1.01
X16 AIR 1.02
X17 AIR 1.03
X18 DI 1.08
X19 DI 1.09
X20 DI 1.14
X21 DI 1.15
X22 DI 1.00
X23 DI 1.01
X24 DI 1.02
X25 DI 1.03
X26 DI 1.04
X27 DI 1.05
X28 DI 1.06
X29 DI 1.07
X30 DOT 1.00
X31 DOT 1.01
X32 DOT 1.02
KAESER KOMPRESSOREN
Circuit diagram
Blower xFC+SC2
IOM-Configuration
SXB.XFC-03020.04
page 8
15 Bl.
Ursprung: SXB.OFC-03010.02
Ersatz für:
Ersatz durch:
Function:
Group of functions:
Datum 05.02.2018
Bearbeiter M.Zeeh
Geprüft M.Zeeh
Norm
Name
Datum
Änderung


DI 1.00
EMERGENCY STOP
DI 1.01
not used
DI 1.02
not used
DI 1.03
ALARM
Fan motor
DI 1.04
Load demand
DI 1.05
REMOTE reset
Alarm indicator
DI 1.06
Differential pressure switch
Filter
DI 1.07
C10
Speed
Supervisory module
DI 1.08
Signal
external
DI 1.09
User's controller
Solenoid valve (AFxM)
(idling)
DI 1.10
not used
DI 1.11
Direction of rotation
Blower-Motor
Phase sequence relay
DI 1.12
not used
DI 1.13
not used
DI 1.14
C5
Oil level monitoring
A-page
DI 1.15
C5
Oil level monitoring
B-page
Remove the shorting link
before connecting the option.
only B14:
Mode of operation: Vacuum
35mbar
-W106
2x0,5mm²
24V-DC 1A
-W104
-W105
2x0,25mm²
24V/0,5A
Circuit diagram
Blower xFC+SC2
digital inputs IOM
SXB.XFC-03020.04
Ursprung: SXB.OFC-03010.02
05.02.2018
M.Zeeh
page 9
15 Bl.


-B40
PT100
-W117
2x0,34mm²
24V-DC 1A
screened
BN
BK
Ext.
X14
-K21
AIR_A
Shield
AIR_B
AIR 1.00
/8.3
(T2)
Airend discharge temperature
-B70
PT100
-W118
2x0,34mm²
24V-DC 1A
screened
WH
BN
Ext.
X15
-K21
AIR_A
Shield
AIR_B
AIR 1.01
/8.3
(TS)
Temperature
Soundproof enclosure
-B43
PT100
-W119
2x0,34mm²
24V-DC 1A
screened
BK
BN
Ext.
X16
-K21
AIR_A
Shield
AIR_B
AIR 1.02
/8.3
(T1)
Inlet temperature
Blower
-B55
PT100
-W120
2x0,34mm²
24V-DC 1A
screened
BK
BN
Ext.
X17
-K21
AIR_A
Shield
AIR_B
AIR 1.03
/8.3
(T3) C39:
oil temperature monitoring
-B1
P
4...20mA
-W115
2x0,34mm²
24V-DC 1A
screened
BU
BN
Ext.
X11
-K21
All
All_PA
GND
All 1.00
/8.3
(p1)
Pressure Input Blower
-B1 = 0... -1200mbar
-B4
P
4...20mA
-W116
2x0,34mm²
24V-DC 1A
screened
BU
BN
Ext.
X12
-K21
All
All_PA
GND
All 1.01
/8.3
(p2)
Pressure Output Blower
-B4 = 0... 1200mbar
-T45
+24VDC
OUT
IN
7
8
6 GRD 2
5 OUT I
GND 3
IN U/I 1
GND 1 2
5
6
-X16
analog signals
external
/7.4 L1+ 24V-DC
/7.4 L1- 24V-DC
Int.
X6
-K21
All_PA
All
GND
All 1.02
/8.3
Analog signal
from external
Function:
Group of functions:
c
b
a
D Änderung
Datum
Name
Norm
Datum
05.02.2018
Bearbeiter
M.Zeeh
Geprüft
M.Zeeh
Ersatz durch:
Ersatz für:
Ursprung: SXB.OFC-03010.02
KAESER KOMPRESSOREN
Circuit diagram
Blower xFC+SC2
analog inputs IOM
SXB.XFC-03020.04
page 10
15 Bl.


activation Oil return (only EBS/FBS)
-K21
DOT 1.00
Shield
DOT
M24
X30 Ext.
-W78 2x 0,5mm² 24V-DC 1A
-K10 24V-DC
Control cabinet ventilator
DOT 1.01
X4 Int.
-K50
24V DC
activation Vacuum pump (only EBS/FBS)
DOT 1.02
-K55
activation option C11 (only BBC.2)
1mm² blue 500V 70°C
1mm² blue/white 500V 70°C
operation
DOR 1.04
Ready for operation
DOR 1.05
Group alarm
DOR 1.06
group warning
DOR 1.07
-X12
Volt-free relay outputs, User's connection
max. 250V AC/24V DC, 1A
max. cable length 100m
* Wired with 1,5mm² orange H07V-K
-X11
230V-AC (1Ph)
230V-AC (N)
-K51
-Q4
DOR COM
-X22
STO1
DOR 1.00
STO2
DOR 1.01
not used
DOR 1.02
Fan motor
DOR 1.03
24V-DC
****
model-dependent components/
performance-related components,
see: UXB.XFC...
Function: Fan motor
Group of functions: Soundproof enclosure
Datum 05.02.2018
Bearbeiter M.Zeeh
Geprüft M.Zeeh
Circuit diagram
Blower xFC+SC2
Relay-outputs IOM
SXB.XFC-03020.04
Ursprung: SXB.OFC-03010.02
page 11
15 Bl.


Frequency converter
SINAMICS CU240E-2
SINAMICS G120/PM240
-T1
-T1-A10
-X15
-X22
-X100
-K60
-S1
EMERGENCY STOP
-W263
FD891CY
12G0,5mm²
screen rail FC
-T1
PE
STO2
STO1
DI5
DI4
DI3
DI2
DI1
DI0
DI COM1
GND
U24V
AI1-
AI1+
DI COM2
AI0-
AI0+
0 V OUT
+10 V
RS-485
BUS ADDRESS
BUS closed
W255
LiYCY
2x0,23mm²
(7.7627.0)
P+
N-
-B60
ISO-class F
155-170°C
SE/PE
Terminalbox Motor
-W260.2
Ölflex 191CY
2x0,75mm²
-W260.1
Ölflex 150CY
5G0,75mm²
-X16
Analog output
(connection only with Isolating amplifier)
PTC resistor sensor Drive motor (-M1)
RDY
BF
SAFE
24V-DC
Remove the shorting link before connecting the option.
adjusted: 0(4)...20mA
Function:
Group of functions:
Circuit diagram
Blower xFC+SC2
Frequency converter
SXB.XFC-03020.04
page 12 15 BL
Ursprung: SXB.OFC-03010.02
Ersatz für:
Ersatz durch:
Datum 05.02.2018
Bearbeiter M.Zeeh
Geprüft M.Zeeh
Norm
Name
Datum
Änderung

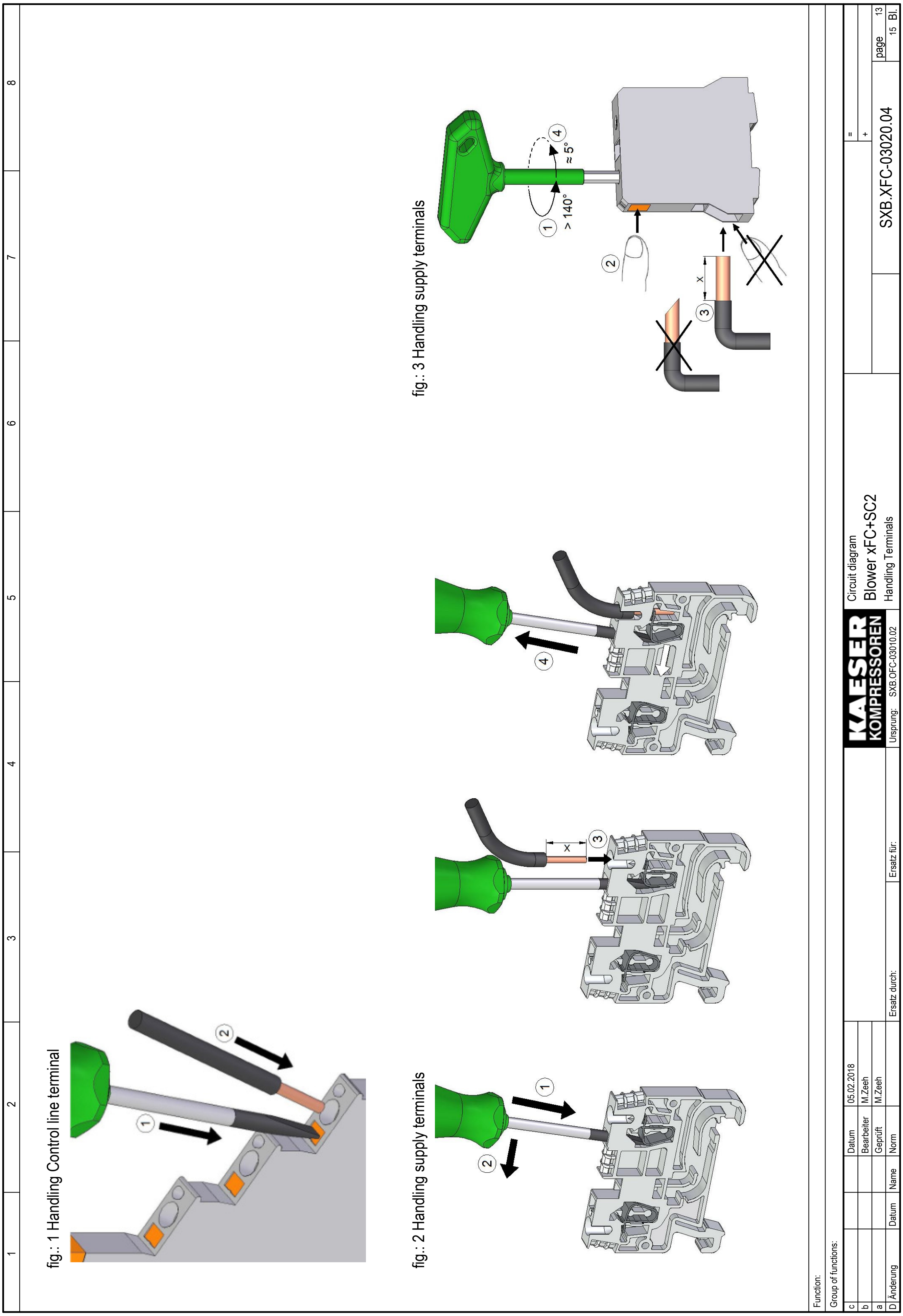


fig.: 1 Handling Control line terminal
fig.: 2 Handling supply terminals
fig.: 3 Handling supply terminals
> 140°
≈ 5°
x
Function:
Group of functions:
Datum
05.02.2018
Bearbeiter
M.Zeeh
Geprüft
M.Zeeh
Norm
Änderung
Datum
Name
Ersatz durch:
Ersatz für:
Ursprung: SXB.OFC-03010.02
KAESER KOMPRESSOREN
Circuit diagram
Blower xFC+SC2
Handling Terminals
SXB.XFC-03020.04
page 13
15 Bl.

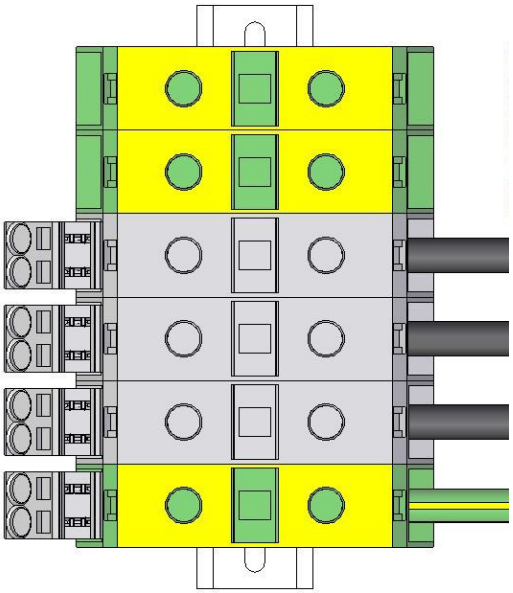


fig.: 2 Feed line connection

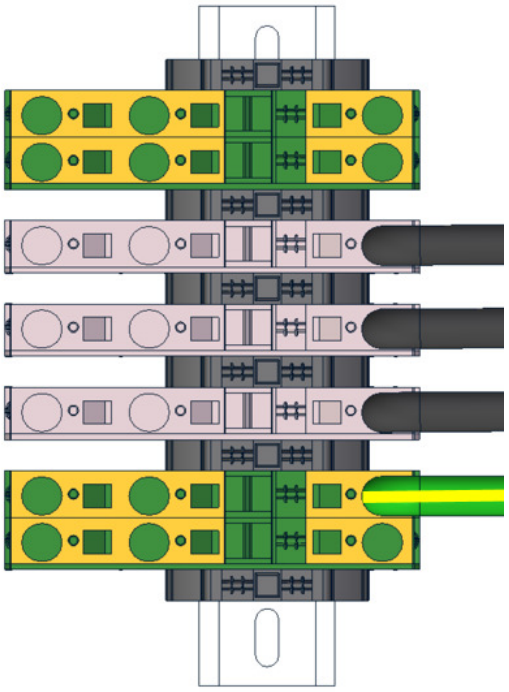


fig.: 1 Feed line connection

Function:
Group of functions:

c			Datum	05.02.2018			
b			Bearbeiter	M.Zeeh			
a			Geprüft	M.Zeeh			
D	Änderung	Datum	Name	Norm	Ersatz durch:	Ersatz für:	Ursprung: SXB.OFC-03010.02

KAESER KOMPRESSOREN

Circuit diagram
Blower xFC+SC2
Feed line connection

SXB.XFC-03020.04

page 14 15 Bl.

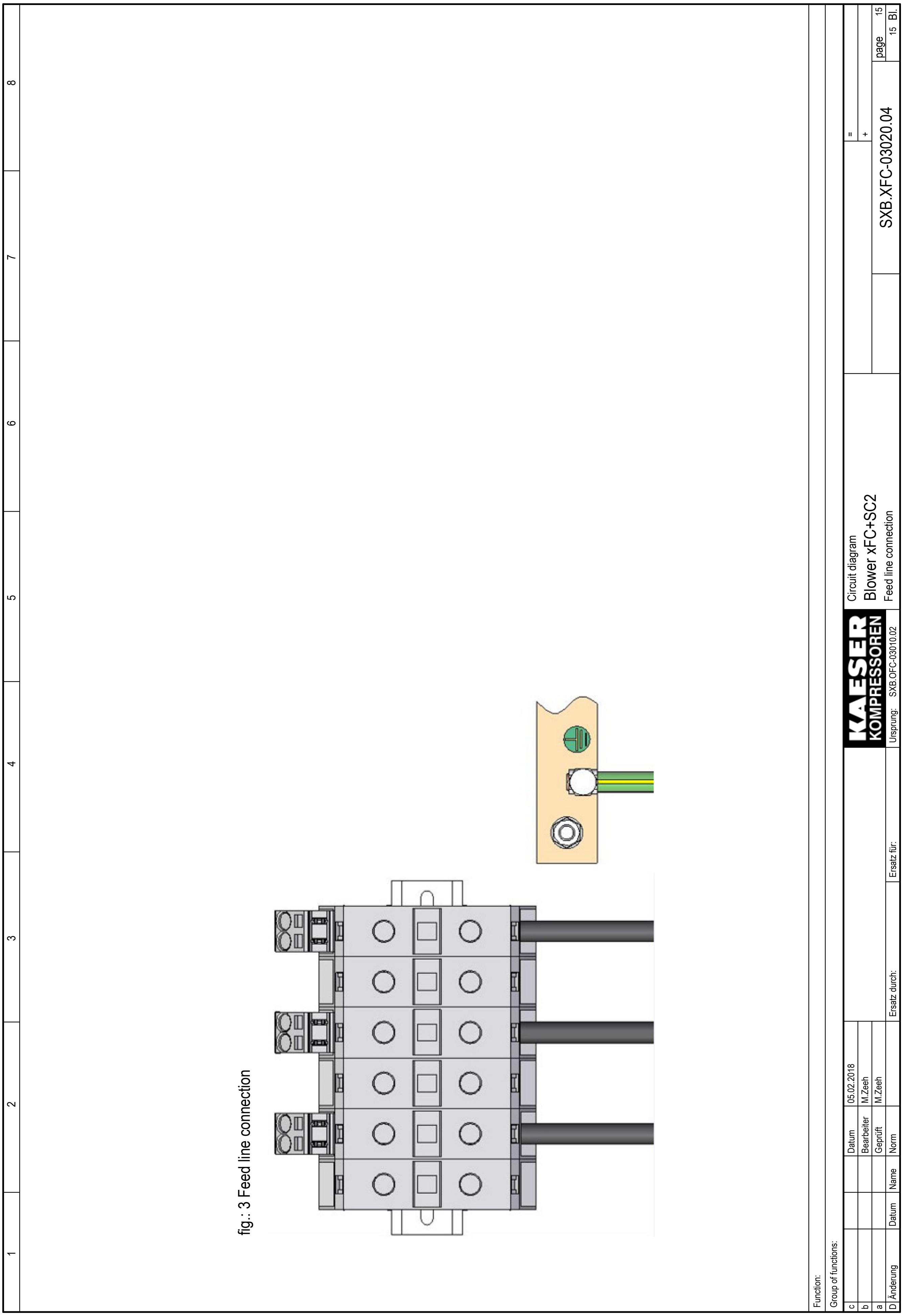


fig.: 3 Feed line connection

Terminal strip: -X0 (total 6 Terminals)

Destination internal: Component identification	Destination internal: Connection number	Location	Wire link	Terminal legend	Link	Terminal number	Destination external: Connection number	Destination external: Component identification	Cable identification
Unit frame		/1.4				PE3	PE	-X11	
-T1	PE	/1.4				PE2			
-R1	L1	/1.3				U1		-supply	-s.b.c. ** X
-R1	L2	/1.4				V1		-supply	-s.b.c. ** X
-R1	L3	/1.4				W1		-supply	-s.b.c. ** X
Mounting plate		/1.4				PE1		-supply	-s.b.c. ** X

Terminal strip: -X11 (total 26 Terminals)

Destination internal: Component identification	Destination internal: Connection number	Location	Wire link	Terminal legend	Link	Terminal number	Destination external: Connection number	Destination external: Component identification	Cable identification
		/1.7				PE	PE3	-X0	
-T21	-	/3.6				PE	PE	-M4	-W29 Ölflex 4x1,5mm²: PE
-T11	PE	/4.3				PE			
		/3.7				PE			
		/3.8				PE			
-K20	X6	/5.6				PE	PE	-M8	H07V2-K 2,5mm² green/yellow: X; -W7.1 Ölflex 191 3x1,5mm²: PE
-K21-X4	1	/5.7				PE	PE	-M9	-W7.2 Ölflex 191 3x1,5mm²: PE
		/4.1	┐			PE			
-F11	6	/4.3	┘		●	1			
-T11	0	/4.2			●	01			
-T21	L1	/4.4			●	2	11	-S1	
-T21	N	/4.4			●	02			
		/4.7			●	3	1	-X100	
		/4.5			●	03			
-K52	14	/5.2			●	4			
		/5.2			●	04	2	-K1.	-W78.2 Ölflex 3x1,5mm²: 2
-K50	14	/5.6			●	5			
		/5.5			●	05			
-K51	14	/11.1			●	6			
-Q4	A2	/11.1			●	06			
-K50	11	/5.6			●	7	L1	-M8	-W7.1 Ölflex 191 3x1,5mm²: 1
		/5.6			●	07	N	-M8	-W7.1 Ölflex 191 3x1,5mm²: 2
		/5.7			●	8	L1	-M9	-W7.2 Ölflex 191 3x1,5mm²: 1
		/5.7			●	08	N	-M9	-W7.2 Ölflex 191 3x1,5mm²: 2
		/3.7				9			
		/4.3			●	09			

Terminal strip: -X12 (total 8 Terminals)

Destination internal: Component identification	Destination internal: Connection number	Location	Wire link	Terminal legend	Link	Terminal number	Destination external: Connection number	Destination external: Component identification	Cable identification
-K21-X5	2	/11.5				1			
-K21-X5	1	/11.5				2			
-K21-X9	2	/11.6				3			
-K21-X9	1	/11.6				4			
-K21-X9	5	/11.7				5			
-K21-X9	4	/11.7				6			
-K21-X9	8	/11.8				7			
-K21-X9	7	/11.8				8			

Cable identification: -W7.1 Ölflex 191 3x1,5mm²; -W7.2 Ölflex 191 3x1,5mm²; -W29 Ölflex 4x1,5mm²; -W78.2 Ölflex 3x1,5mm²; -s.b.c. **; H07V2-K 2,5mm² green/yellow

c				Datum	05.02.2018
b				Bearbeiter	M.Zeeh
a				Geprüft	M.Zeeh
H	Änderung	Datum	Name	Norm	

Ersatz durch: | Ersatz für: | Ursprung: KAESER KOMPRESSOREN

Terminal schedule
-X0,-X11,-X12
= +
KXB.XFC-03020.04
page 1, 2 Bl.

Terminal strip	Cable identification (top)	Destination internal: Component identification	Destination internal: Connection number	Location	Wire link	Link	Terminal number	Destination external: Connection number	Destination external: Component identification	Cable identification (bottom)
Terminal strip: -X15 (total 26 Terminals)		-K21 -X3	10	/9.2		●	1			
				/9.2		●	2			
				/9.3		●	3			
		-F4	13	/9.4		●	4			
		-K21 -X3	11	/9.5		●	5			
		-K21 -X3	4	/9.5		●	6			
				/9.6		●	7	13	-S9	-Ex2 Ölflex 2x1,5mm²: 1
		-K21 -X3	3	/9.6		●	8	14	-S9	-Ex2 Ölflex 2x1,5mm²: 2
				/9.8		●	9	14	-K26	
		-K21 -X3	1	/9.8			10	13	-K26	
		-K21 -X8	2	/9.2			11			
		-K21 -X8	8	/9.2			12			
		-K21 -X8	5	/9.5			13			
				/9.5		●	14			
				/9.5		●	15			
				/9.5		●	16			
				/9.5		●	17			
				/9.5		●	18			
		-K21 -X8	11	/9.5		●	19			
				/9.5		●	20			
		-S1	31	/12.5			21	9	-T1	-W263 FD891CY 12G0,5mm²: 9
				/12.8			22			
	-W263 FD891CY 12G0,5mm²: 6	-T1	16	/12.7			23	7	-K21 -X5	
	-W263 FD891CY 12G0,5mm²: 7	-T1	17	/12.7			24	6	-K21 -X5	
				/9.6			PE	PE	-B51	-W51 Ölflex 191 3x1,5mm²: PE
	-W263 FD891CY 12G0,5mm²: PE	-..		/12.7			PE	PE	-B52	-W52 Ölflex 191 3x1,5mm²: PE
Terminal strip: -X16 (total 8 Terminals)		-T45	1	/10.5			5			(+)
		-T45	2	/10.5			6			(-)
	-W260.1 ÖF150CY 5G0,75mm²: 1	-T1	12	/12.3			1			
	-W260.1 ÖF150CY 5G0,75mm²: 2	-T1	13	/12.3			2			
	-W260.1 ÖF150CY 5G0,75mm²: 3	-T1	14	/12.3			3		-B60	-W260.2 ÖF191CY 2x0,75mm²: 1
	-W260.1 ÖF150CY 5G0,75mm²: 4	-T1	15	/12.3			4		-B60	-W260.2 ÖF191CY 2x0,75mm²: 2
	-W260.1 ÖF150CY 5G0,75mm²: PE	-.		/12.4			PE			
				/12.4			PE			
Terminal strip: -X21 (total 6 Terminals)		-T21	+	/4.8		●	1			
		-T21	-	/4.8		●	01			
		-K26	2	/6.2		●	2			
		-K26	1	/6.2		●	02			
		-K21-X4	3	/7.3		●	3	7	-T45	
		-K21-X4	2	/7.3		●	03	8	-T45	
Terminal strip: -X22 (total 6 Terminals)	-W263 FD891CY 12G0,5mm²: 5	-T1	5	/12.6		●	1	6	-X100	
	-W263 FD891CY 12G0,5mm²: 3	-T1	69	/12.5		●	01			
				/12.6		●	2			
	-W263 FD891CY 12G0,5mm²: 2	-T1	28	/12.5		●	02			
				/11.4		●	3	9	-K21 -X5	
	-W263 FD891CY 12G0,5mm²: 1	-T1	34	/12.4		●	03	A2	-K51	
Terminal strip: -X100 (total 6 Terminals)		-X11	3	/4.5	⊓		1	1	-K60	
		-S1	12	/4.5	⊓		2	2	-K60	
		-S1	22	/9.1	⊓		3	3	-K60	
		-K21 -X3	8	/9.1	⊓		4	4	-K60	
		-S1	32	/12.6	⊓		5	5	-K60	
		-X22	1	/12.6	⊓		6	6	-K60	

c				Datum	05.02.2018
b				Bearbeiter	M.Zeeh
a				Geprüft	M.Zeeh
H Änderung	Datum	Name		Norm	

Ersatz durch: Ersatz für: Ursprung:

KAESER KOMPRESSOREN

Terminal schedule

-X15,-X16,-X21,-X22,-X100

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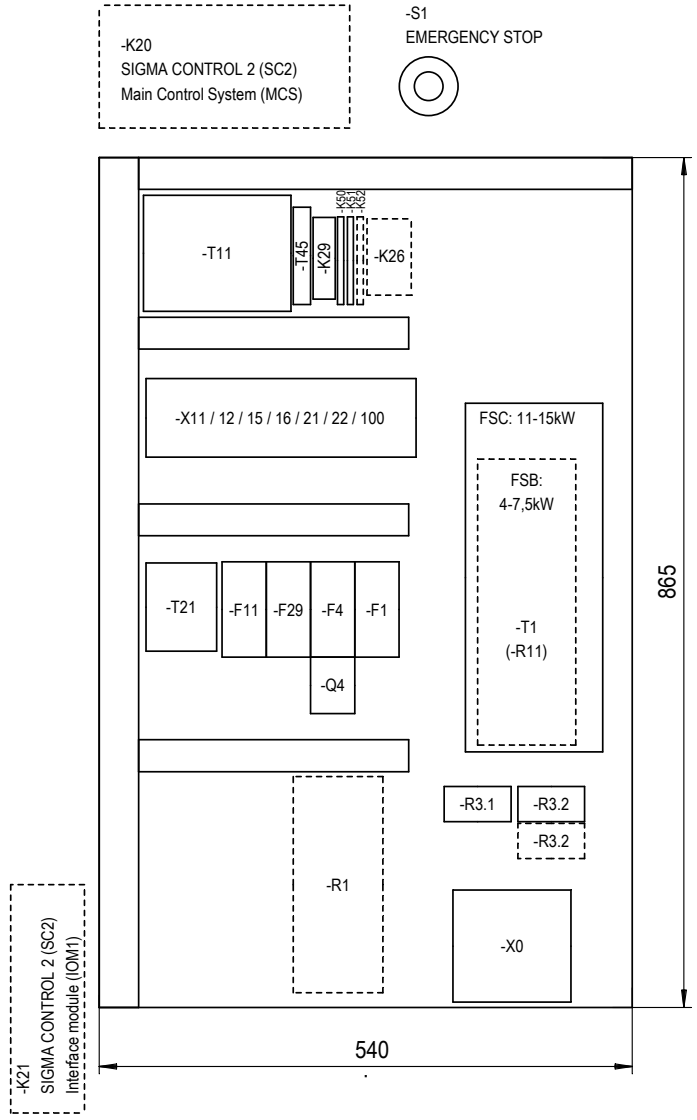
KXB.XFC-03020.04

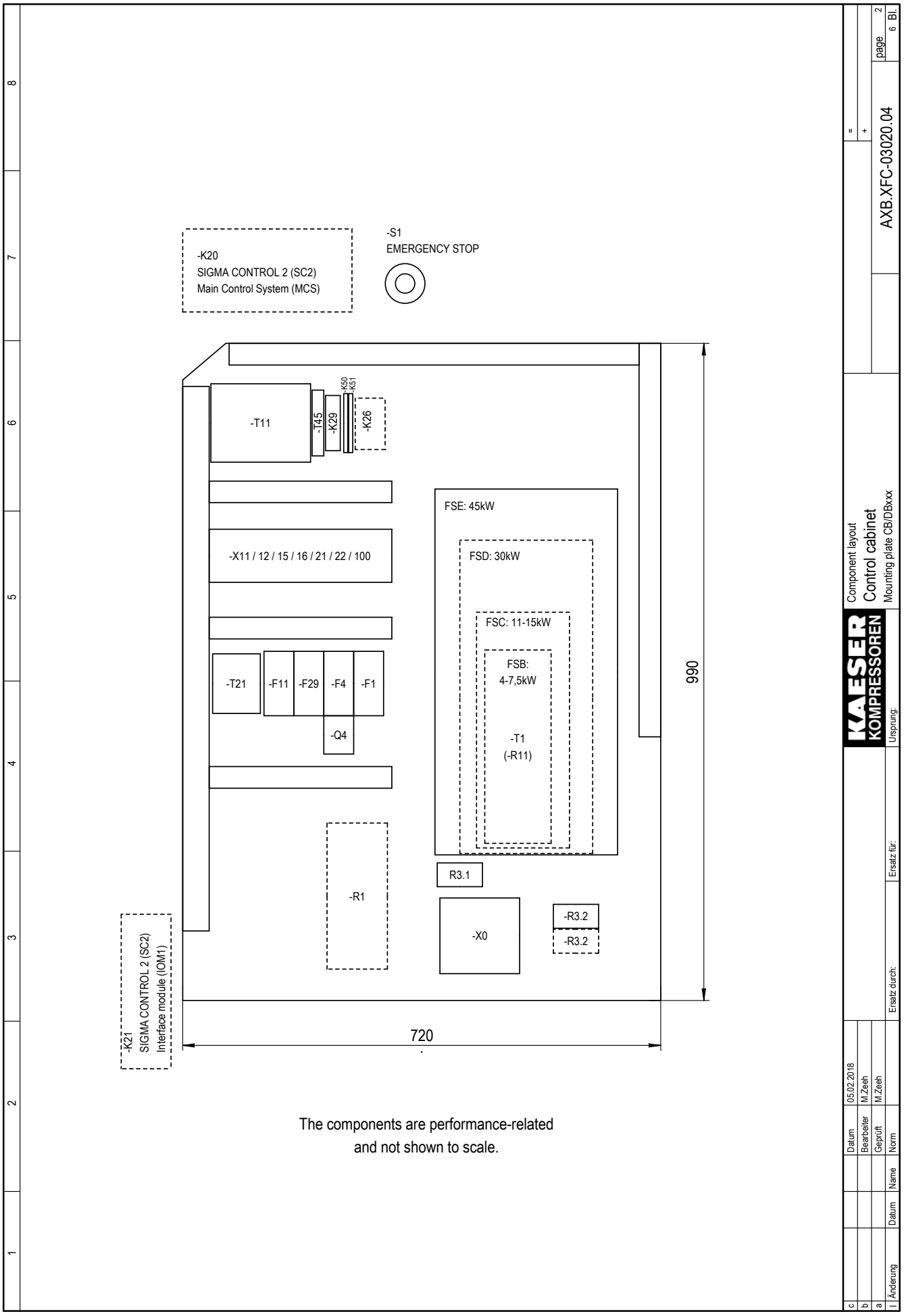
page 2
2 Bl.



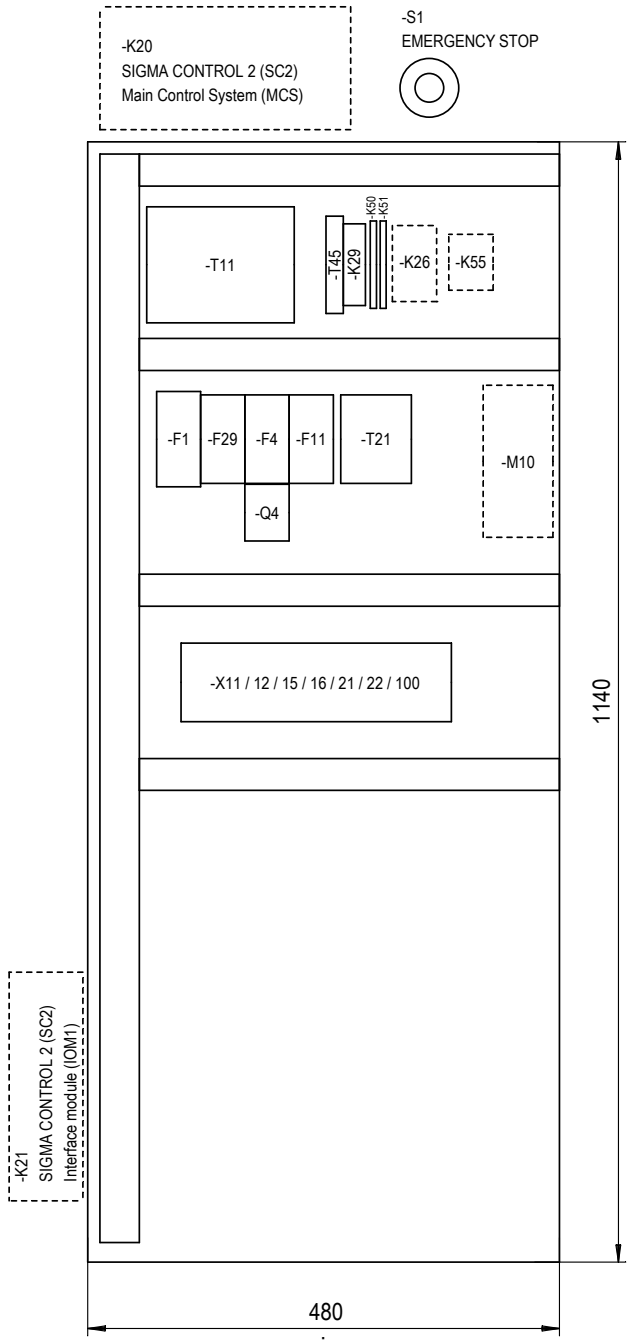
The components are performance-related
and not shown to scale.

Component layout
Control cabinet
Mounting plate BBxxx
KAESER KOMPRESSOREN
Ursprung:
Ersatz für:
Ersatz durch:
AXB.XFC-03020.04
page 1
6 Bl.

		Datum	Name
c			
b	Datum	05.02.2018	
a	Bearbeiter	M.Zeeh	
I	Geprüft	M.Zeeh	
	Änderung	Norm	

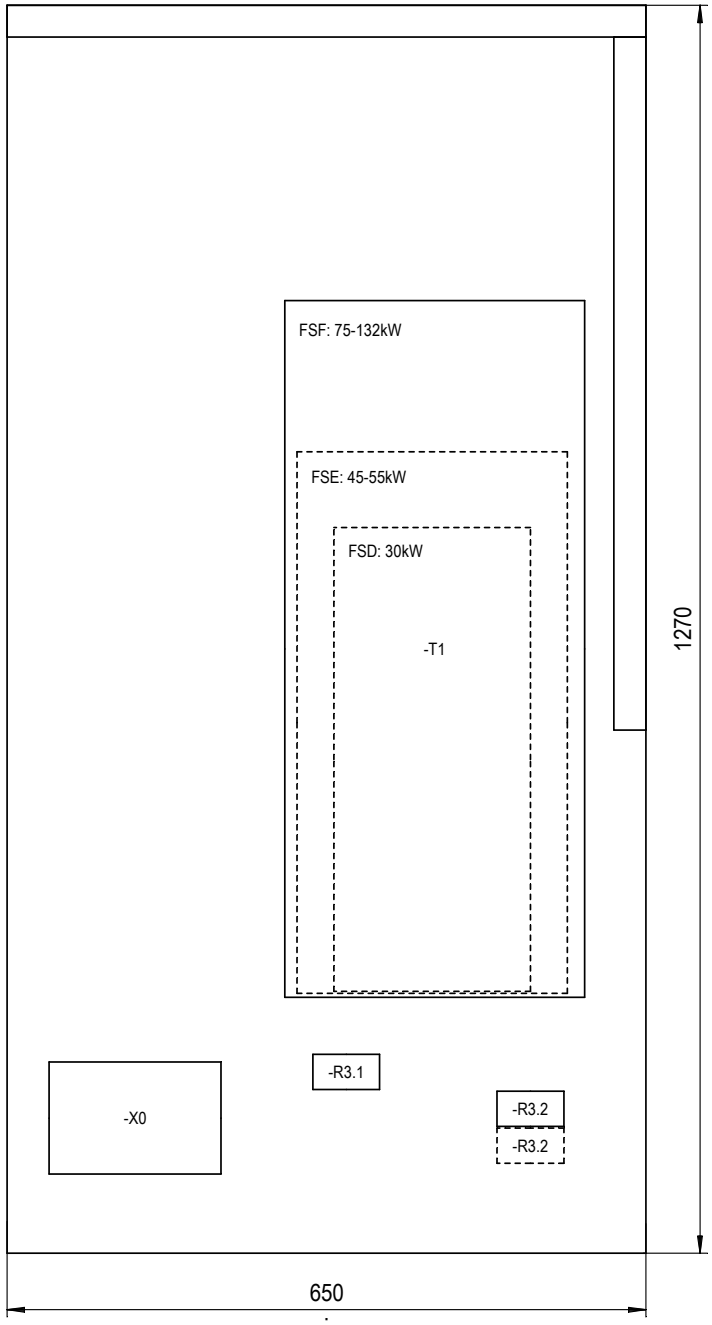


The components are performance-related and not shown to scale.



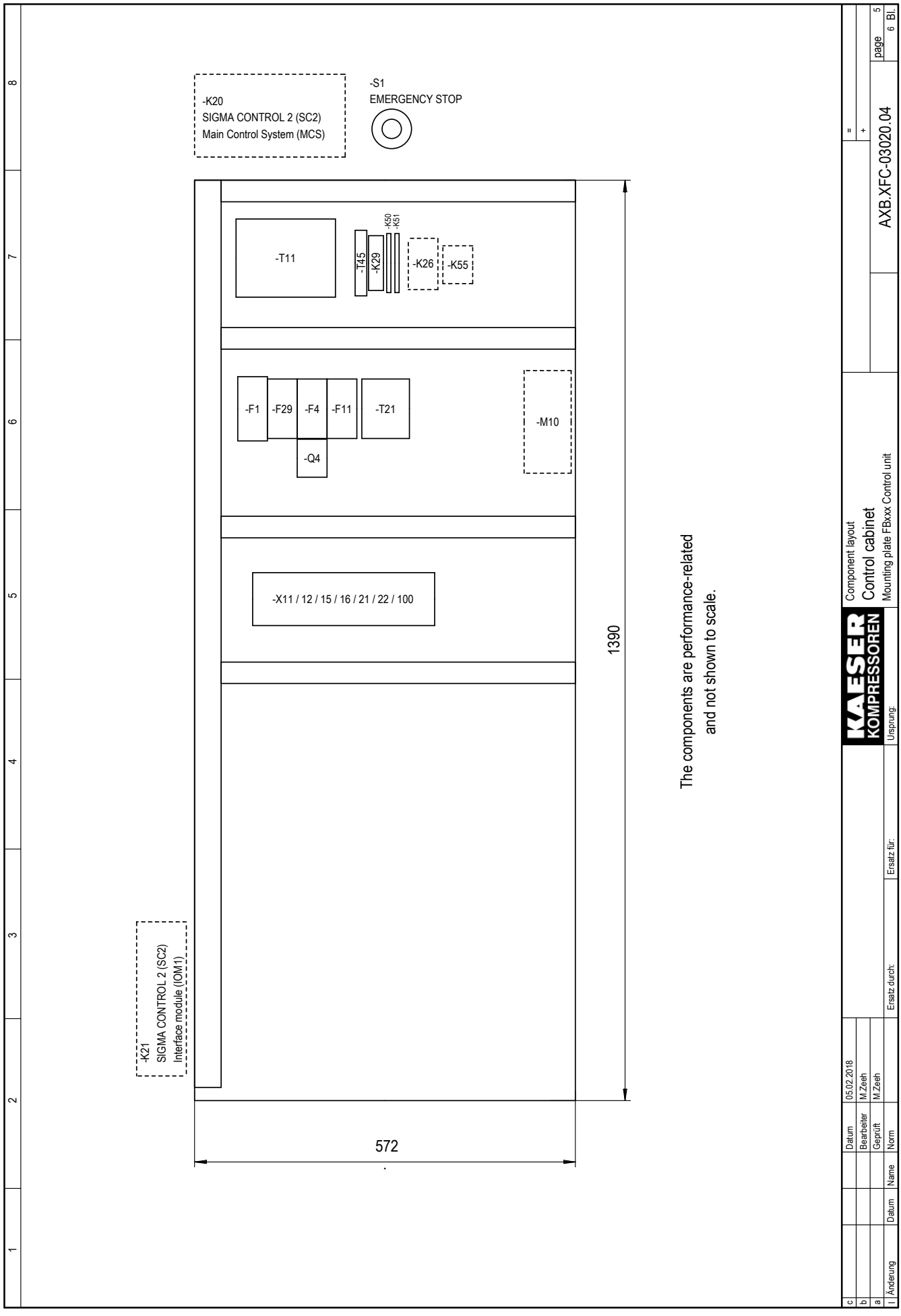
The components are performance-related and not shown to scale.

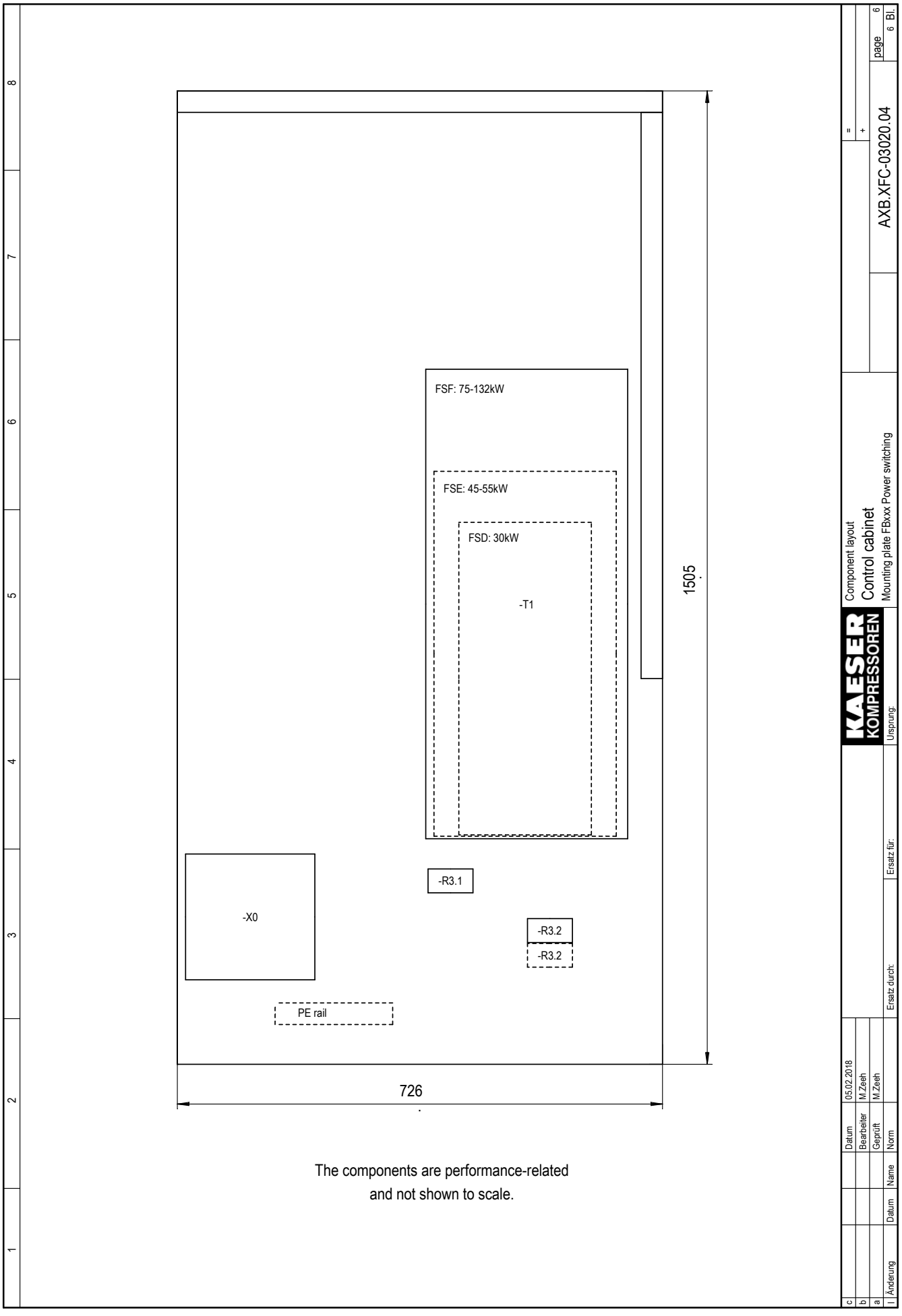
Component layout
Control cabinet
Mounting plate EBxxx Control unit
AXB.XFC-03020.04
page 3 6 Bl.
Ursprung:
Ersatz für:
Ersatz durch:
Datum 05.02.2018
Bearbeiter M.Zeeh
Geprüft M.Zeeh
Norm
Name
Datum
Änderung



The components are performance-related
and not shown to scale.

Component layout
Control cabinet
Mounting plate EBxxx Power switching
AXB.XFC-03020.04
page 4
6 Bl.


-K20
SIGMA CONTROL 2 (SC2)
Main Control System (MCS)
-S1
EMERGENCY STOP
-T11
-T45
-K29
-K50
-K51
-K26
-K55
-F1
-F29
-F4
-F11
-T21
-Q4
-M10
-X11 / 12 / 15 / 16 / 21 / 22 / 100
-K21
SIGMA CONTROL 2 (SC2)
Interface module (IOM1)
1390
572
The components are performance-related
and not shown to scale.
AXB.XFC-03020.04
page 5
6 Bl.
Component layout
Control cabinet
Mounting plate FBxxx Control unit
KAESER KOMPRESSOREN
Ursprung:
Ersatz für:
Ersatz durch:
Datum 05.02.2018
Bearbeiter M.Zeeh
Geprüft M.Zeeh
Norm
Name
Datum
Änderung



The components are performance-related and not shown to scale.

13.5 Project planning data