

LIST OF SERVICE PARTS

For condensate combustion



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Pos.	Product no.	Product description	Price
1.	951001	Verderflex Dura Peristaltic Pump D 10 XW HSCLSS 70R0.55K EP TF V	on demand
2.	951002	Verderflex Dura Spare Hose Single D10 EPDM HOSE	on demand
3.	952001	Becker Pump Type: Rotary Vane, dry running DT4.8	on demand
4.	952002	Hose Connector for Becker Pump R3/8" GES 14	on demand
5.	955001	Compressed Air Hose for Becker Pump to the condensate filter, sold by metre [€/m]	on demand



Pos.	Product no.	Product description	Price
6.	954001	Protection tub stainless steel 1000mm x 377mm	on demand
7.	954002	Protection tub stainless steel 900m x 377mm	on demand
8.	954003	Oven insert cylinder stainless steel with cover Ø 430mm x length 550mm	on demand
9.	954004	Oven insert cylinder stainless steel with cover Ø 430mm x length 500mm	on demand
10.	954005	Oven insert cylinder stainless steel without cover Ø 350mm x length 550 mm	on demand



Pos.	Product no.	Product description	Price
11.	954006	Oven insert cylinder stainless steel without cover Ø 350mm x length 500mm	on demand
12.	954007	Condensate filter stainless steel Ø 215mm x height 200mm including connections Incl. floating switch, sealing, filter	on demand
13.	954008	Plastic multilayer tube, for condensate pumping Ø 16x2mm, sold by metre [€/m]	on demand
14.	954009	Jet for condensate combustion length 500mm x Ø 12mm	on demand
15.	956001	Floating switch RK 1183/ 1-E5617 HM 1000mm stranded, -20...+125 °C horizontal	on demand

Pos.	Product no.	Product description	Price
16.	958001	Sealing for condensate filter, Ø 210mm	on demand
17.	951003	Lubricant for Verderflex pump 0,5l	on demand
18.	95	Free	on demand
19.	95	Free	on demand
20.	95	Free	on demand



LIST OF SERVICE PARTS

for drive of blower unit



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Pos.	Product no.	Product description	Price
21.	953001	Drive for blower unit V3, Antrieb with 7,5 kW	on demand
22.	953002	free	on demand
23.	953003	free	on demand
24.	953004	Propeller for blower unit V3 Ø 1000mm	on demand
25.	957001	Multi grease IV, content 400 ml supplier:Würth	on demand



Pos.	Product no.	Product description	Price
26.	95	free	on demand
27.	95	free	on demand
28.	95	free	on demand
29.	95	free	on demand
30.	95	free	on demand



OPERATING & MAINTENANCE MANUAL

for drive of blower unit



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Scope:

1. General
2. Incoming goods
3. Installation
4. Coupling
5. Maintenance & lubrication interval
6. Propeller / speed
7. Plain bearing
8. Drive drawing
9. Warranty

1. General

The operating and maintenance manual refers to the drive of the blower unit V3 (7,5kW) and central lubrication unit.

An air-cooled engine, equipped with lubricated plain bearings.

2. Incoming goods

After arriving of the device, remove the packaging material and ensure that all listed components are available and free of damage.

The shaft of the motor must be rotatable smoothly by hand.

Ensure compatibility of the data on the motor type label with the mains connection and the requirements of the motor.



3. Installation

The blower unit V3 must be fixed on the clean flange surface DN 250 with the proper sealings and the foreseen clamping screws. During tightening of the screws, the supporting surfaces must be always in parallel to one another.

4. Coupling

The coupling is a magnetic coupling, that is permanently fixed inside the drive. It is free of maintenance and must not be modified.



5. Maintenance

Cooling ribs and cooling channels of the motor need to be kept clean, in order to not affect negatively the heat dissipation.

Wear and vibration behaviour:

To avoid abnormal wear and negative vibration behaviour, the following aspects need to be considered:

1. Clearance of the sliding bearing (radial bearing) is fixed and maintenance free.



There is a high risk of a seizure at the bearings, if the tolerance approaches zero.

2. Clearance of the axial movement is fixed and maintenance free.



The axial movement must be between 0,5mm and 1,0mm.



Attention!

Lubrication interval:

The function of the central lubrication unit of the drive **must be checked** during running operation.

(Drive drawing – point 8)

The lubrication must be programmed in the controller
30 seconds break 4 seconds running time

Just use Multi Grease IV for lubrication.

The container of stock must always be at least half full.

That's the only way to ensure, that there is sufficient grease in the plain bearings.



6. Propeller/Speed

The propeller is free of maintenance.

Nevertheless, it should be checked twice a year for damages and the correct fixation.



The propeller must not operate with more than 400rpm.



The diameter of the propeller is 100cm and is included with the drive.

The Propeller is made of stainless steel and is precisely manufactured for the drive.

Use of any other propeller will void the warranty.

7. Plain bearing

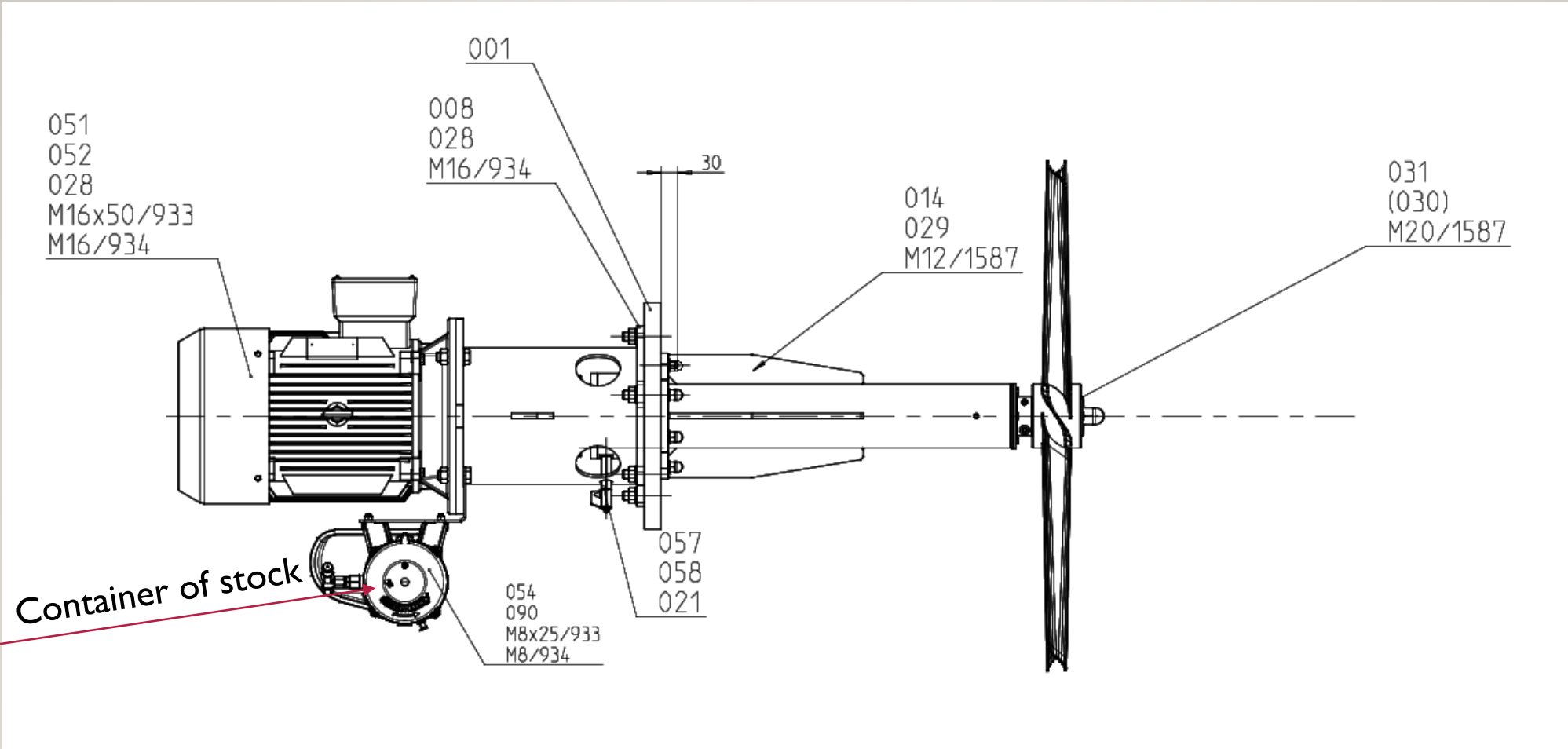
The plain bearing is pre-adjusted in delivery condition of the drive.

During commissioning of the thermal system, the inside must be completely empty, when the first heating up starts.

After at least 3 hour drying time with a pressure of 8 bar and a temperature of 150°C, the bearings need to be checked and adjusted, in case. An autoclave temperature of 200°C must not be exceeded.

The maximum flow temperature of the thermal oil must not exceed 250°C.

8. Drive Drawing



9. guarantees

Blower unit V3:

With correct assembly, precise compliance with the lubrication and the specially made propeller made of stainless steel with a diameter of 100 cm.

six month

Propeller:

Custom made propeller 100 cm diameter in stainless steel for blower unit V3.

two years

Oven inserts variant 1 and 2:

All components of the furnace inserts of variants 1 and 2 are wearing parts.

no warranty



propulsion and propeller

This warranty does not apply to defects caused in whole or in part by:

- A failure to follow operating and/or maintenance instructions;
- B Usual wear and tear;
- C Defects that could have been discovered with the usual incoming and quality checks and controls;
- D damage or deterioration of the goods as a result of improper storage, use or handling;
- E Incorrect, erroneous or incomplete information provided by Buyer to Supplier;
- F Repairs made by Buyer or third parties;
- G Replacement or consumable parts or material not supplied or certified by the supplier.

Consumable parts and accessories are excluded from all warranty after their first use.

The applicable warranty periods begin at the time of delivery.



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Scope:

11/25/2022

1. General
2. Incoming goods
3. Installation
4. Condensate pump
 - 4.1. Maintenance
5. Condensate air pump
 - 5.1. Maintenance
6. Condensate filter
 - 6.1. Maintenance
7. Condensate jet
8. Oven insert
 - 8.1. Position
 - 8.2. Maintenance
 - 8.3. burner output / condensate amounts
9. warranty

1. General

The operating and maintenance manual refers to the condensate combustion set and contains,

- Condensate pump: Verderflex Dura Peristaltic Pump D 10 XW HSCLSS 70R0.55K EP TFV
- Condensate air pump: Becker Pump ,Type: rotary vane, dry running DT4.8
- Condensate filter: condensate filter, stainless steel, Ø 215mm x height 200mm with connectors, hose, condensate jet and floating switch
- Oven inserts Var. 1: Protection tub stainless steel, oven insert cylinder stainless steel with cover, oven insert cylinder stainless steel without cover.
- Oven inserts Var. 2: Protection tub stainless steel, oven insert cylinder stainless steel with welded perforated plate and welded circular ring behind.

2. Incoming goods

After receiving the condensate combustion set, remove the packaging material and ensure that all delivered components are available and free of damage.



3. Installation

The condensate pump and the condensate air pump must be mounted on a stable surface (e.g. console). The condensate filter **must be mounted directly to the oven** or next to it, to ensure a minimum distance of **20cm above the condensate jet**.

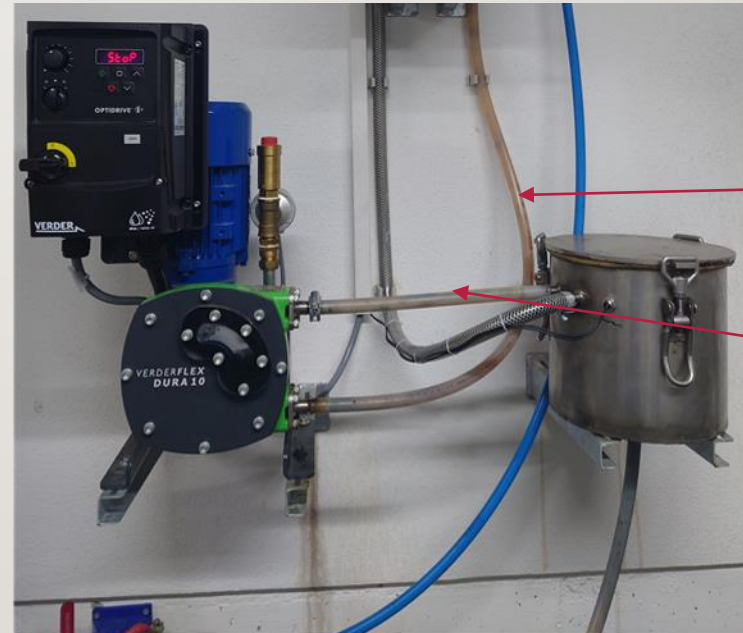
Generally, all condensate pipes should be as short as possible.

4. Condensate pump

The condensate pump may only start pumping, if the condensate air pump has run for 15 seconds, the thermal oil reaches min. 50°C and the condensate filter is empty. (floating switch for condensate filter switches to „green“ on the control).

4.1. Maintenance

Please follow the pump maintenance advices and warranty of the manufacturer.



From condensate tank

Into condensate filter

5. Condensate air pump

Oven heats completely:

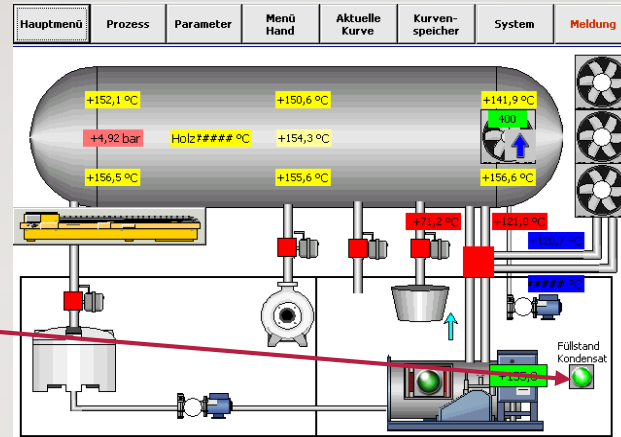
→ Floating switch for condensate filter turns to **green**.

→ The condensate air pump starts running, before the condensate pump activates.

Oven switches off:

→ the condensate pump switches off,

→ the condensate air pump runs 30sec after.



Condensate air pump



5.1. Maintenance

Please follow the pump maintenance advices and warranty of the manufacturer.

6. Condensate filter

The condensate runs into the box of the condensate filter, through the condensate filter and will be pumped under overpressure to the condensate jet.

→ floating switch turns **green**.

In case of a too dirty condensate filter, or a blocked condensate jet, the container fills and the floating switch activates.

→ the control turns to **red and displays a malfunction!**

→ the whole condensate pumping stops immediately!



Condensate pipe of condensate pump

Input of condensate air pump

Floating switch
Condensate filling level



In operating condition, the condensate filter must be tightly locked with the tension lock. It may only be opened, in case the system is switched off, because of an over pressure up to +1000mbar during operating.

6.1. Maintenance

- The sealing of the condensate filter box must be checked visually during filter change
- In case of damage or untightness, it must be replaced
- The condensate filter needs to be replaced, in case of excessive dirt
- During change of condensate filter, check if the floating switch moves smoothly



In case of blocked condensate pipes, they must be replaced.

Sealing

Floating switch

Condensate filter



7. Condensate jet

The condensate pipe of the filter need to be connected directly with the condensate jet.

The condensate jet needs to be guided into the combustion chamber through the provided passage, in such a way that it spreads the condensate directly into the flame.



The condensate jet must be checked everytime for free passage, before starting the system.

In case of adhesions on the inner surface of the condensate jet, it must be cleaned or replaced.

Condensate pipe

Condensate jet



8. Oven insert / Var. 1

The oven inserts are adapted to the respective oven.

They always contain of:

- A protection tub (stainless steel),
- A oven insert cylinder (stainless steel) with cover,
- A oven insert cylinder (stainless steel) without cover.

The insert set needs to be pushed into the oven in such a way that the oven insert cylinder without cover closes with the oven door.

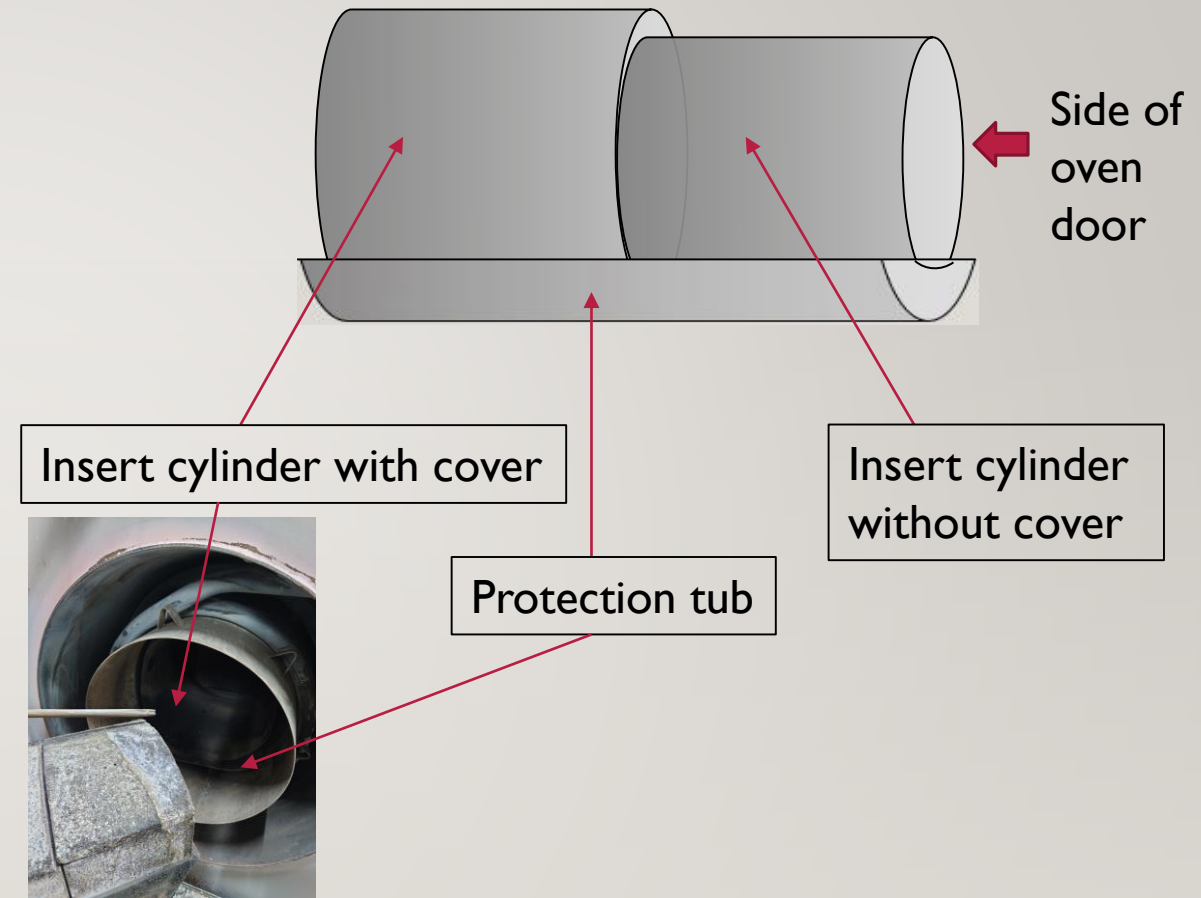
8. Oven insert / Var. 2

The oven inserts are adapted to the respective oven.

They always contain of:

- A protection tub (stainless steel),
- A oven insert cylinder (stainless steel) with welded perforated plate and welded circular ring behind.

The Insert set is pushed into the oven so that the open side of the oven insert cylinder is approx. 15cm sitting behind the oven door.



8.1. Positioning

All oven insert variants (8. Variant 1 and 2) must be inserted in the oven in such a way that no condensate can run to the oven door. Condensate must never come into contact with the oven parts.

8.2. Maintenance



The oven inserts **must be checked** after every 3rd drying run, because they may burn out from time to time.

The insert **must be** rotated 90 degrees each time.

That could lead to holes in the insert cylinders!

If there are some holes in the bottom of the insert cylinder, it must be replaced.

Otherwise, not burned condensate may get in touch with the thermal oil pipes.

This could damage the oven after a while.

8.3. Burner output / amount of condensate

The burner output must not exceed 90 KW. It is important to ensure that the burner burns as long as possible within a process.

With a burner running time of approx. 10 hours within one process, a maximum of 550 liters is allowed (55 liters per hour evenly dosed) condensate are burned!

It may be burned less, but not more!



If the burner output is too high, the furnace insert will be destroyed too quickly and the burner running time is reduced enormously so that less condensate can be burned.



The amount of condensate must be regulated individually depending on the composition of the condensate. In the case of types of wood with resin content such as (spruce, pine, larch...), the Condensate combustion be extremely careful, the injection quantity must be reduced, since resin has an very high calorific value!

9. Guarantees

Condensate incineration: The kit for the complete condensate incineration and the guidelines for operation are based on experience and should be considered as a suggestion.

The commissioning takes place without any guarantee and warranty.

The use and use of the condensate incineration is at your own risk and responsibility.

Claims for damage of any kind (personal injury, external components, nature and the environment,...) cannot be asserted.

