

INSTRUCTION MANUAL

Washing Machine Type VTH



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1.0 Purpose and scope of operations

Washing Machine Type VTH is designed for the washing of potatoes, carrots and similar products.

When washing products that, without further treatment, are to be used in the food industry, the machine's contact surfaces must be constructed from stainless steel.

The washing machine cannot be used for products that are under 15 mm. in diameter.

Normal operational temperature range: 0°C to 40°C.

2.0 Installation

In order that the washing machine functions correctly, it must stand firmly on all four legs. The adjustable legs can be regulated so the machine stands level.

Connect the electricity supply in accordance with local regulations. Connect the electricity supply to the relay box through a motor protection relay which corresponds to the size of the motor. If the machine is fitted with a motor relay, the power supply should be connected to this.

Check that the washing machine's drum rotates in the right direction and the conveyor's flow direction is correct. An arrow on the washing drum indicates the correct direction. If the direction of rotation or flow is wrong, switch 2 phases in the power supply.

Connect a clean water supply to the spray nozzles for spraying the conveyor.
Install pipes to carry clean water to the washing drum.

The water outlet must be connected to a suitable drainage system.

2.1 Installation of accessories

Follow the appropriate instructions when installing accessories.

3.0 Elevator

The elevator (conveyor) is an independent unit. For further information, see the enclosed instructions.

4.0 Operation

Check that Washing Machine VTH is correctly placed in relation to other machines in the production sequence.

Before adding the product to be washed, fill the drum to a level approximately 100 mm. above the bottom of the washing drum. Less water gives a more effective wash, while more water gives a less effective, but gentler wash.

As a starting arrangement, open the outlet shutters as illustrated below. From this position, the outlet can be adjusted to suit the required wash.

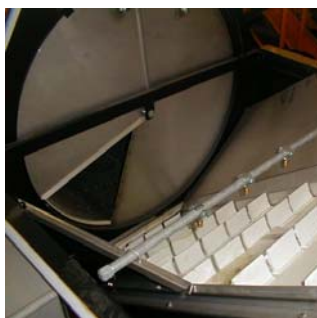


Fig. 1

With a small opening, the product remains in the wash longer, thus achieving a more effective wash. For a light wash, open the shutters wider.

5.0 Pictograms

Danger! Keep fingers away from inlet and outlet of the drum. Keep a safe distance.

6.0 Lubrication and maintenance

All bearings are lubricated for life and require no further maintenance.

N.B. Bearings must be given a protective layer of grease if Washing Machine VT is to remain inoperative for a longer period.

Grease: LM Castrol NLGI 2.5

The worm gear which drives the washing drum and conveyor is lubricated for life with IP TELIUM VSF, a synthetic grease suitable for a normal temperature range of 0°C to 40°C.

Keep the conveyor taut and straight by adjusting the conveyor's tensioning bolts.

The height of the washing drum must be kept correctly adjusted. This is done by adjusting the V-belt bearings in which the washing drum hangs. Likewise, the drum's 4 side guides (vertical control) and 2 longitudinal guides must also be kept in the correct position. If the drum is not kept in the correct position, the PVC seals at both inlet and outlet will wear unnecessarily.

6.1 Cleaning

With reference to the Danish Plant Directorate's Order No. 965 of 13 December 1993 (p. 6).

- 2.3.3. Seed potato growers with contained propagation must clean and disinfect all sorting and ancillary equipment after each new variety. Disinfecting should be carried out using a product approved by The Danish Institute of Plant and Soil Science.
- 2.3.4. Companies authorised to sort potatoes and who also have the authorisation to propagate potatoes, must clean and disinfect sorting machinery etc. which is under the control of The Danish Plant Directorate before the sorting of own propagation is commenced. Disinfecting should be carried out using a product approved by The Danish Institute of Plant and Soil Science.
- 2.3.5. Premises and machinery etc. must be cleaned and disinfected each year before 30 June. Disinfecting must be carried out using a product approved by The Danish Institute of Plant and Soil Science.

In other countries, customers must conform to relevant, local food and hygiene regulations.

Cleaning with a high pressure cleaner requires that the following parts are securely covered:

Gearmotor, relay box and electrical control box.

In order to maintain effective production and keep maintenance costs at a minimum, regular lubrication, maintenance and cleaning are very important.

7.0 Packing and transport information

Weight:

VTH715	550 kg
VTH920	800 kg.
VTH925	900 kg.
VTH930	1,000 kg.

<u>Dimensions:</u>	<u>Length</u>	<u>Width</u>	<u>Height</u>
VTH715	3,180 mm.	1,330 mm.	1,940 mm.
VTH920	3,750	1,460	2,200
VTH925	4,300	1,530	2,200
VTH930	4,800	1,530	2,200

8.0 Transport and lifting instructions

Should it be necessary to lift the sorter, this **must** be carried out by using nylon straps fitted to the sorter's four legs, as shown in the illustration below (fig. 2).



Fig. 2

9.0 Accessories

An automatic level control (fig. 3) can be fitted as an accessory

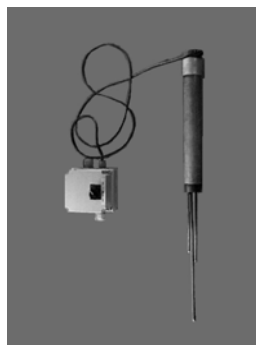


Fig. 3

As an extra safeguard, the washing machine can also be fitted with a load relay, (fig 4), which, depending on the required amount in the drum, starts and stops the feed to the drum.



Fig. 4

If the washing machine is fitted with a pump, adjust the vertical, level-regulating rods to the desired water level.

If the washing machine is fitted with a load relay, adjust in the following manner:

At the top of the load relay there is an inbuilt switch, which is designed for rough level adjustment. Set this switch to 9.

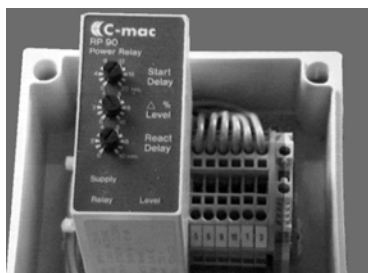
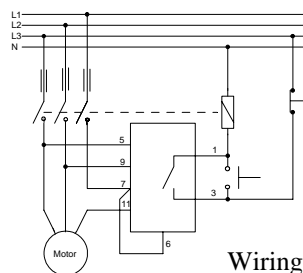


Fig. 5



Wiring diagram RP90

Then follow the procedure below:

Potentiometer 1 (start delay), setting of start time.

Potentiometer 2 (% level), fine adjustment to minimum level.

Potentiometer 3 (react delay), reaction time to maximum level.

The load is connected and after the end of the start-up time, turn the switch rough level adjustment step by step downwards 9-8-7-6 etc. until the (diode) lamp lights up.

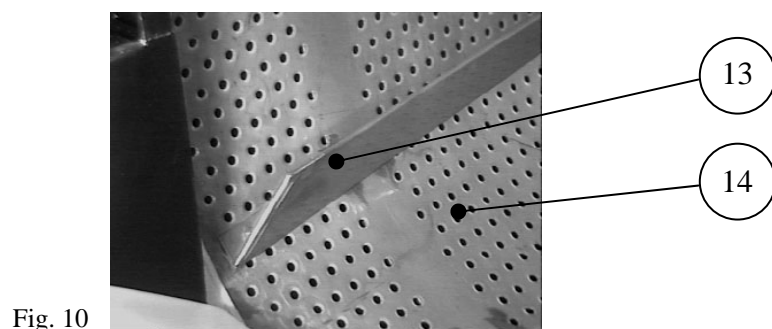
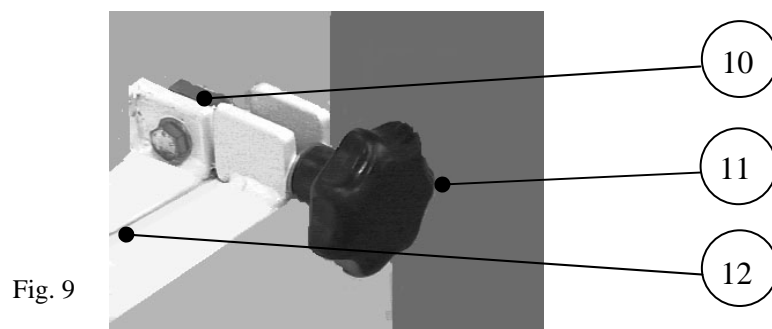
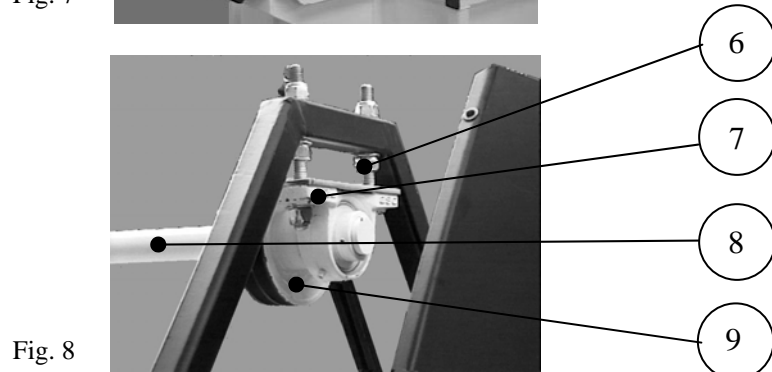
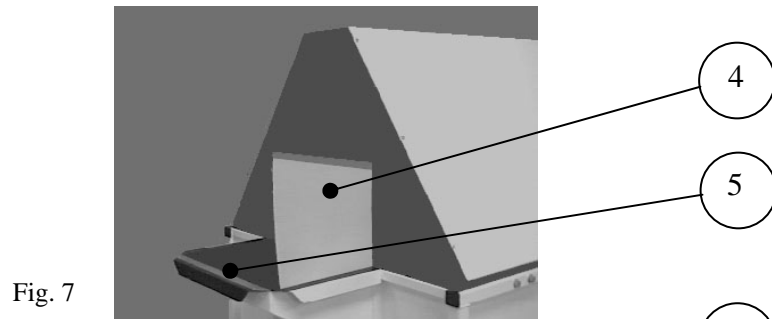
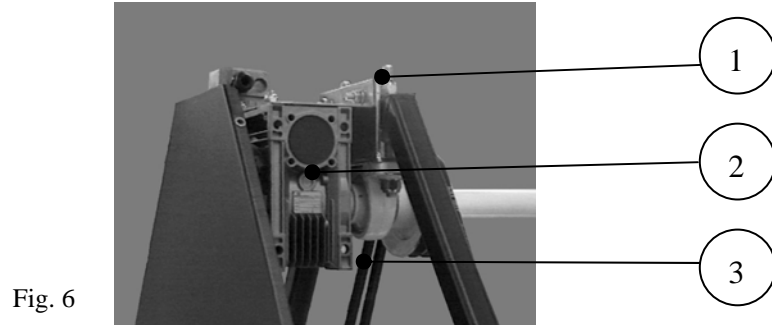
Turn potentiometer 2 (fine adjustment) to maximum until the level diode turns off again, at this point the take-up effect of the motor has now been found. As the reaction time is set at maximum, there are only 10 seconds for this fine tuning of the adjustment.

Set potentiometer 3 at the required reaction time and RP90 is now adjusted correctly, see fig. 5.

Description	Part no.
Level control for stem gate, item no.	4 40 99 030
Load relay 380 volt, item no.	4 40 99 200
Load relay 220 volt, item no.	4 40 99 210

10.0 Spare parts

When ordering parts, state machine type, serial no. and, if possible, position no.



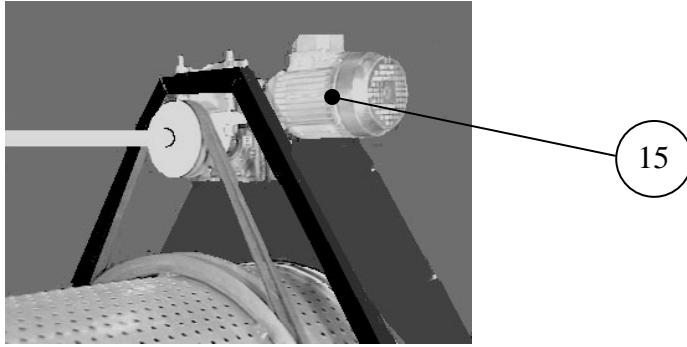


Fig. 11

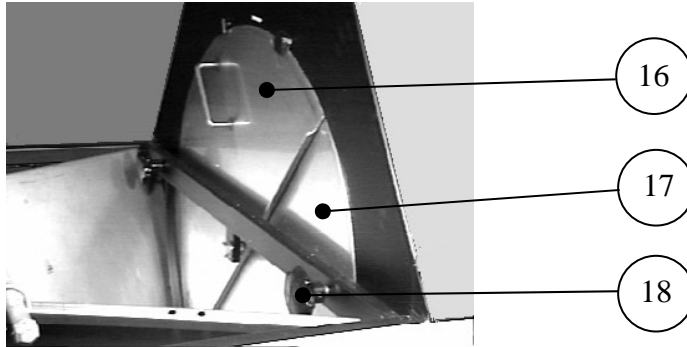


Fig. 12

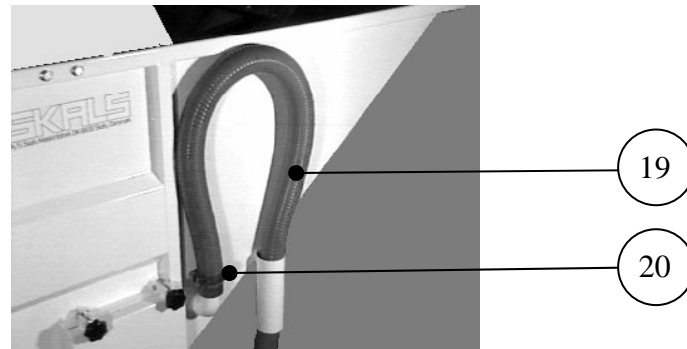


Fig. 13

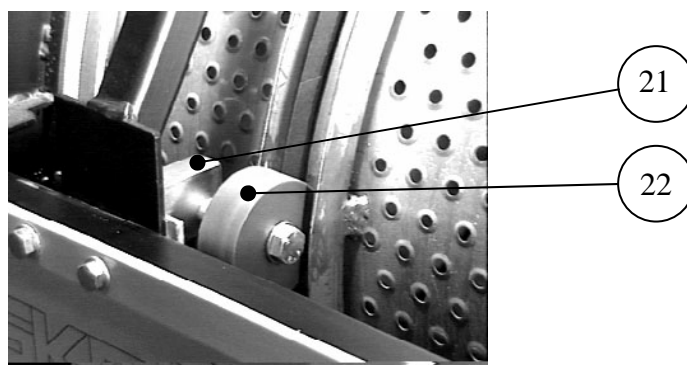


Fig. 14

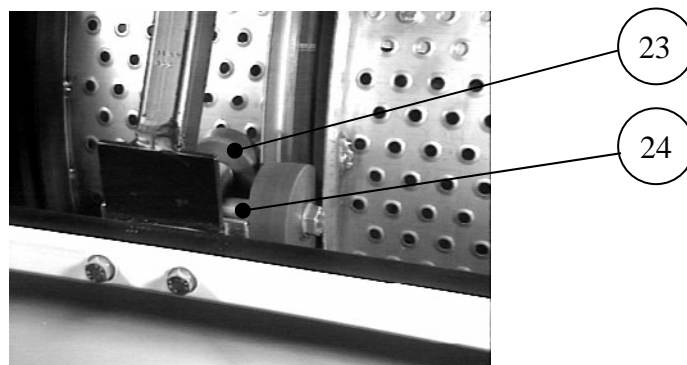


Fig. 15

Fig. 16

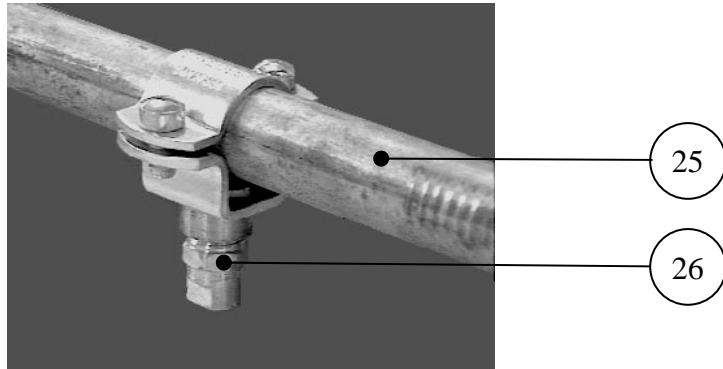


Fig. 17

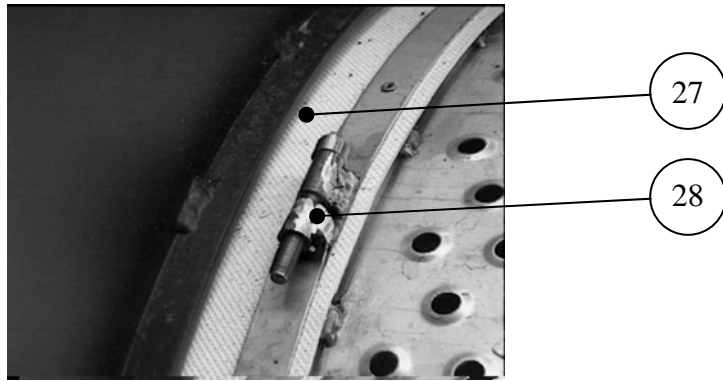
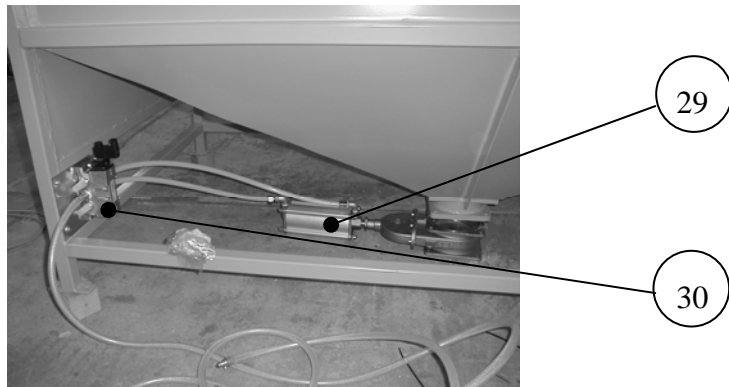


Fig. 18



Page	Fig. no.	Pos. no.	Description
7	6	1	Gear support
7	6	2	Gear unit
7	6	3	V-belt
7	7	4	PVC door
7	7	5	PVC mat
7	8	6	Bearing support
7	8	7	Bearing
7	8	8	Axle
7	8	9	Pulley
7	9	10	Threaded arm for handle
7	9	11	Locking handle
7	9	12	Sealing
7	10	13	Cleat
7	10	14	Washing drum
7	11	15	Motor
8	12	16	Upper shutter
8	12	17	Lower shutter
8	12	18	Locking handle
8	13	19	Drainage pipe
8	13	20	Drainage pipe clamp
8	14	21	Single guide support
8	14	22	Vertical guide
8	15	23	Longitudinal guide
8	15	24	Double guide support
9	16	25	Spray pipe
9	16	26	Spray
9	17	27	Nylon seal, drum
9	17	28	Clamp, drum
9	18	29	Stemgate
9	18	30	Electrical valve

9.0 Declaration of conformity with EU.

Manufacturer	
Firm:	A/S Skals Maskinfabrik
Address:	Hovedgaden 56
	8832 Skals, Denmark
Telephone:	87 25 62 00

declares herewith, that

Machine:	Washing Machine Type VTH
Brand:	
Type, serial no., year:	

Is manufactured in accordance with the decisions of the Councils Directives:

- 1 Machinery Safety – Directive 98/37/EC
- 2 Low Voltage Equipment Directive (LVD) 2006/95/EEC
- 3 Electromagnetic Compatibility (EMC) Directive 89/336/EEC and 93/68/EEC as amended.

Title:	Productions Manager
Name:	Søren Lund Madsen
Firm:	A/S Skals Maskinfabrik

Date: _____

Signed: _____

