

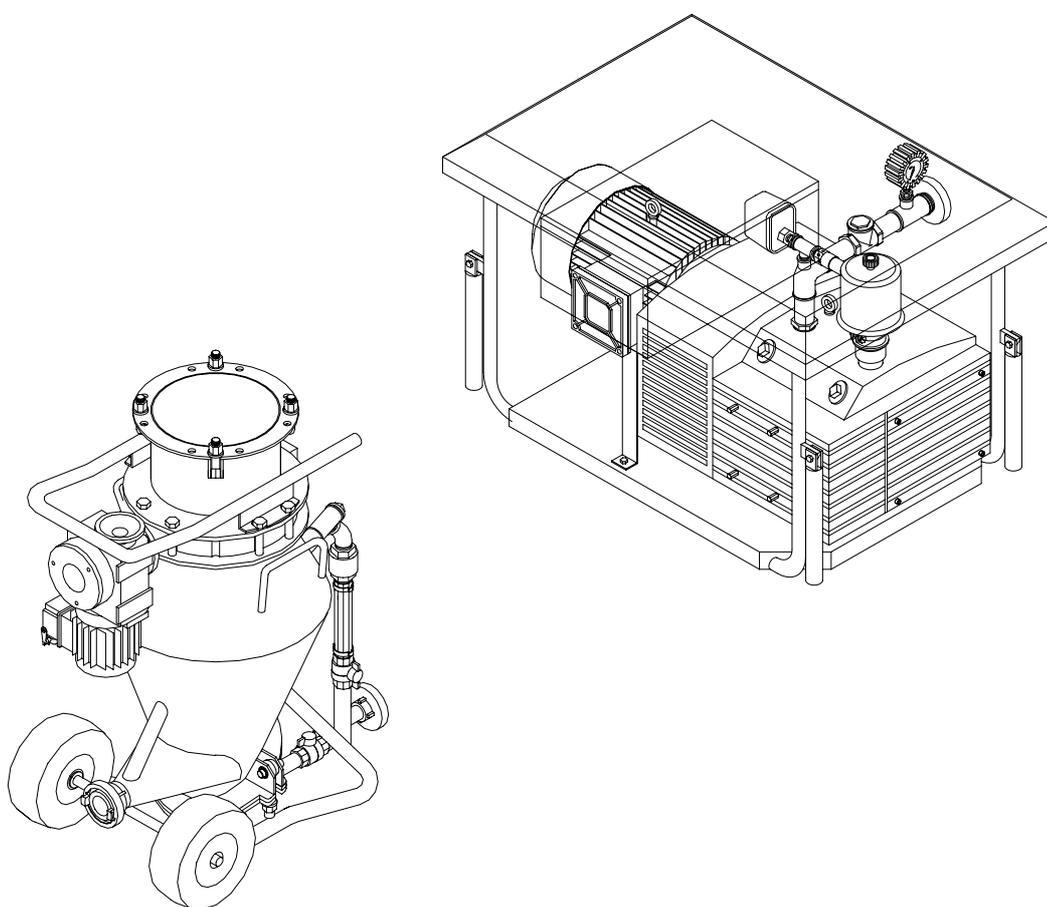
OPERATING INSTRUCTIONS

(Item number of the operating instructions 00 08 91 21)

(Item number of the parts list – machine 00 08 90 56)

PNEUMATIC CONVEYING SYSTEM

PFT SILOMAT E 140 (VAE)



WE KEEP THINGS MOVING



Contents

Dear PFT customer,	3
Technical specifications	4
Setting values	4
Basic safety instructions	5
Basic safety instructions	6
Basic safety instructions	7
Description of functions	8
Operating sequence	8
Intended use	8
Overview of Silomat E 140 item number 00 08 90 56	9
Overview of control box 00 09 07 62	10
Before start-up	11
Start-up	12
Material that is difficult to convey	14
Measures to be taken when work is finished or interrupted	14
Freeing the system of voltage	14
Depressurizing the system	15
Clearing hose blockages	15
Cleaning emulgator filters: The pressure display is at "0"	15
Cleaning emulgator filters: The pressure display indicates there is pressure!	16
Maintenance – compressor KDT 3.140 item number 00 10 88 96	17
Transportation and storage	19
Check list	20
Accessories	21
Replacement part drawing – conveying container item number 00 08 90 77	22
Replacement part list – rollable conveying container item number 00 08 90 77	23
Drawing – rollable conveying container item number 00 08 90 77	24
Replacement part list – rollable conveying container item number 00 08 90 77	25
Drawing – control box exterior item number 20 44 30 12	26
Replacement part list – control box exterior item number 20 44 30 12	27
Drawing – control box interior item number 00 09 07 62	28
Replacement part list – control box interior item number 00 09 07 62	29
Drawing – carryable frame item number 20 56 66 07	30
Replacement part list – carryable frame item number 20 56 66 07	31
Drawing – compressor item number 00 10 88 96	32
Replacement part list – compressor item number 00 10 88 96	33
Drawing – pressure control Silomat E 140 item number 00 08 90 68	34
Replacement part list – pressure control Silomat E 140 item number 00 08 90 68	35
Drawing – rubber pressure hose item number 20 65 09 00	36
Replacement part list – rubber pressure hose E item number 20 65 09 00	37
Circuit diagram – main power S163627B	38
Circuit diagram – control current S163628B	39

Dear PFT customer,

Congratulations on your purchase. You have made a wise choice in valuing the quality that comes with a brand name product from a reputable company.

The conveying system **PFT SILOMAT E 140 VAE** is state of the art. It has been designed in such a functional manner as to be a reliable aid in rough construction site conditions.

These operating instructions should always be stored and kept at hand at the site where the machine is used. They contain information on the various functions of the machine. Study the operating instructions thoroughly before starting the machine, as we accept no liability for accidents or damage to the machine caused by incorrect operation.

If operated correctly and handled with care, the conveyor system

PFT SILOMAT E 140 VAE will be a trusty helper.

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Initial inspection after delivery

A vital task for all technicians delivering the conveying system **PFT SILOMAT E 140 VAE** is the inspection of the machine settings at the end of the first cycle. The factory settings may change during the initial cycle. If these changes are not corrected in time – immediately after start-up – malfunctions may well be the result.

After delivering the conveying system **PFT SILOMAT E 140 VAE** and giving appropriate instructions – i.e. after about two hours – the technician must always carry out the following checks / settings:

- Pressure control
- Level sensor
- Connection cable
- Fuses
- Plug connections

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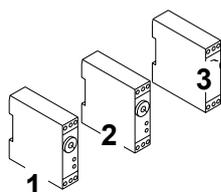
Technical specifications

SILOMAT E 140

Dimensions (carryable frame)	
Length	1,020 mm
Width	700 mm
Height	680 mm
Material volume of conveying container	62 litres
Electrical connection	400 V rotary current
Connection power	8,1 kW
Fuse protection	3 x 25 slow-blow A
Connection cable	5 x 4 mm ² 32 A
Connection power compressor	8,1 kW
Air capacity of compressor	140 Nm ³ /h
Max. working pressure	2.5 bar
Pumping capacity *	20 kg/min at 80 / 140 m pumping distance
Conveying container	86 kg
Carryable frame with compressor and control box	200 / 210 kg
Permanent noise pressure level	85±1 dB

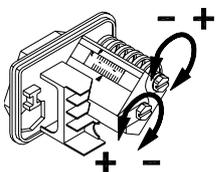
* depending on material quality and weight, conveying height and hose diameter

Setting values



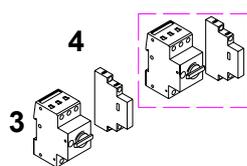
Relay

Function	Description	Setting value
(1) Request	K2	3 sec.
(2) Filling time	K5	6 sec.
(3) Conveying time	K8	18 sec.



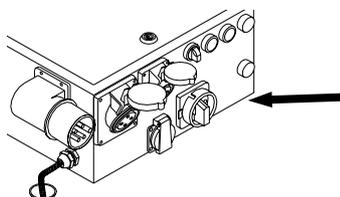
Air pressure safety switches

- 0.8 bar switch on machine
- 0.5 bar switch off machine



Motor protection switch

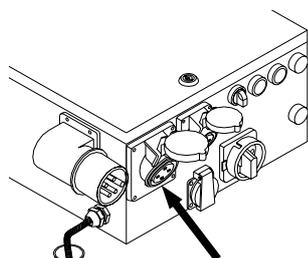
- (3) Q3 motor and drive 0.63-1A
- (4) Q2 compressor 8,1 kW motor 400 V, 18 A



Hand automatic switch

Hand: In this position, the compressor runs continuously and can be used for blowing through the conveying line and for venting the silo.

Automatic: In this position, the system runs automatically.



Vibrator socket

The vibrator runs automatically during the filling time.

Basic safety instructions

1. Follow all safety instructions and danger warnings on the machine. Ensure that all instructions are kept legible.
2. Inspect the machine for visible damage and defects at least once every shift. If you notice any safety-threatening alterations to the machine or its operating behaviour, stop the machine immediately and notify your supervisor.
3. Do not attempt to modify the machine in any way which may impair its safety without first consulting your machine dealer. This also applies to the installation of unchecked "safety devices".
4. Spare parts must comply with the technical requirements of the manufacturer. This is guaranteed for all original PFT parts.
5. Only trained or authorized personnel should operate the machine. Clearly define the responsibilities of the staff for operation, setup, maintenance and repairs.
6. Personnel undergoing training should only be allowed to operate the machine under the supervision of experienced personnel.
7. All electrical work should be carried out by a qualified electrician or by trained personnel under the supervision of a qualified electrician and should comply with electro-technical regulations.
8. Observe the operating instructions when turning the machine on and off. Watch control lamps for signals.
9. When the machine is completely switched off for maintenance and repair work, measures must be taken to ensure that it cannot be switched back on accidentally (for example, lock the main switch and remove the key, or attach a warning sign to the main switch).
10. Before cleaning the machine with a water jet, seal all openings through which water could enter and thereby impair the safety and proper functioning of the machine (electric motors and control boxes). Remove all covers after cleaning.
11. Only use original fuses of the prescribed amperage.
12. If work has to be carried out on live components, a second person should be present to disconnect the power in the event of an emergency.
13. Disconnect the machine from any external energy source before you relocate it, even if you are only moving it a short distance. The machine should be connected properly to the mains before being put back in operation.
14. Set up the machine on stable ground and secure it against unintentional movements.
15. Lay out the conveying lines safely. Do not lay them on sharp edges!
16. Depressurise all conveying systems before opening conveying lines.



17. When removing blockages, the person undertaking the task must stand in such a way that he/she cannot be hit by discharged mortar. In addition, safety goggles should be worn. No other persons may be within the immediate vicinity of the machine while this job is being done.
18. Appropriate noise protection devices must be provided if the permanent noise level exceeds 85 dB (A).



19. If required, wear the following protective clothing while spraying: safety goggles, safety shoes, safety clothing, gloves, protective skin cream and respirator mask.
20. Have the machine inspected as required – but at least once a year – by a specialist.

Basic safety instructions

**WARNING!**

The following terms and symbols are used in this manual for particularly important information:

**WARNING!**

The machine should only be used if it is in technically perfect condition and in compliance with the regulations. Pay attention to safety and the operating instructions. It is especially important to immediately rectify all faults which could impair safety.

In order to make the operation of our machines as easy as possible for you, we would like to briefly inform you of the most important safety regulations. If you comply with these regulations, you will be able to use our machine in a safe and quality-assuring manner for a long time to come.

**WARNING!**

If additional parts that are not specified in these operating instructions are installed for special procedures, it is necessary to keep to the utilization, safety and maintenance regulations.

**WARNING!**

It is forbidden to use the machine for purposes other than those for which it is intended.

**WARNING!**

It is forbidden to use the machine in explosive environments.

**WARNING!**

The machine must always be used in a perfect condition and in accordance with these instructions, while observing the safety instructions and danger warnings. Any damage which could impair operational reliability must be repaired immediately.

**WARNING!**

The user must be aware of the risk of getting one's clothes or long hair caught in movable parts.

Chains, bracelets and rings can also pose a risk.

Basic safety instructions

**WARNING!**

The workplace of the user must be clean, tidy and free from objects which could restrict your freedom of movement.

**WARNING!**

The workplace must be lit appropriately for the particular work you are doing.
Insufficient or excess lighting can be dangerous.

**WARNING!**

Special information, regulations and restrictions for the prevention of damage.

The machine should only be used as intended in a perfect technical condition and in compliance with safety regulations and the operating instructions. It is especially important to immediately correct any faults that could impair safety.

**WARNING!**

Please observe the accident prevention regulations for compressors VBG 16, in particular sections IIIc "Installation" and IV "Operation", as well as VBG 4 "Electrical equipment and tools".

Modifications to the pumps can only be carried out with the agreement of our plant.

Description of functions

The conveying system **PFT SILOMAT E 140 VAE** is a pneumatic, fully automatic conveying system for transporting ready-mix dry mortar from the silo / container to the cleaning machine.

Please observe the processing guidelines of the material manufacturer.

The machine consists of portable or transportable components, which facilitate rapid transport in convenient dimensions.

The following points should be observed during operation:

- Worksite power connection – control box
- Control box connection – level sensor
- Control box connection – motor and drive
- Control box connection – vibrator
- Compressor connection – conveying container
- Conveying container connection – cleaning machine

Operating sequence

As soon as the level sensor of the cleaning machine reports “Empty”, the flap opens (“Open” position) and the conveying container is filled with approx. 62 l of dry material while the silo butterfly valve is open. The vibrator runs at the same time in order to support the flow of material from the silo / container.

When the filling time has elapsed, the flap closes again (“Closed” position). The conveying container is now sealed pressure-tight to the silo / container.

Now the compressor begins to work and blows air through the emulgator filter into the conveying container. In this way, the material is loosened up and pressed through the extraction connection (16) of the conveying container into the conveying line and on to the cleaning machine. Pressure is built up in the conveying line, which is monitored with a safety switch. If it drops below the set value of 0.5 bar, this means that the conveying container and conveying line are empty. The system completes the conveying cycle and shuts down. As soon as there is a new signal from the level sensor at the control box of the SILOMAT E 140, a new conveying cycle is started.

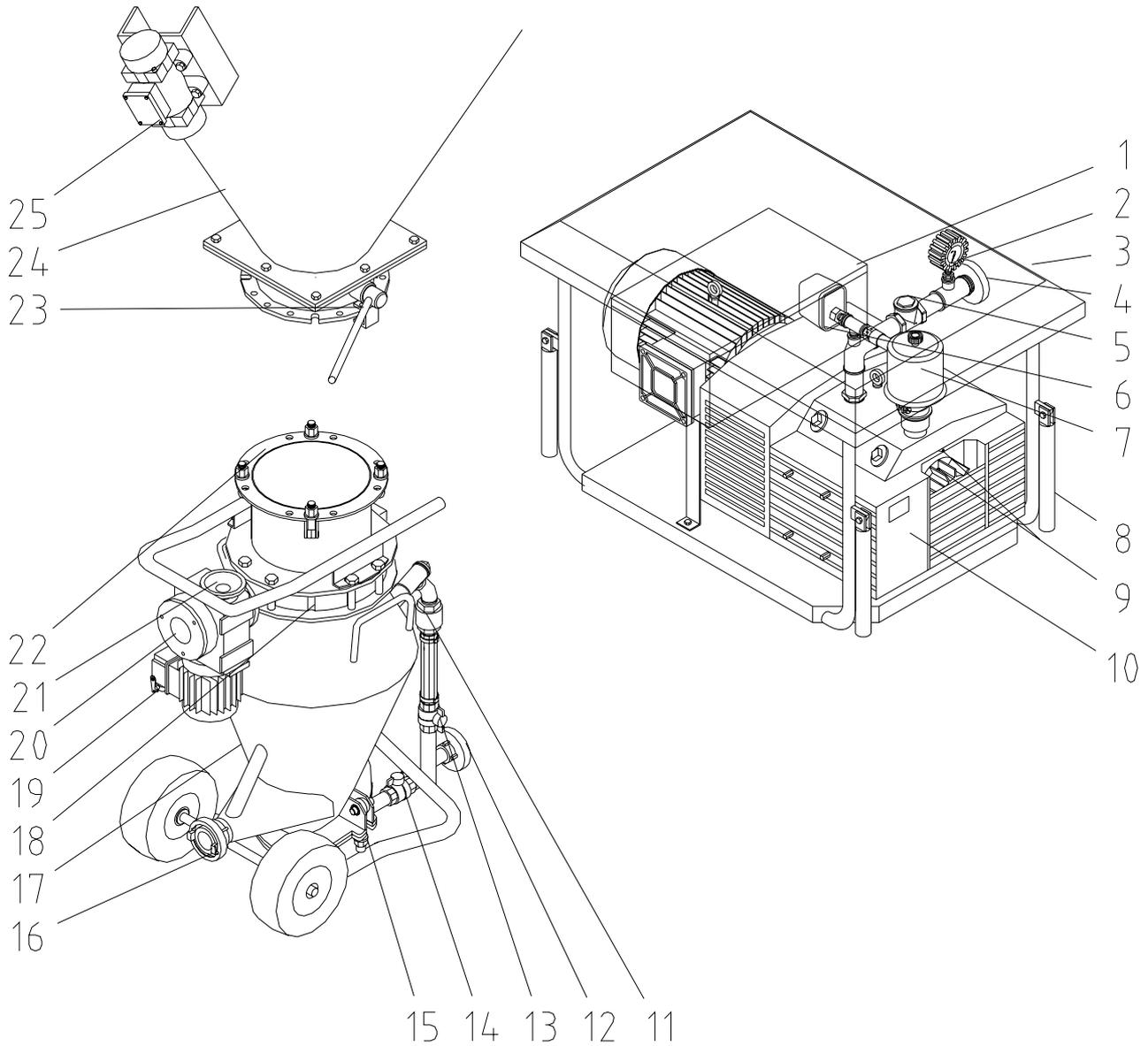
The distribution of air can be controlled by hand using the bypass at the conveying container. In this way, the system can be adapted to suit the material (specific weight) in question.

Intended use

The compressor can be used to generate overpressure.

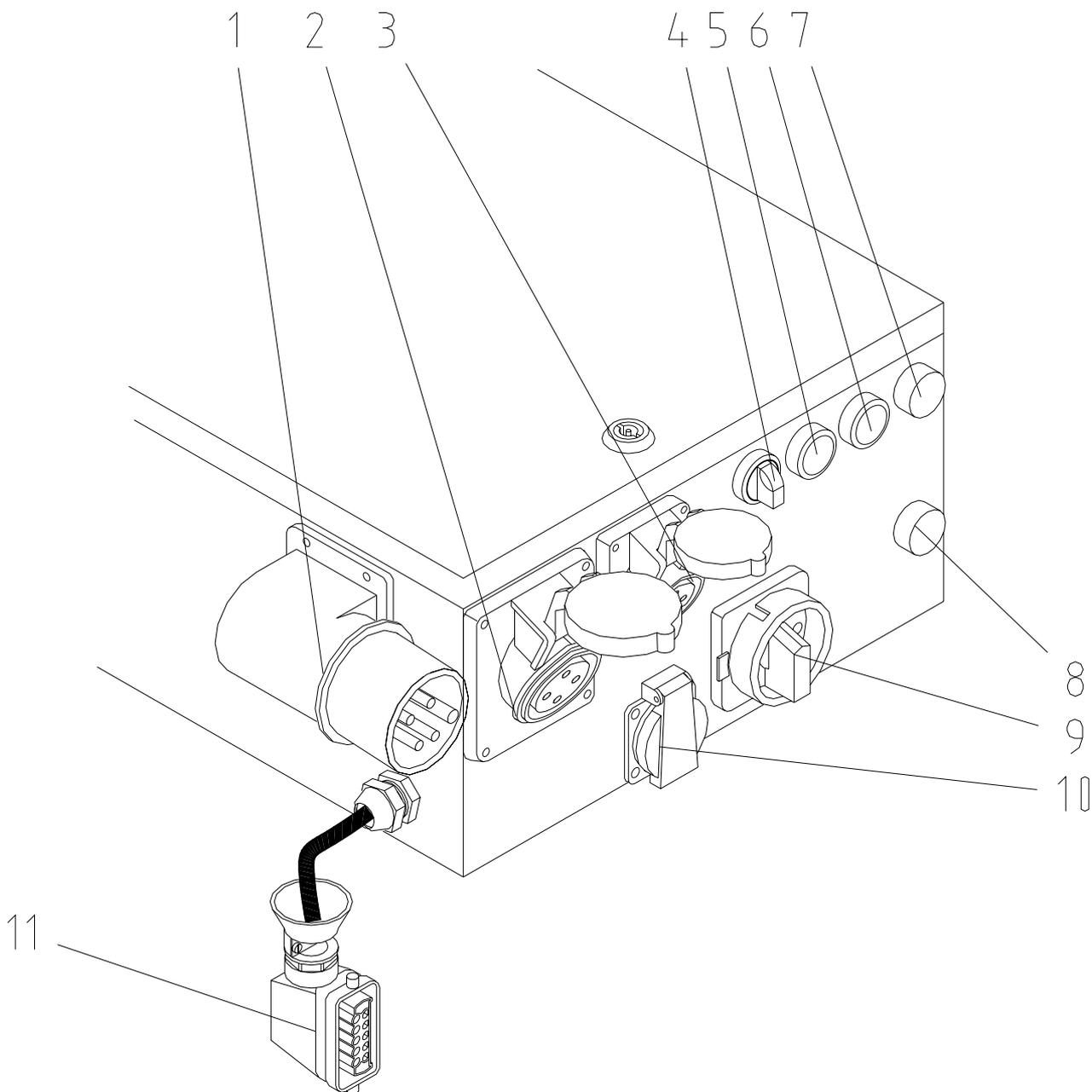
Operation is only designed for normal atmospheric air. Not for the conveying of toxic or combustible media. The compressor works oil-free. Avoid the intake of oil mist. The characteristic data are valid up to a height of 800 m above sea level.

Overview of Silomat E 140 item number 00 08 90 56



- | | |
|---|--|
| 1 Control box | 2 Pneumatic pressure gauge |
| 3 Carryable frame | 4 Connection of air to conveying container |
| 5 Pressure control | 6 Safety switch |
| 7 Filter | 8 Carrying handle |
| 9 Hopper lubricating nipples | 10 Compressor |
| 11 Counter flow valve | 12 Connection of air from compressor |
| 13 Tap for bypass | 14 Tap bypass |
| 15 Emulgator cleaning cover | 16 Connection of material hose to cleaning machine |
| 17 Conveying container | 18 Flap |
| 19 Connection of control cable from control box | 20 Motor and drive |
| 21 Motor and drive hand wheel for closing the flap when there's a power failure | 22 Intermediate piece |
| 23 Silo outlet flap (not in scope of delivery) | 24 Silo/Container (not in scope of delivery) |
| 25 Vibrator (not in scope of delivery) | |

Overview of control box 00 09 07 62



- | | |
|---|--|
| 1. Mains connection 32 A | 2. Vibrator connection |
| 3. Request connection rotary wing sensor mixer pump | 4. Program button manual – automatic |
| 5. Pressure switch off | 6. Pressure switch on |
| 7. Fault | 8. Control lamp – change direction of rotation |
| 9. Main reversing switch of Silomat live and change direction of rotation | 10. Connection – continuous current 230 V |
| 11. Control cable for the motor and drive | |

Before start-up



WARNING!

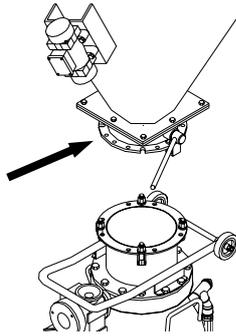
Prior to each time you start work, the operability of the **pressure relief unit** of the silo / container must be checked.

SILOMAT systems for free-fall silos may only be connected to **unpressurized** silos / containers. The **dust removal lines** of the silo / container must be open und unclogged.

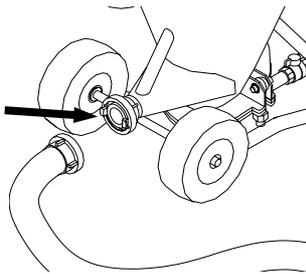
To avoid there being **condensation water** in the system, prior to starting work:

- Disconnect the air hose from the compressor at the conveying container.
- Switch on the compressor; in doing so, observe the direction of rotation.
- Air must escape at the fast coupling (remove rubber hose). If the direction of rotation is incorrect, turn the main reversing switch to the zero position.
- Push the direction plate to the opposite side and set the main switch to the other direction. You have now changed the direction of rotation.
- Let it run approx. 5-10 minutes.
- While this is happening, kink the hose several times, relieving it again after a short pressure build-up.
- Repeat the procedure until no more water spray emerges from the hose.
- Switch off the system using the red pressure switch "OFF".

Start-up



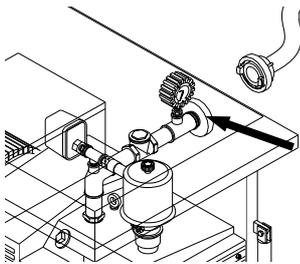
Connect the conveying container to the silo outlet flap.



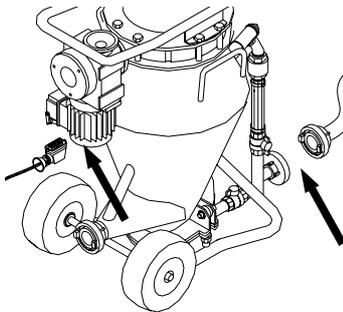
Lay out the conveying line between the cleaning machine and the conveying container outlet.

To ensure that the system works optimally over long conveying distances, the conveying line should not only be laid out flatly.

We therefore recommend that you create raises - e.g. at the hose coupling by means of, for example, two pallets placed upright.

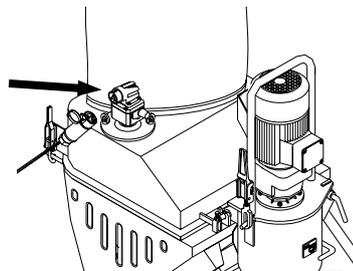
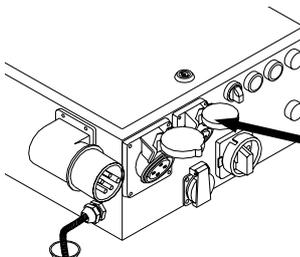


Connect the air hose from the conveying container to the compressor.



Connect the air hose from the compressor to the conveying container.

Connect the 10-pin control cable from the control box to the servo motor of the flap.



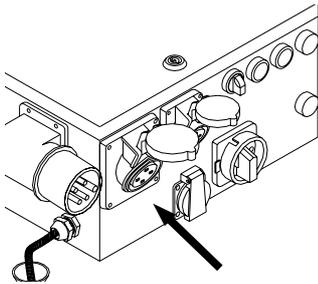
Connect the control cable

(item no. 20 42 38 00) to the CEE panel-

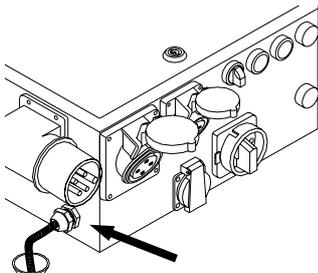
mounted socket 3 x 16 A 12 h white, and

connect the injection hood to the rotary wing

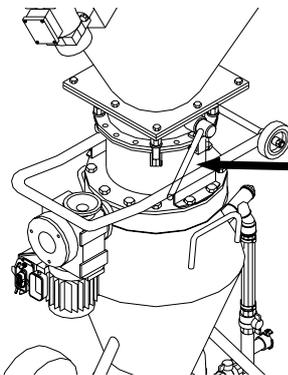
sensor.



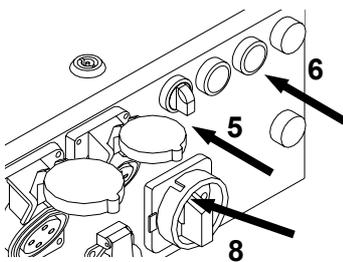
Plug the vibrator cable from the silo / container into the CEE panel-mounted socket 4 x 16 A 6 h red.



Now connect the SILOMAT system to a worksite switchgear assembly with a power cable 5 x 4 mm² (PFT item no. 20 42 39 00 or 20 42 39 20) in accordance with VDE with 30 mA earth leakage circuit breakers that conform to regulations.



Open the silo outlet flap.

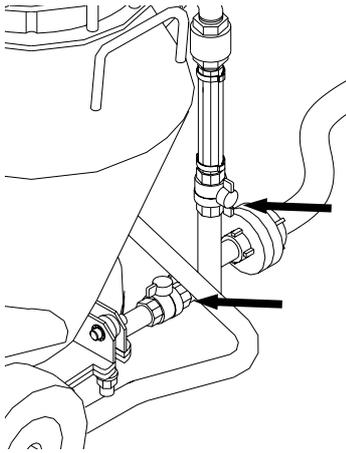


Main reversing switch (8) on.
Turn the hand automatic switch (5) to the automatic position and press the green operating switch "ON" (6).

As soon as the level sensor reports "EMPTY":

- The locking flap opens, and during the set filling time
- the conveying container is filled with approx. 62 l dry material.
- The vibrator runs at the same time if the cable connection is established.
- The locking flap closes after the filling time has elapsed and the compressor starts.
- After the conveying time has elapsed and when the pressure has dropped to below 0.6 bar (if the hose is empty) it shuts down by itself.
- The system waits for a new signal to repeat the conveying cycle for the fully automatic supply of the cleaning machine.

Material that is difficult to convey



NOTE

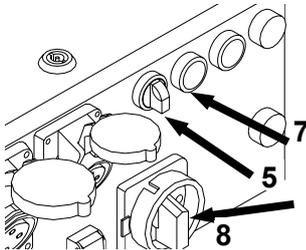
For material that is not easy to convey (e.g. outside plastering), the conveying air must be set optimally using the taps.

By slightly opening the tap leading upwards, part of the air is directly led into the outlet of the conveying container (bypass system) and supports the conveying of the material.

Rule of thumb:

The heavier the material, the more the tap of the upwards leading air line must be opened.

Measures to be taken when work is finished or interrupted



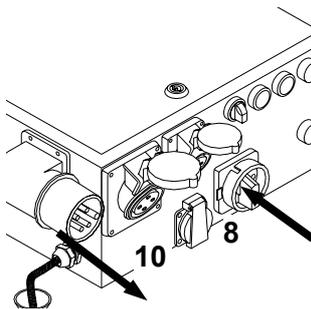
- Switch off the system by pressing the red pressure switch (7) "OFF".
- Turn the hand automatic switch (5) to the position "0".
- Turn the main reversing switch (8) to the position "0".
- Disconnect the electrical cables and hoses.



WARNING!

When doing any kind of work on the SILOMAT E, you should make sure that the conveying system is depressurized and de-energized.

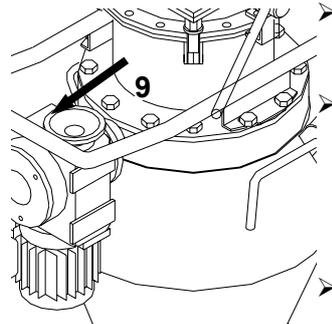
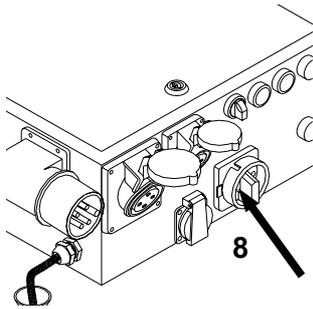
Freeing the system of voltage



Turn the main reversing switch (8) to the position "0".

When working on the control box, the power supply must be interrupted by removing the connection cable (10).

Depressurizing the system



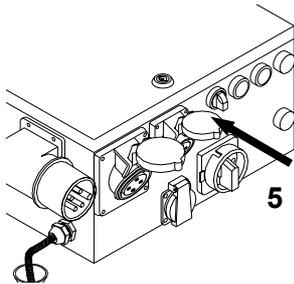
- Turn the main reversing switch (8) to the position "0".
- By turning the hand wheel (9), the locking flap of the motor and drive is opened slightly so that the pressure can escape into the silo / container.
- Close the locking flap again.



WARNING!

In accordance with the accident prevention regulations of the Builder's Guild, all personnel clearing blockages should wear safety goggles and should position themselves in such a way so that they cannot be hit by discharged material. No other persons should be in the vicinity.

Clearing hose blockages



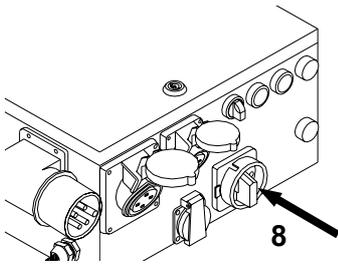
- Depressurize and de-energize the conveying system (see above).
- Disconnect conveying hoses in the vicinity of the blocked part.
- Shake the hose and knock the coupling against a soft surface (wood or something similar) to loosen the obstructing material and remove it from the hose.
- Then reconnect the conveying hoses and make the system ready for operation.
- Start the system at the position "HAND" (5) and let the compressor run until the hose is blown free.
- Then switch back to automatic operation (5).

Cleaning emulgator filters: The pressure display is at "0"

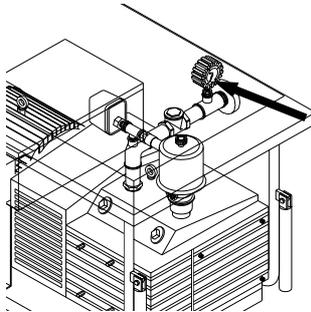


WARNING!

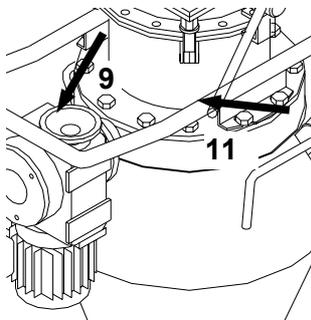
Do not clean the system with a steam sprayer or high-pressure cleaner.



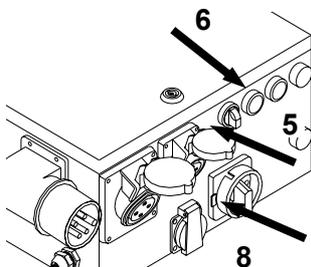
Turn the main reversing switch (8) to “0”.



Observe the pressure display at the compressor!
 Check if the pressure hose is depressurized.
 The pressure display is at “0”.

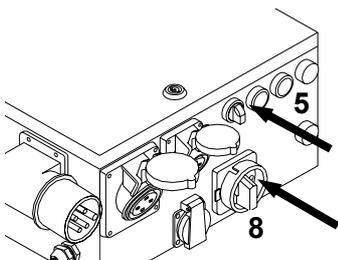


Move the motor and drive to the position “**FLAP CLOSED**” by turning the hand wheel (9).
 Close the silo outlet flap (11).

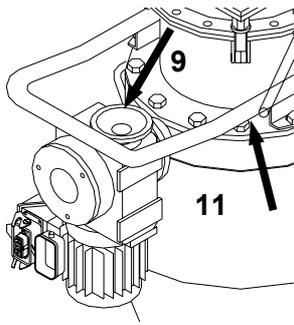


Turn the hand-0 automatic switch (5) to the “**HAND**” position.
 Turn the main reversing switch (8) to the “**I**” position.
 Press the operating switch (6) **ON**.
 Blow the conveying container until it is empty.
 Turn the main reversing switch (8) to the position “**0**”.
 Otherwise, proceed as described on page 17, points 13 to 16.

Cleaning emulgator filters: The pressure display indicates there is pressure!



Turn the main reversing switch (8) to “0”.
 Turn the hand automatic switch to “**Hand**”.



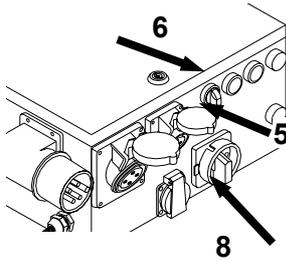
Move the motor and drive to the position **“FLAP OPEN”** by turning the hand wheel (9) until the accumulated pressure can escape into the conveying container or the silo / container.

The pressure display at the compressor must display 0.

Clean the conveying hoses by shaking them.

Move the motor and drive in the **“FLAP CLOSED”** direction by turning the hand wheel (9).

Close the silo outlet flap (11).



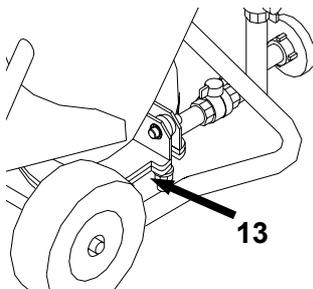
Turn the hand-0 automatic switch (5) to the **“Hand”** position.

Turn the main reversing switch (8) to the **“I”** position.

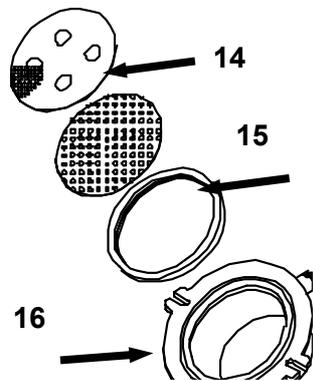
Press the operating switch (6) **“ON”**.

Blow the conveying container until it is empty.

Turn the main reversing switch (8) to the position **“0”**.



Remove the emulgator cleaning cover by opening both eye screws (13) (M20x100 key width 30).



Separate the emulgator filters (14) by removing the gasket (15).

Clean the emulgator filters (14), and replace if required.

Assemble the emulgator filters (14) with the gasket (15); the coarse filter goes below.

In doing so, make sure that, due to the bulge at the fine filter, there is a gap between the two filters.

Place the emulgator filters (14) in the cleaning cover (16) and attach to the conveying container.

The SILOMAT E140 is now ready for operation again.

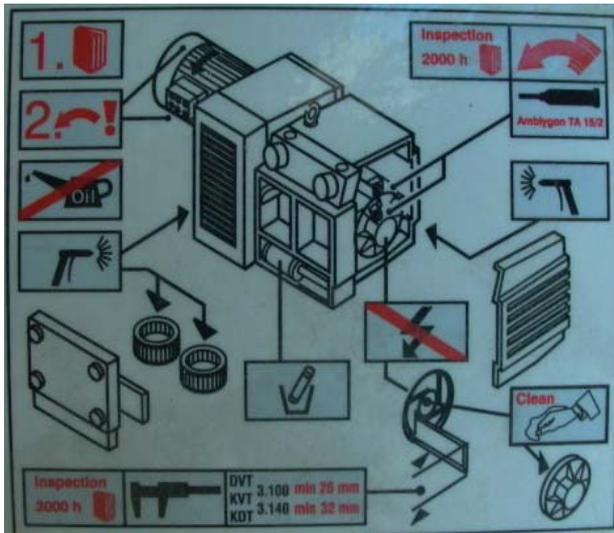
Maintenance – compressor KDT 3.140 item number 00 10 88 96



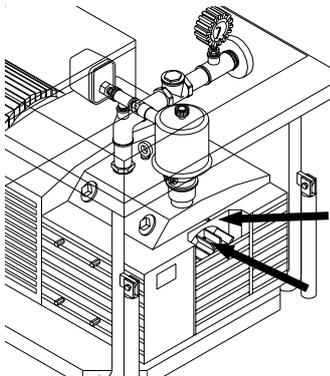
Due to air compression, high temperatures are created at the pump.

Warning: Danger of being burned

Let the pump parts cool down before dismantling them.

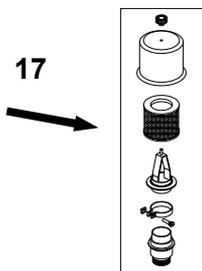


The sticker must be clearly legible at all times.



Hopper lubricating nipples are attached to the housing and to the right of the side cover.

Lubricate each of the bearings after 2,000 operating hours with the compressor running.

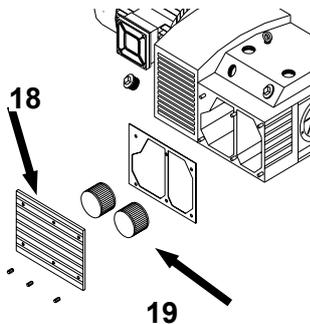
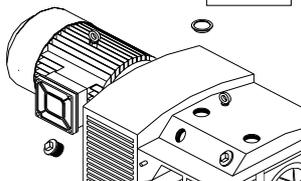


Before beginning the maintenance work, de-energize the compressor.

Clean the intake filter (17) weekly.

If the filter is too dirty, the air output is reduced and the compressor overheats.

Blow out the filter with compressed air from the inside out.



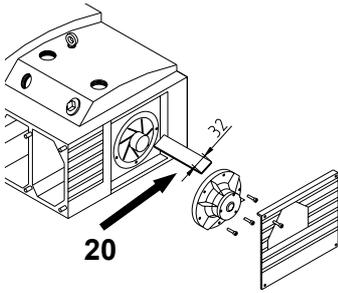
Check the filters after 1,000 operating hours.

Only carry out the checks in the specialist workshop.

Screw off the filter bowl cap (18).

Blow out the filters (19) with compressed air from the inside out.

Replace damaged or very dirty filters.



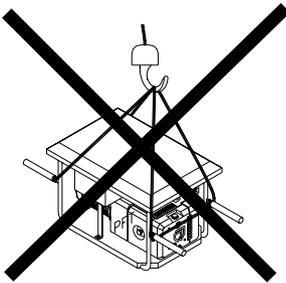
Check the slider width after 2,000 operating hours.

The minimum width of the sliders (20) of 32 mm may not be gone below.

When replacing the sliders, blow the housing out with dry air.

When dismantling, top up the grease in the rolling bearings to replace the amount used.

Transportation and storage



Make sure to store the pump in a dry place and to avoid condensation caused by water vapours.

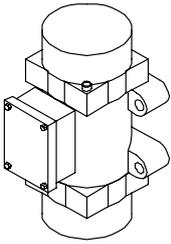
The SILOMAT E 140 may **not** be transported by crane.

Check list

Fault	Cause	Remedy
High pressure valve blows off	Fault in the air / conveying line Clogging	Check the line See page 15 Clean the emulgator filter Check K5 Check the locking flap Check the pressure control
Fault in sequence program	Motor, motor cable, motor protection switch or end switch at motor and drive defective	Replace defective parts
Clogging	Filling time set too high Conveying line laid out incorrectly End switch misadjusted Pressure control misadjusted Locking flap defective Locking flap doesn't close	Check K5 See description of pressure control Replace Observe display, readjust control disc
Program is running, compressor is not	Cable, motor protection switch, motor defective End switch at motor and drive defective	Repl ace end switch, readjust
Compressor is running all the time	Hand-0 automatic switch is at hand position Emulgator filter is clogged Conveying line kinked, clogged Conveying relay defective Material clumps in conveying container outlet Cable defective End switch at motor and drive defective Filter hoses at the cleaning machine contaminated or stuck	Switch to automatic Replace conveying relay K8 See page 16 Cleaning emulgator filters Replace end switch Tap contents out of filters, replace if required
Program isn't running	Fine fuse on transformer defective Control cable level sensor Hand-0 automatic switch defective Filling time (K5), conveying time (K8) or request (K2) defective End switch at motor and drive defective or misadjusted	Replace fine fuse Replace Replace Check parts, replace if required Replace end switch or readjust
Compressor gets too hot	Air wheel defective, air intake clogged	Clean
Flap opens and then won't close again	End switch at motor and drive defective or misadjusted Automatic plumb level (K6) FLAP CLOSED defective Filling time (K5) defective	Replace or readjust end switch Replace K6 Replace K5
Not enough material in the machine	Material does not flow out of the silo Container flap is closed Level sensor too long Filling time set too short Emulgator filter clogged Fault in sequence program	Connect vibrator Open container flap Attach rotary wing at higher position Check K5 Clean - see page 15
Red fault lamp lights up	Fault in sequence program, possibly due to foreign bodies at or near the flap Motor protection switch disengaged	Relieve motor and drive Remove foreign bodies Press motor protection switch Motor and drive possibly overloaded

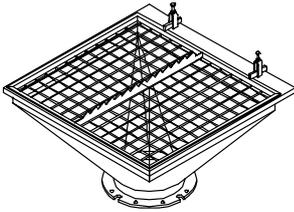
Accessories

You can find further accessories in the internet under www.pft.de or at your building machinery dealer's.



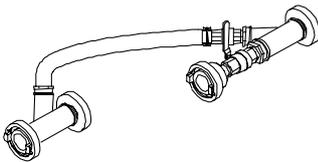
PFT external vibrator SR 22, 400V (item number 20 70 80 00)

The external vibrator is screwed on to the silo / container and connected to the control box. The vibrator's control is installed in the control box.



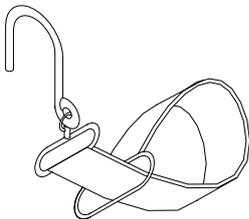
PFT bag filling hopper (item number 20 70 61 00)

The bag filling hopper is screwed on to the conveying container. It is for filling the system with bagged material.



PFT bypass for conveying air (item number 20 56 61 00)

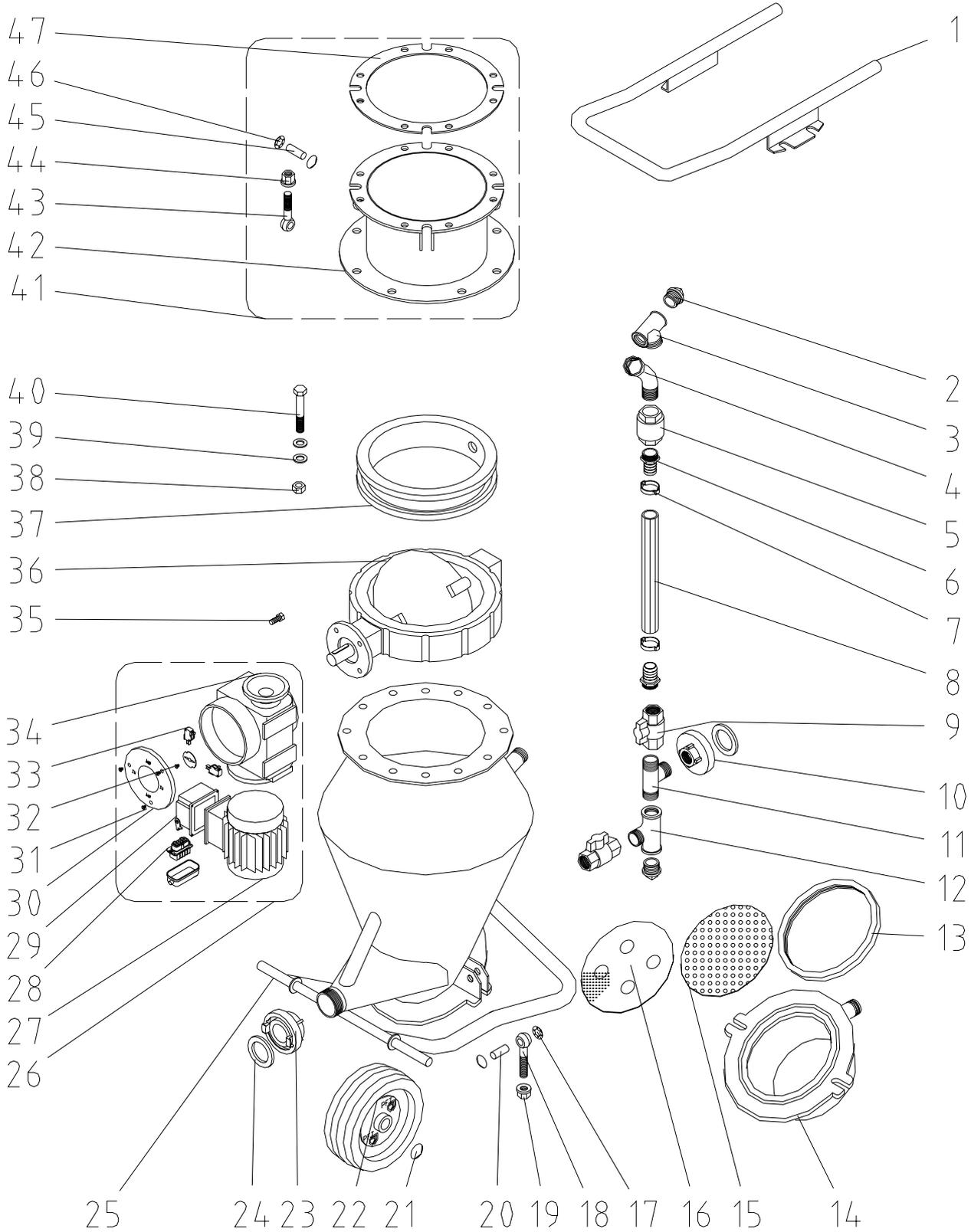
The bypass helps to improve the flow of material which is difficult to convey. It is connected in the pressure line between the conveying container and the cleaning machine.



PFT hose attachment turning band (item number 20 65 40 00)

The turning band relieves the conveying hose of tractive force when it is laid vertically and fixes it onto, for example, the frame.

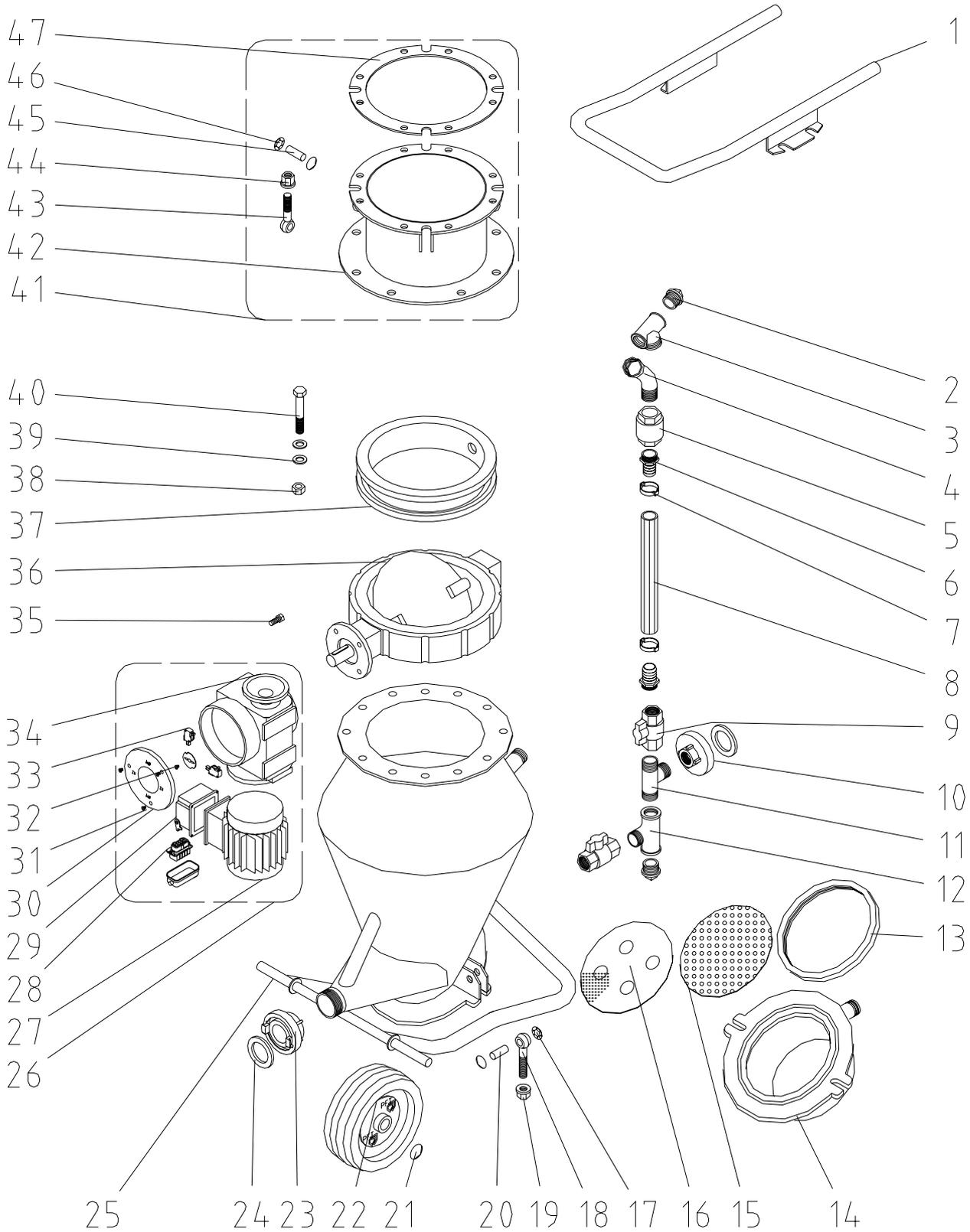
Replacement part drawing – conveying container item number 00 08 90 77



Replacement part list – rollable conveying container**item number 00 08 90 77**

Pos.	Qty	Item no.	Description
1	1	00 05 79 23	Pipe bar conveying container rollable shortened RAL2004
2	2	20 20 58 10	Stopper 1" external thread no. 290 zinc-plated
3	1	00 02 26 57	T-piece 1" internal thread 1" external thread 1" internal thread no. 133 zinc-plated
4	1	00 02 26 56	Curved section 1" internal thread – external thread 45° no. 121 zinc-plated
5	1	20 21 91 00	Counter flow valve 1" internal thread
6	2	20 20 37 70	Hose screw joint 1" external thread with socket 1"
7	2	20 20 29 10	Hose clip 34-37 VPE=10ST
8	1	20 65 31 01	Water/air hose 1" x 230 mm
9	2	20 21 51 55	Tap 1" internal thread DIN 2990 PN 35 with stop for air tap
10	1	20 65 66 00	Coupling C DIN 1" internal thread
11	1	20 20 41 50	T-piece 1" external thread no. 135 zinc-plated
12	1	00 02 26 57	T-piece 1" internal thread 1" external thread 1" internal thread no. 133 zinc-plated
13	1	20 56 60 40	Emulgator gasket
14	1	20 56 64 03	Emulgator cleaning cover conveying container rollable
15	1	20 56 60 10	Emulgator plate with big holes
16	1	20 56 60 20	Emulgator plate with small holes
17	4	20 20 86 04	Fast catch with cap 16s x N27
18	2	20 20 85 00	Eye screw M16 x 80 DIN 444 zinc-plated
19	2	20 20 99 21	Nut M16 DIN 6331 zinc-plated
20	2	20 70 58 00	Bolt A 16 H 11 x 45
21	2	20 20 86 03	Fast catch with cap 20s x N 27
22	2	00 00 82 54	Spare wheel 230 x 85 cover RAL2004
23	1	20 65 61 00	Coupling C DIN 2" internal thread
24	1	20 65 82 00	Gasket coupling C-DIN

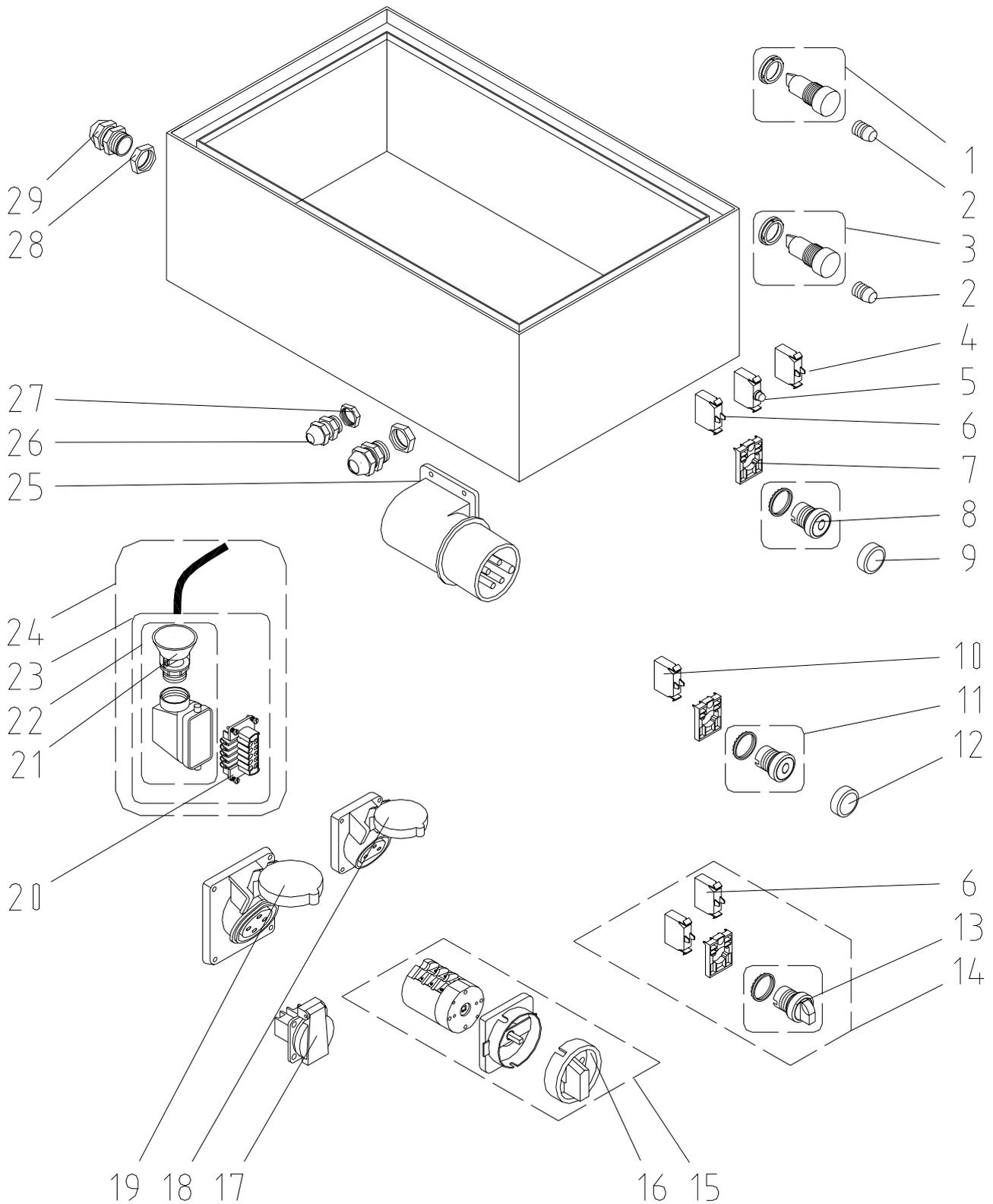
Drawing – rollable conveying container item number 00 08 90 77



Replacement part list – rollable conveying container**item number 00 08 90 77**

Pos.	Qty	Item no.	Description
25	1	20 56 63 53	Conveying container rollable RAL2004
26	1	20 56 12 02	Motor and drive for flap type 6
27	1	00 08 08 62	Motor for motor and drive Flender CA21 type 6
28	1	20 43 23 00	Male insert 10-pin HAN 10 E
29	1	00 01 28 05	Housing 10-pin motor and drive type 6
30	1	20 56 19 01	Clear cover motor and drive CA21 D=143
31	3	20 24 46 00	Cylinder screw M5 x 12 DIN 84 zinc-plated
32	1	20 56 19 20	Screw for control disc
33	2	20 45 65 10	Micro-switch for motor and drive new
34	1	20 56 18 00	Hand wheel motor and drive
35	4	20 20 99 31	Hex. screw M10 x 25 DIN 933 zinc-plated
36	1	00 08 90 78	Locking flap TYPE L01 DN250
37	1	00 08 93 67	Rubber locking flap TYPE L01 DN250
38	8	20 20 99 20	Hex. nut M16 DIN 934 zinc-plated
39	16	20 20 67 00	Washer B 17 DIN 125 zinc-plated
40	8	20 20 81 00	Hex. screw M16 x 110 DIN 931 zinc-plated
41	1	20 56 63 52	Intermediate piece (L)
42	1	20 56 63 33	Intermediate piece for conveying container 8 x D=18 painted
43	4	20 20 85 00	Eye screw M16 x 80 DIN 444 zinc-plated
44	4	20 20 99 21	Nut M16 DIN 6331 zinc-plated
45	4	20 70 58 02	Bolt A 16 H 11 x 50 St zinc-plated 1.5 x 30°
46	8	20 20 86 04	Fast catch with cap 16s x N27
47	1	20 70 63 00	Rubber packing D 330x260x4

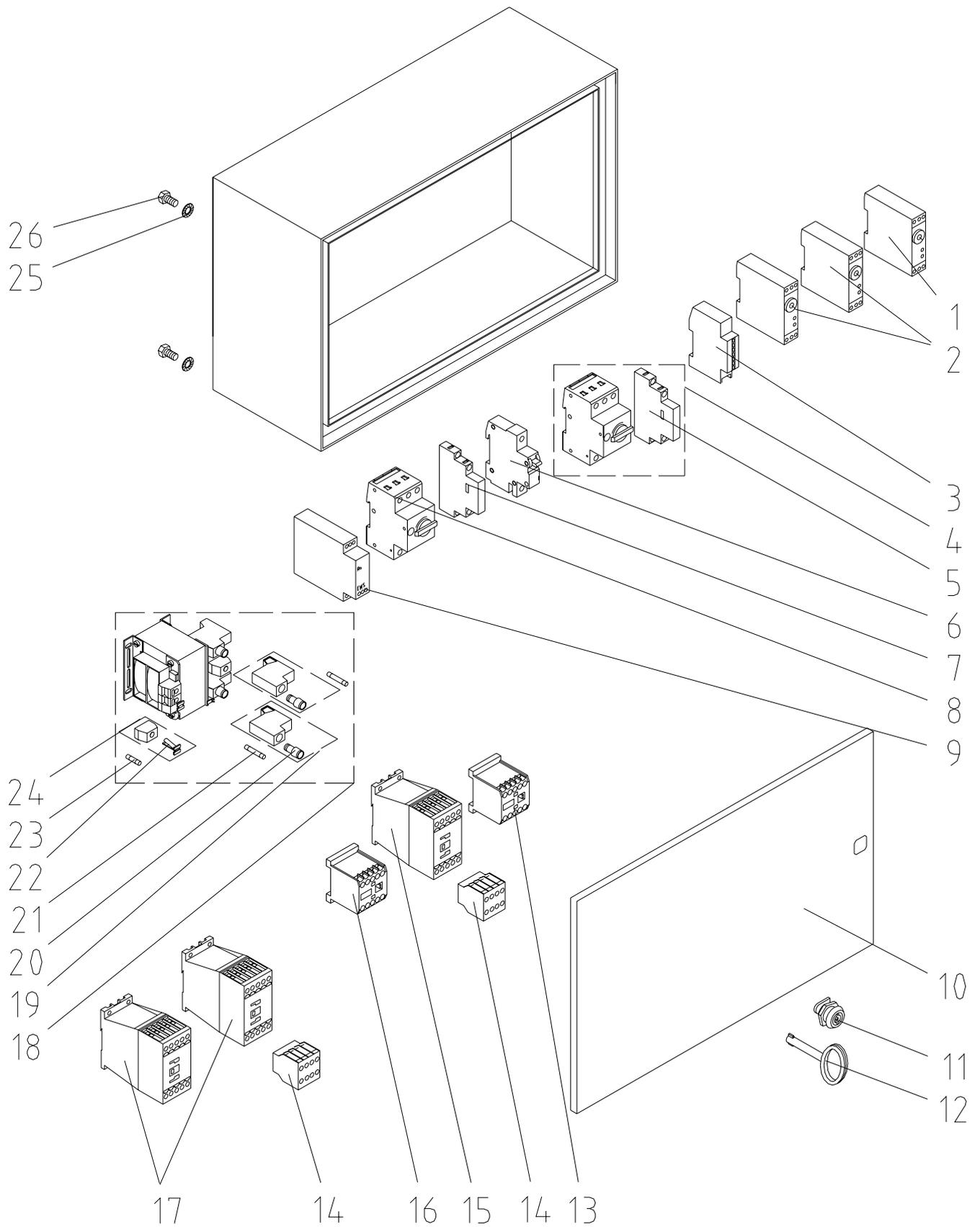
Drawing – control box exterior item number 20 44 30 12



Replacement part list – control box exterior item number 20 44 30 12

Pos.	Qty	Item no.	Description	
1	1	00 00 22 50	Control lamp screw-in yellow without bulb lamp front installation	H3
2	2	20 45 91 01	Bulb lamp 48 V 2 W screw-in BA 9 S	
3	1	00 00 22 51	Control lamp screw-in red without bulb lamp front installation	H1
4	1	00 05 38 86	LED – resistor series element for 42 V	
5	1	00 05 38 80	Illuminated element green 12-30 V	
6	3	00 05 38 35	Contact-element 1 closer M22	
7	3	00 05 38 34	Fixation adapter for switch elements	
8	1	00 05 38 33	Illuminated button green M22	S3
9	1	00 05 38 30	Membrane round for pressure switch IP 67	
10	1	00 05 38 36	Contact-element 1 opener M22	
11	1	00 05 38 37	Pressure switch red off M22	S2
12	1	00 05 38 30	Membrane round for pressure switch IP 67 M22-T-D	
13	1	00 05 38 76	Button stop for air tap with zero position and 2x latching type	S1
14	1	00 05 38 38	Button stop for air tap 3 positions with 2 closers complete M22	
15	1	20 45 52 00	Main reversing switch	Q1
16	1	20 45 52 01	Knob for main reversing switch item 455200	
17	1	20 42 72 00	Panel mounted earthing socket blue	X2
18	1	20 42 64 00	CEE panel mounted socket 3 x 16 A 12 h white no.1272	X7
19	1	20 42 66 00	CEE panel mounted socket 4 x 16 A 6 h red no.1467, flange 92 x 100	X4
20	1	20 43 22 00	Female insert 10-pin HAN 10E	
21	1	20 43 24 00	Strain relief PG 16	
22	1	20 43 21 00	Plug 10-pin HAN 10E with strain relief	
23	1	20 43 26 00	Plug with female insert 10-pin HAN 10E with strain relief	
24	1	20 43 28 00	Control cable 10m plug 10-pin HAN 10E and core-end sleeves	X3
25	1	20 42 51 00	CEE panel mounted plug 5 x 32 A 6 h red no. 391	X1
26	1	00 04 11 41	Connector skintop with nut M16 x 1.5	
27	1	00 04 11 43	Nut skintop M16 x 1.5	
28	2	00 04 11 45	Nut skintop M20 x 1.5	
29	2	00 04 11 27	Connector skintop with nut M20 x 1.5	

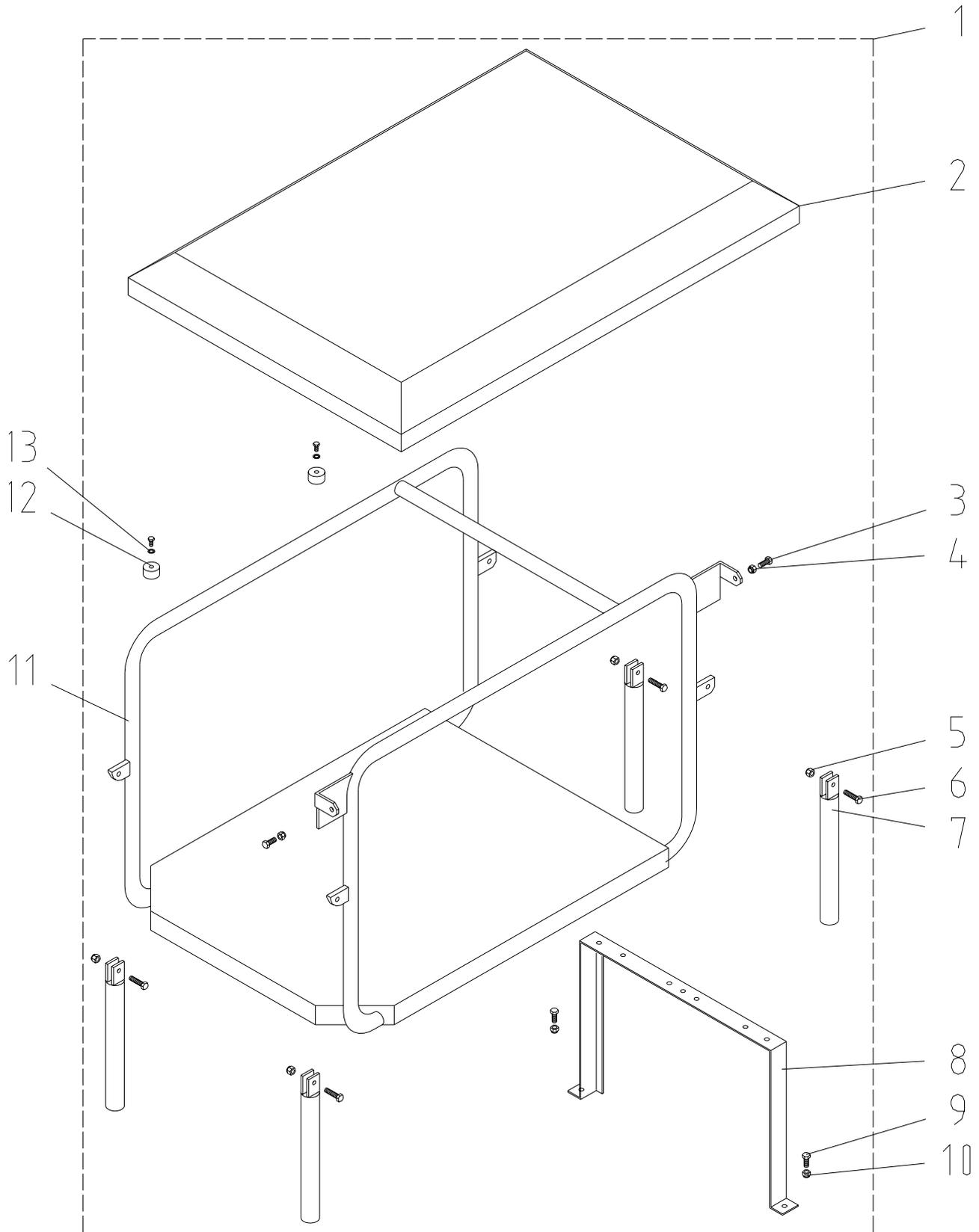
Drawing – control box interior item number 00 09 07 62



Replacement part list – control box interior item number 00 09 07 62

Pos.	Qty	Item no.	Description	
1	1	20 45 26 00	Relay 42 V, 9-180 sec.	K8
2	2	20 45 27 00	Relay 42 V, 1.5-30 sec.	K5 K2
3	1	20 45 31 01	Time indicator 42 V	U1
4	1	00 02 21 43	Motor protection switch 16-20 A PKZM 0-20	Q2
5	1	00 02 14 01	Auxiliary contact NHI-11-PKZO	
6	1	20 41 93 10	Automatic protection 16 A 1-pin	F1
7	1	00 02 14 01	Auxiliary contact NHI-11-PKZO	
8	1	00 04 25 99	Motor protection switch 0.63-1 A PKZM 0-1	Q3
9	1	20 45 27 51	Phase sequence relay 200-500 V with 2 transfer contacts	K10
10	1	00 04 31 24	Door SILOMAT C	
11	1	00 03 62 49	Lock control box (two-way key bit)	
12	1	20 44 45 00	Key for control box	
13	1	20 44 72 00	Automatic plumb level DIL ER22, 42 V	K1
14	2	00 08 52 93	Auxiliary contact DILM 32	
15	1	00 08 42 26	Automatic plumb level DIL M 25-10 42 V	K9
16	1	20 44 73 00	Automatic plumb level DIL EM 01 42 V	K3
17	2	00 08 42 23	Auxiliary contact DIL M9-10 42V	
18	1	20 46 07 00	Transformer unit 230/400 42 V (70 VA) fine fuse 30 mm long	T1
19	2	20 41 92 50	Safety fuse TRKS 4/1-SI (5 x 30)	
20	2	00 00 73 72	Fuse insert holder round / black	
21	2	20 41 90 71	Fine fuse 5 x 30, 0.8 A	F3 F4
22	1	00 00 73 73	Fuse insert holder angular/orange	
23	1	20 41 90 20	Fine fuse 5 x 20, 2.5 A, slow-blow	F5
24	1	20 41 92 30	Safety fuse grey 20 mm fuse	
25	4	20 20 93 14	Washer A 8.4 DIN 6798 zinc-plated	
26	4	20 20 87 01	Hex. screw M8 x 16 DIN 933 zinc-plated	

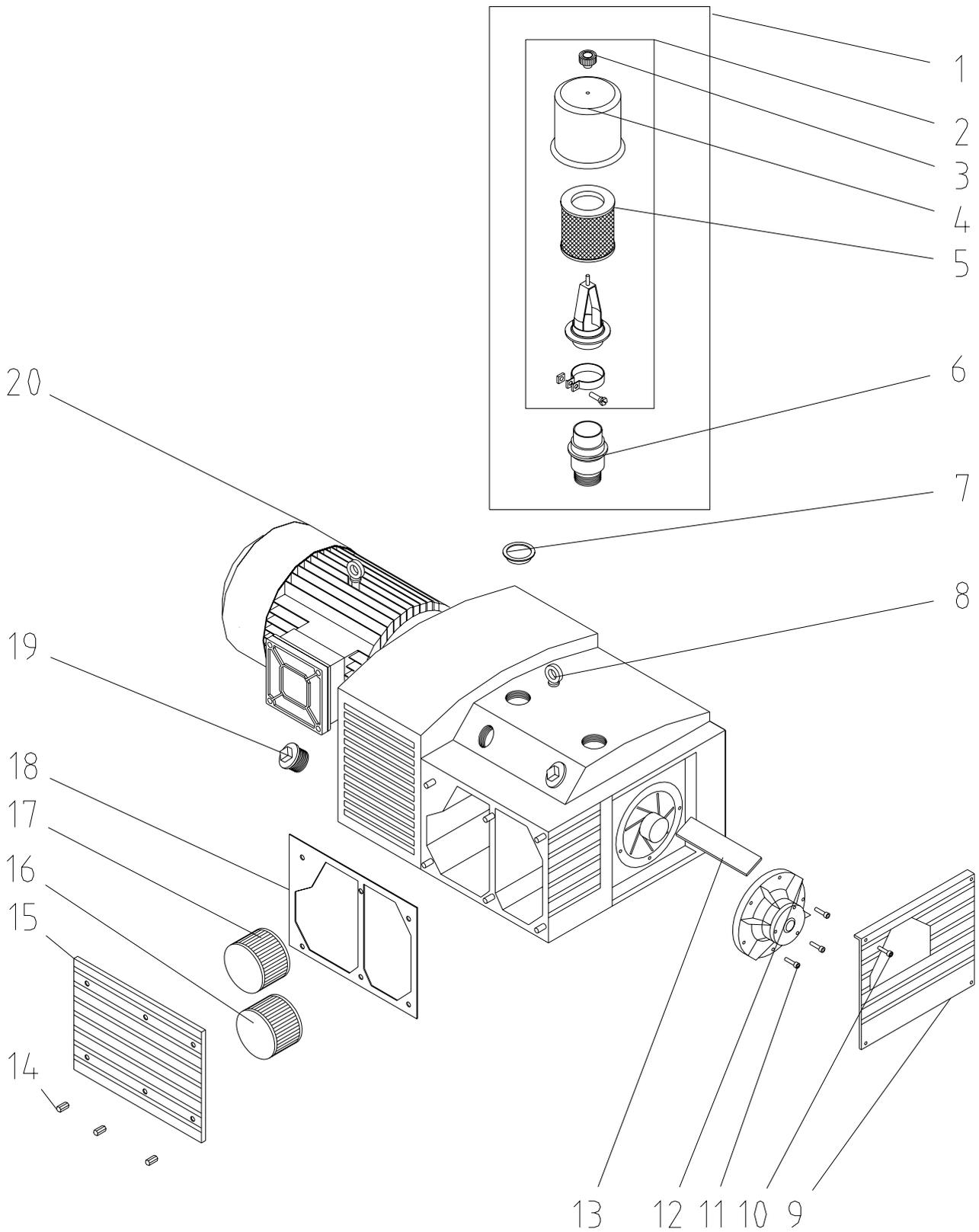
Drawing – carryable frame item number 00 09 86 40



Replacement part list – carryable frame item number 00 09 86 40

Pos.	Qty	Item no.	Description
1	1	00 09 86 40	Carryable frame E systems 670 mm complete
2	1	20 56 66 14	Cover carryable frame E systems 670 mm
3	2	20 20 61 00	Hex. screw M8 x 20 DIN 933 zinc-plated
4	2	20 20 72 00	Nut M8 DIN 985 zinc-plated
5	4	20 20 72 00	Nut M8 DIN 985 zinc-plated
6	4	20 20 78 00	Hex. screw M8 x 30 DIN 933 zinc-plated
7	4	20 56 66 15	Folding carrying handle 280 mm
8	1	00 09 86 32	Support control box E system
9	2	20 20 61 00	Hex. screw M8 x 20 DIN 933 zinc-plated
10	2	20 20 72 00	Nut M8 DIN 985 zinc-plated
11	1	00 09 86 28	Carryable frame for E system 670 mm
12	2	20 44 49 00	Rubber diaphragm D20 x 25 M6 shape E
13	2	20 20 93 10	Washer 6.4 x 18 x 1.5 DIN 90

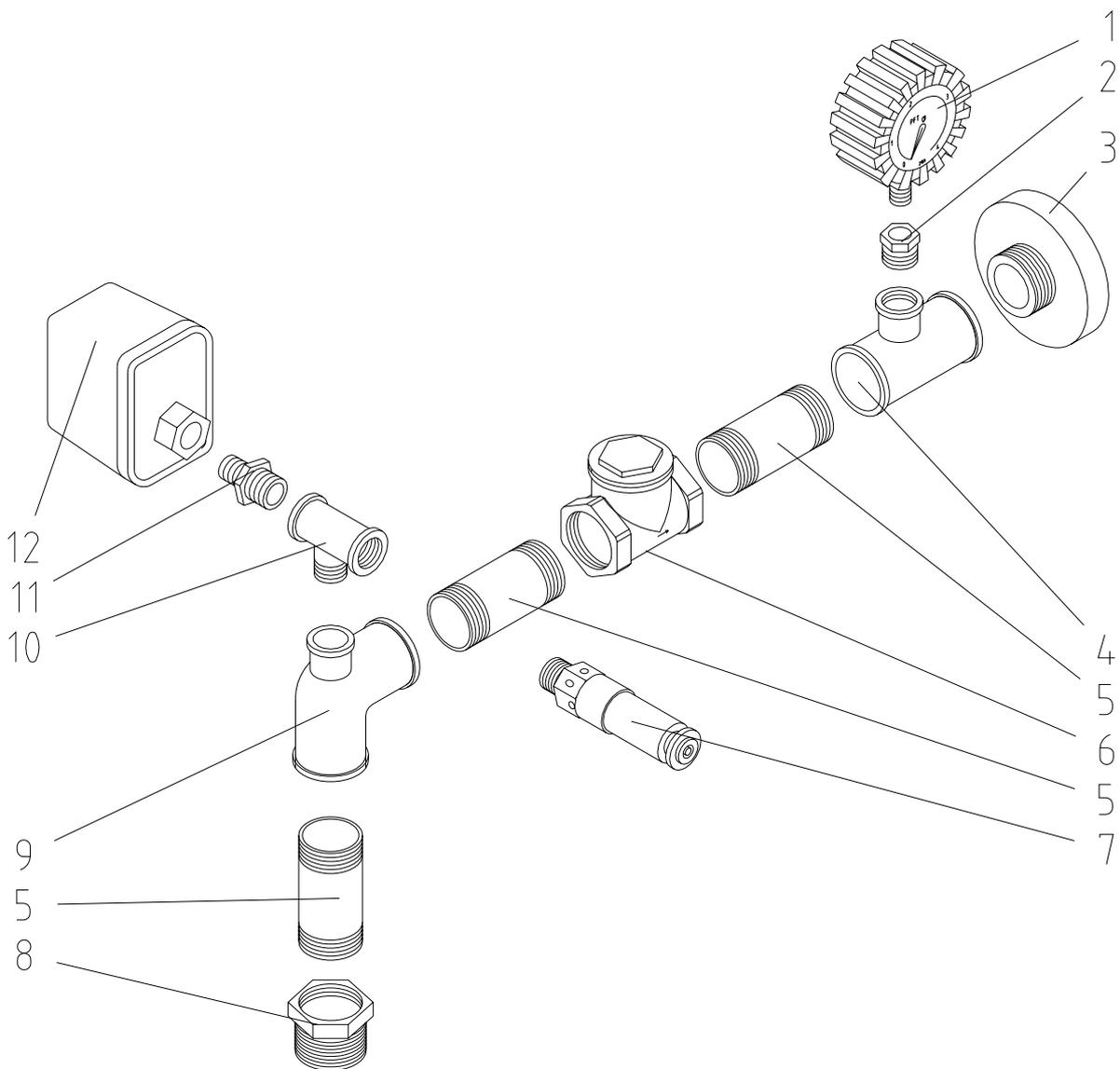
Drawing – compressor item number 00 10 88 96



Replacement part list – compressor item number 00 10 88 96

Pos.	Qty	Item no.	Description
		00 09 51 07	Compressor KDT 3.140 T RAL3604050 DUBAI
		00 09 50 65	Compressor KDT 3.140 T RAL2002 RAKfix (VAE)
1	1	00 10 49 28	Intake filter complete KDT 3.140 dry running compressor
2	1	00 09 06 31	Intake filter KDT 3.140 dry running compressor
3	1		Available on request
4	1	00 09 06 32	Housing intake filter KDT 3.140 dry running compressor
5	1	00 09 06 34	Intake filter KDT 3.140 dry running compressor
6	1	00 10 47 85	Intake tube KDT for oil free compressor
7	1		Available on request
8	1		Available on request
9	1		Available on request
10	1		Available on request
11	1		Available on request
12	1		Available on request
13	1	00 10 88 29	Fan (1 set=7 items) for KDT 3.140
14	1		Available on request
15	1		Available on request
16	1	00 11 18 53	Filter KDT 3.140 dry running compressor
17	1	20 56 26 00	Filter C 1112/2
18	1		Available on request
19	1	00 03 62 02	Stopper 1 1/4" zinc-plated NO.290
20	1		Available on request

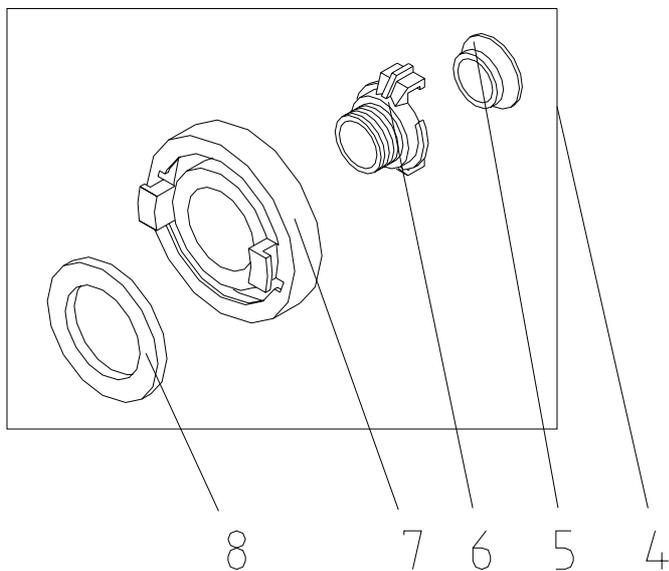
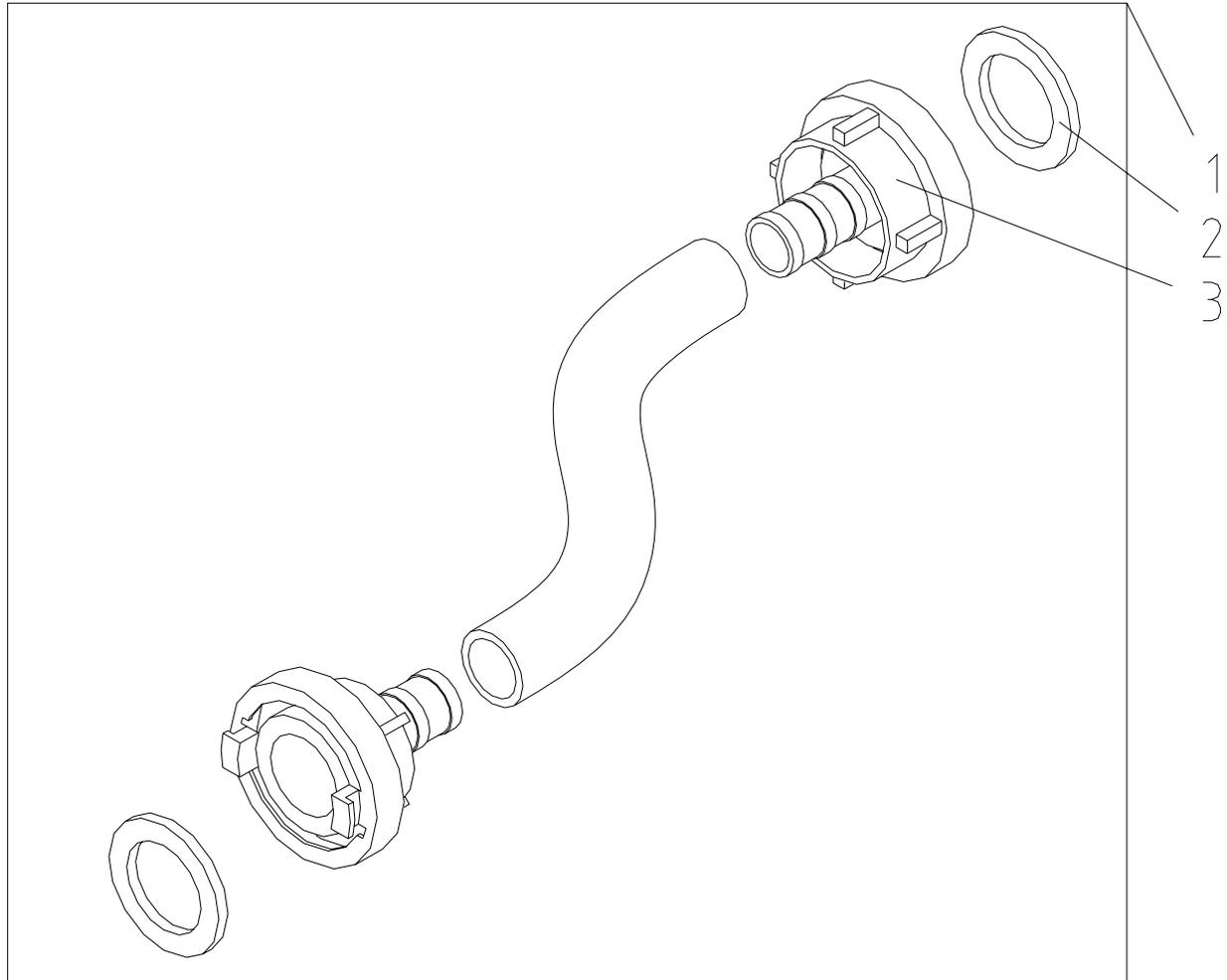
Drawing – pressure control Silomat E 140 item number 00 08 90 68



**Replacement part list – pressure control Silomat E 140 item number 00
08 90 68**

Pos.	Qty	Item no.	Description
1	1	20 21 59 00	Gauge 0-4 bar 1/4" bottom D = 63 mm
2	1	20 20 52 00	Reducer 1/2" external thread 1/4" internal thread no. 241 zinc-plated
3	1	20 65 65 10	Coupling C DIN 1 1/4" external thread
4	1	20 20 45 41	T-piece 1 1/4" 1 1/4" 1/2" internal thread no. 130
5	3	20 20 32 70	Double nipple 1 1/4" x 80 no. 23 zinc-plated
6	1	00 08 90 13	Counter flow valve 1 1/4" internal thread PN16 red brass
7	1	20 56 49 00	Safety valve R 1/2" 2.2 bar
8	1	00 03 60 97	Reducer 1 1/2" external thread 1 1/4" internal thread NO. 241
9	1	00 03 61 53	T-piece 1 1/4" x 1/2" x 1 1/4" internal thread NO. 130
10	1	20 20 42 00	T-piece 1/2" internal thread 1/2" external thread 1/2" internal thread no. 133 zinc-plated
11	1	20 20 32 81	Double nipple reduced 1/2"-3/8" external thread no. 245 zinc-plated
12	1	20 44 76 01	Safety switch type FF4-4 0.22-4 bar

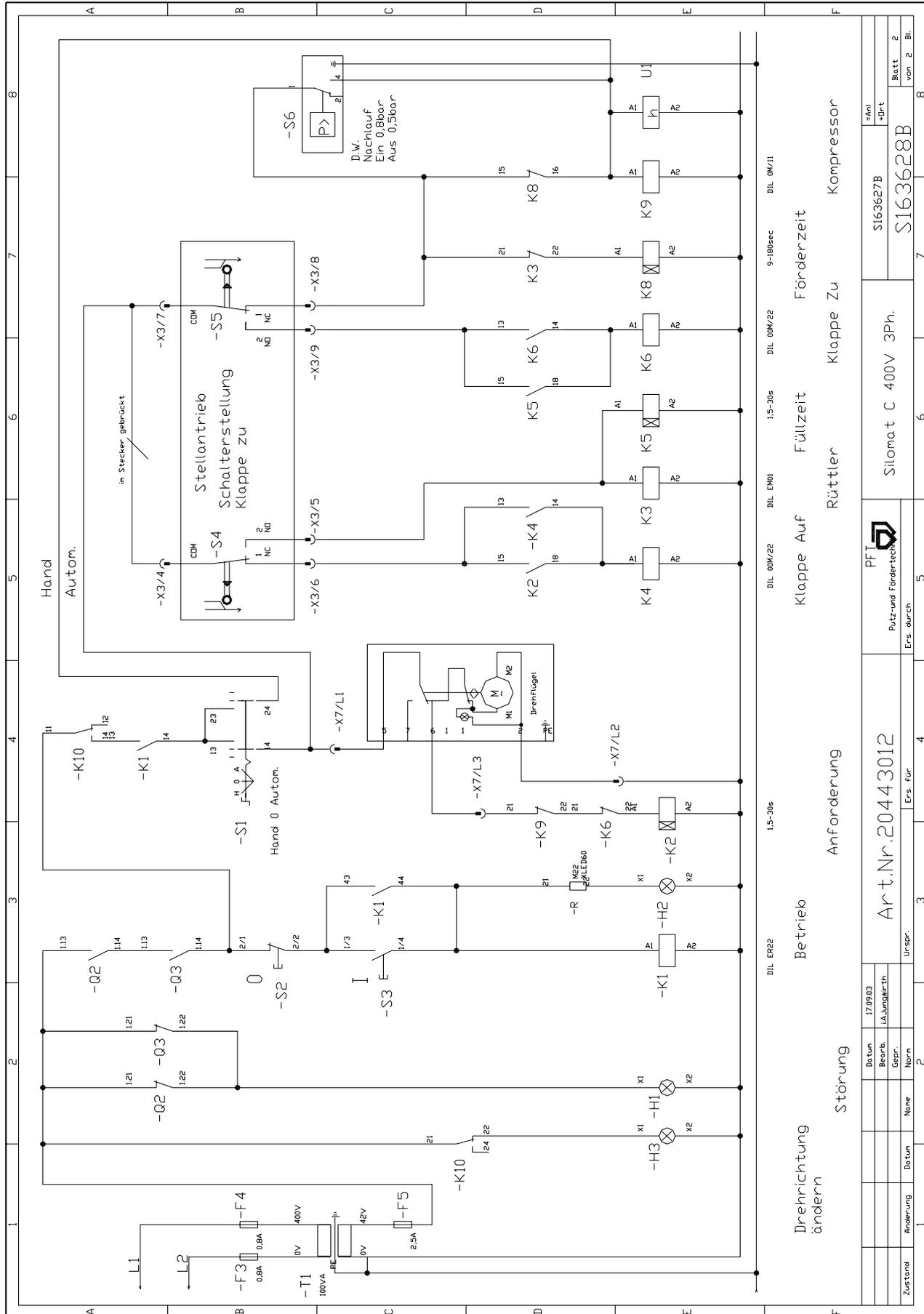
Drawing – rubber pressure hose item number 20 65 09 00



Replacement part list – rubber pressure hose E item number 20 65 09 00

Pos.	Qty	Item no.	Description
1	1	20 65 09 00	Rubber pressure hose NW 32 approx. 7.5 m with couplings C
2	1	20 65 82 00	Gasket coupling C-DIN
3	1	20 65 52 00	Suction coupling C 32 for 20 65 09 00
4	1	00 08 90 79	Reduction coupling C-Geka
5	1	20 20 17 00	Gasket Geka coupling (pack=50 items)
6	1	20 20 08 00	Geka coupling 1" external thread
7	1	20 65 66 00	Coupling C-DIN 1" internal thread
8	1	20 65 82 00	Gasket coupling C-DIN

Circuit diagram – control current S163628B



Zustand		Änderung		Datum	
Name		Norm		Urspr.	
17.05.03		i.A. Jungwirth		Art.Nr. 20443012	
Ers. durch		Ers. für		Anforderung	
PFT		PFT		Klappe Auf	
Patr- und Förder techn.		Patr- und Förder techn.		Rüttler	
Silomat C 400V 3Ph.		Silomat C 400V 3Ph.		Füllzeit	
S163627B		S163627B		Förderzeit	
S163628B		S163628B		Klappe Zu	
von 2 Bl.		von 2 Bl.		Kompressor	

WE KEEP THINGS MOVING



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