

VACUUM PUMP GROUPS USER MANUAL



USER MANUAL OF VACUUM PUMP GROUPS

1. Introduction

This manual contains operating and safety instructions for 400 - 500 - 750 - 1000 - 1200 - 2000 - 3000 l/min vacuum pumps. In order to understand the features of the vacuum pump before use, it is necessary to read the instruction manual carefully. Incorrect handling can cause accidents.

The specification label containing the technical specifications of the vacuum pump is on the vacuum pump. The property label containing the machine serial number is on the vacuum tank. Before use, after reading the instruction manual, the machine should be checked for any damage during transportation. After the damage check has been performed, the machine must be operated in accordance with the safety instructions.

2. Safety instructions

2.1 General safety instructions

Before using the machine, make sure that the following instructions are read and understood.

Warning: May cause physical injury and property damage to humans and animals if handled incorrectly.

As long as the product is used in accordance with safety instructions, it is not dangerous for people and animals.

Installation is quick and easy.

It has been tested at the manufacturer.

Warning: Persons who will install and operate the product must know how to operate the product and read and follow the instructions in the user manual.

Use, maintenance and repair of the product should only be carried out by authorized and trained personnel.

2.2 Safety operating instructions

- Any negative conditions around the machine that could prevent the machine from running must be eliminated.
- The machine must be used in a grounded plug.
- Do not touch the pump housing or the electric motor housing while the machine is running.
- The machine must be operated on a flat and stable surface.
- The machine must be operated in a closed place against adverse weather conditions.
- To reduce the risk of electric shock or injury, use only in dry areas.
- Maintenance and repair work must only be carried out by qualified personnel when the machine is switched off.

- Make sure that the machine is disconnected from the power before any work on the machine.
- Non-original spare parts should not be used in any maintenance / repair work. The warranty will be void if used.
- Before operation, maintenance / repair, etc., the instructions in the user manual must be read.

Warning: Failure to comply with the safety instructions in the operating instructions may result in personal injury or property damage, in which case the manufacturer does not accept liability.

2.3 Labels

The labels on the product are shown below.

- Vacuum pump label

Shows the machine voltage, motor power, motor rotation, serial number, production date. It is located on the vacuum pump.

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		POWER RATING 380 V / 220 V 50 Hz	POWER <input type="text"/> kW
VACUUM 50 kPa	ROTATION SPEED <input type="text"/> r.p.m		
EFFICIENCY <input type="text"/> l.p.m	SERIAL NO. <input type="text"/>		
 	MANUFACTURED <input type="text"/>		

- VPG label

Shows the machine voltage, motor power, motor rotation, serial number, production date. It is located on the corner of the vacuum tank.

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		POWER RATING 380 V / 220 V 50 Hz	POWER <input type="text"/> kW
VACUUM 50 kPa	ROTATION SPEED <input type="text"/> r.p.m		
EFFICIENCY <input type="text"/> l.p.m	SERIAL NO. <input type="text"/>		
 	MANUFACTURED <input type="text"/>		

- Warning label

This label on the pulley protection cage describes the following warnings:

- The machine must be used in a grounded plug.
- Read the user manual before starting the machine.
- The machine must not be operated without reading the user manual.
- Never put a hand-arm in the pulley protection cage.
- Care must be taken when starting the machine.



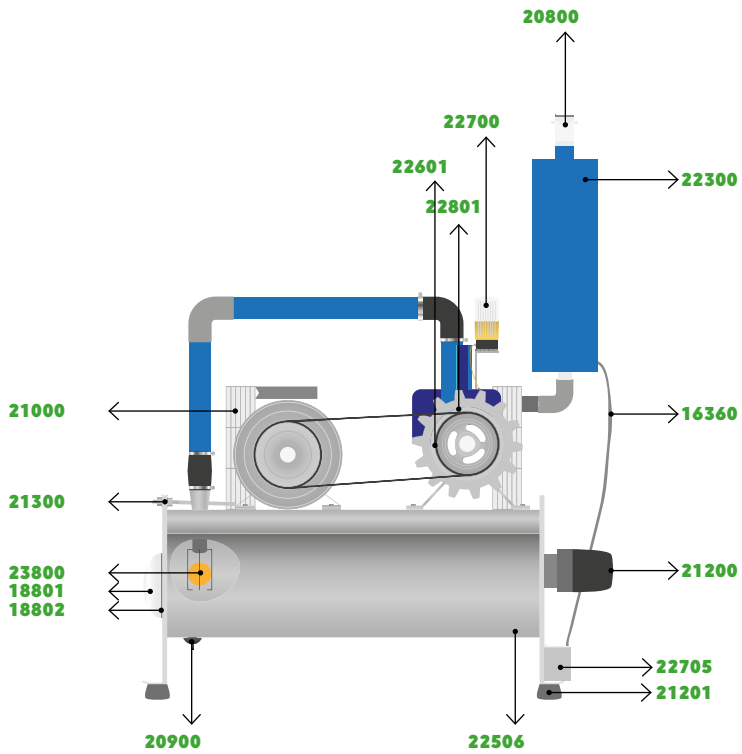
3. Assembling and operating the product

3.1 Product tree

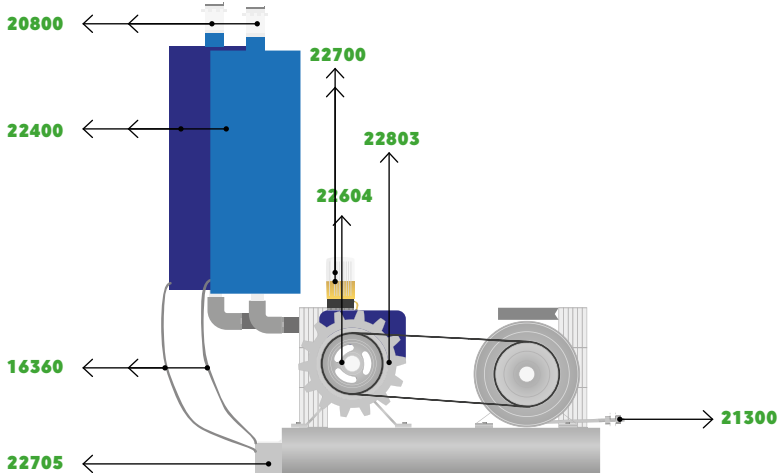
The products and quantities of vacuum pumps are listed below.

	VACUUM PUMP	ELECTRIC MOTOR	EXHAUST	LUBRICATOR	MOTOR PULLEY	VACUUM PUMP PULLEY	VACUUM TANK
VPG 400	1	1	1	1	1	1	1
VPG 500	1	1	1	1	1	1	1
VPG750	1	1	1	1	1	1	1
VPG1000	1	1	1	1	1	1	1
VPG1200	1	1	1	1	1	1	1
VPG 2000	1	1	2	2	1	1	1
VPG3000	1	1	2	2	1	1	1

** In the VPG2000 and VPG3000 models, the vacuum tank is sold separately.



Scheme 1



Scheme 2

Parts of scheme 1

20800 - Nonreturn exhaust valve
22300 - Exhaust
16360 - PVC hose, single, 7 x 14 mm
21200 - Rubber reduction, 63 x 52 mm
22705 - Waste oil tank
21201 - Foot wedge with bolt, M10
22506 - Galvanized vacuum tank
20900 - Rubber dehydrating valve
18802 - Polycarbonate vacuum tank side lid gasket
18801 - Polycarbonate vacuum tank side lid
23800 - PVC ball, Ø 80 mm
21300 - Motor tightener of vacuum pump
21000 - Pulley protection of vacuum pump
22601 - Motor and pump pulley
22801 - V belt, 13 x 900 mm
22700 - Oil tank

Parts of scheme 2

20800 - Nonreturn exhaust valve
22700 - Oil tank
22604 - Pump pulley
22803 - V belt
21002 - Pulley protection of vacuum pump
22606 - Motor pulley
21300 - Motor tightener of vacuum pump
22705 - Waste oil tank
16360 - PVC hose, single, 7 x 14 mm
22400 - Exhaust

3.2 Package contents and product operation

Vacuum pumps are tested by the manufacturer and delivered in a packaged form after all checks are done.

The vacuum pump, electric motor, exhaust and lubricator, which are the main parts of the vacuum pump group, are mounted on the vacuum tank and are ready for milking after electrical connection by the buyer.

The thermal magnetic circuit breaker (on/off switch) supplied with the vacuum pump must be electrically connected with the appropriate power cable.

After the electrical connection is made, the vacuum installation is connected to the vacuum tank output and the machine is made ready for milking.

3.3 Controls before start-up

The vacuum pump must be checked for visible defects and hazards before starting.

- Check the machine for loose, worn and damaged parts during transport.
- Make sure that there is no danger (water leakage, exposed cable) to prevent proper operation of the machine near the machine.

3.4 Electrical connection

The electrical connection of the machine must be carried out by a licensed electrician.

A 3x2.5 mm TTR cable must be used when connecting the thermal magnetic circuit breaker supplied with the machine. If a cable is used other than the appropriate electrical cable size, the risk of damage to the cable is increased and the electric motor may be damaged. The thermal magnetic circuit breaker prevents the motor from being burned by switching off the vacuum pump group when the electric motor is drawing more or less current.

The machine must be operated from a grounded plug. The ground line is a measure taken to prevent electric shock to the user in case of electric leakage.

Warning: The manufacturer does not guarantee or assume any liability for any damage caused by the fact that the electrical connection is not performed by trained and licensed electrical personnel.

3.5 Starting the machine

- After the electrical connection is made, the vacuum pipe is connected to the vacuum tank outlet and the machine is ready for the milking.
- After the necessary installation is carried out, the vacuum pump is operated by pressing the switch of the thermal magnetic circuit breaker.
- After the milking is finished, the vacuum pump is switched off by pressing the close switch of the thermal magnetic circuit breaker.

4. Periodic maintenance and cleaning

The vacuum pump assembly must be operated undamaged and intact. If any malfunction or damage is detected, the machine must be switched off immediately.

Warning: Use of a defective or damaged machine can cause physical injury or property damage.

- Cleaning or maintenance of the machine should only be carried out after the machine is switched off and disconnected from the power supply.
- Maintenance and cleaning work must only be carried out by trained personnel.
- Warning labels that are not read or damaged must be replaced immediately.

4.1 Lubricator control

- The machine oil should be checked regularly.
- Oil should be added as the oil in the oiler decreases.

Warning: Oil-free operation of the machine may cause the fiber vanes inside the pump to break and damage the pump.

Warning: Only SAE10 oil must be used for efficient and trouble-free operation of the machine.

4.2 Vacuum tank cleaning

- The vacuum tank must be opened and ventilated on an average of ten days and the dirt must be cleaned. This should only be done when the machine is switched off.
- Vacuum tank cleaning ensures more efficient operation and long life.

4.3 V belt control

- The v-belt between the electric motor and the vacuum pump must be checked regularly. Over time, worn or loosened belts must be replaced with a new one.

5. Technical Features

PUMP TYPE	DIMENSION (mm)	WEIGHT (kg)	VANE TYPE	DIMENSION OF VANE	DIMENSION OF PULLEY (mm) (FOR VACUUM PUMP)	POWER OF MOTOR (kW)	ROTATION OF MOTOR (rpm)	DIMENSION OF PULLEY (mm) (FOR ELECTRIC MOTOR)	DIMENSION OF V BELT (mm)	QUANTITY OF V BELT
400 l/min	35 x 83 x 135	75	Fibre	70 x 41.5 x 4.85	120 x 24	1.1	1400	120 x 24	13 x 900	1
500 l/min	35 x 83 x 135	88	Fibre	100 x 41.5 x 4.85	120 x 24	1.5	1400	120 x 24	13 x 900	2
750 l/min	36 x 98 x 165	120	Fibre	149.6 x 41.5 x 4.85	120 x 24	2.2	1400	120 x 28	13 x 1000	2
1000 l/min	46 x 93 x 165	140	Fibre	199.6 x 41.5 x 4.85	120 x 24	3	1400	130 x 28	13 x 1000	2
1200 l/min	46 x 93 x 165	145	Fibre	199.6 x 41.5 x 4.85	120 x 24	3	1400	130 x 28	13 x 1000	2
2000 l/min	55 x 88 x 162	185	Fibre	250 x 65 x 5.90	140 x 38	5.5	1400	130 x 38	13 x 1200	3
3000 l/min	66 x 90 x 177	200	Fibre	324.5 x 80 x 7.3	140 x 38	5.5	1400	140 x 38	13 x 1200	3

6. Errors, causes and solutions

• Vacuum pump is not vacuuming.

- Vanes may be broken.
- + The vanes must be replaced.

- The vanes may be stuck due to incorrect oil use.
- + Remove the pipe and exhaust and pour the diesel through the exhaust port and run the machine with diesel for a while and clean the inside of the pump. Then use the correct oil of the machine and continue milking.

- The side cover of the vacuum tank may have fallen, the cover gasket may be worn, or the dehydrating valve of tank may remain open.
- + Check the side cover of the vacuum tank, if the gasket is worn, the new gasket must be fitted, the dehydrating valve of tank must be closed.

- The pulley bolt may be loose, the v belts may be stretched or worn.
- + Check the tightness of the pulley, replace the worn belt with a new one.

- There may be any air leakage in the vacuum installation.
- + Check the vacuum valves, vacuum pipes and servo regulator.

- If the motor does not get enough voltage, the motor does not operate efficiently, so it cannot catch the rotation and the vacuum pump cannot make the required vacuum.
- + Contact a licensed electrician and check the electrical connection.

• The oil flow of the vacuum pump is too high.

- The lubricator gasket may have fallen or worn, the lubricator container may be cracked, the lubricator may not be seated well.
- + Check the lubricator gasket, if the gasket is dropped, it must be reinstalled. If the lubricator container is cracked, a new oil container must be installed. The lubricator container must be fully seated.
- The seals inside the pump may have lost their function.
- + Seals should be replaced with a new one.

• The vacuum pump is not getting oil.

- Inside the lubricator can be filled with dirt.
- + Clean the inside of the lubricator.
- The lubricator hose may be clogged.
- + The lubricator hose must be cleaned or replaced.
- The seals inside the pump may have lost their function.
- + Seals should be replaced with a new one.

7. Warranty

Product warranty is only valid when the product is used in a correct and proper manner. The warranty period is 2 (two) years from the date of delivery.

The warranty covers defects arising from the manufacturer and reported to the manufacturer within the warranty period. It only includes the cost of spare parts used to remedy faults caused by manufacturing faults.

The transportation costs that may arise due to the labor costs and the costs of replacement / replacement of defective parts or materials related to periodic maintenance are not warranted. The warranty is void if repair is carried out without the knowledge of the manufacturer.

Damage caused by the neglect of the maintenance and cleaning of the product, damages caused by the product intentionally, damage caused due to misuse, improper electrical components (such as low or high voltage) or damage caused by overloading the product are not covered by the warranty.











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