USER MANUAL

V. BRØNDUM A/S
Item No. A0800063

RONDA® 2-58 Duo

Heavy Duty Industrial Vacuum Cleaner
For Liquid Filtration and Transport

IMPORTANT!
Read this manual before you operate the machine

USER MANUAL

Index

RONDA 2-58 Duo

Heavy Duty Industrial Vacuum Cleaner for Liquid Filtration and Transport

Congratulations on your new RONDA® 2-58 Duo industrial vacuum cleaner from V. BRØNDUM A/S.

RONDA® 2-58 is a heavy duty industrial vacuum cleaner, which has been developed to vacuum and transport large quantities of liquids. RONDA® 2-58 Duo is perfect for the vacuuming of large quantities of liquids with a high concentration of large and small particles. The machine separates the large particles from the liquid without needing a change of filter. RONDA® 2-58 Duo is well qualified for the vacuuming of coolants with metal shavings, for slaughterhouses, the fishing industry, wastewater treatment plants etc.

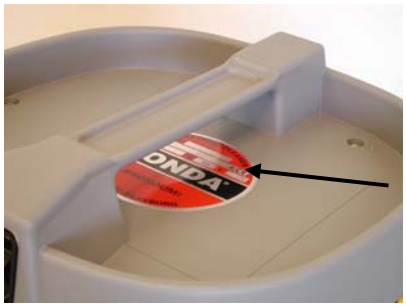
- 2,4 kW continuous suction power
- Modular construction which is adaptable to the task
- Built-in submersible pump for the transport of vacuumed liquid
- Trolley frame with large wheels
- Very large collection capacity
- Degree of protection against moisture IPx4 (IEC 60529)
- Separation of particles and liquid
- Low noise level
- Easily detachable containers
- Washable collection basket

RONDA® 2-58 Duo has 2 separator containers. Container 1 is a separator with a coarse-meshed collection basket, which separates all the coarse particles such as chips etc. Only the finest particles and the liquid will continue to separator 2. The liquid will gather in separator container 2 and can next be transported to the drain by the built-in submersible pump.

The motors in the motor top over container 2 are protected by a liquid/dust separator, a fine-meshed micro pre-filter and a float valve.

Technical Data

RONDA® 2-58 Duo is connected to 230 V mains voltage.



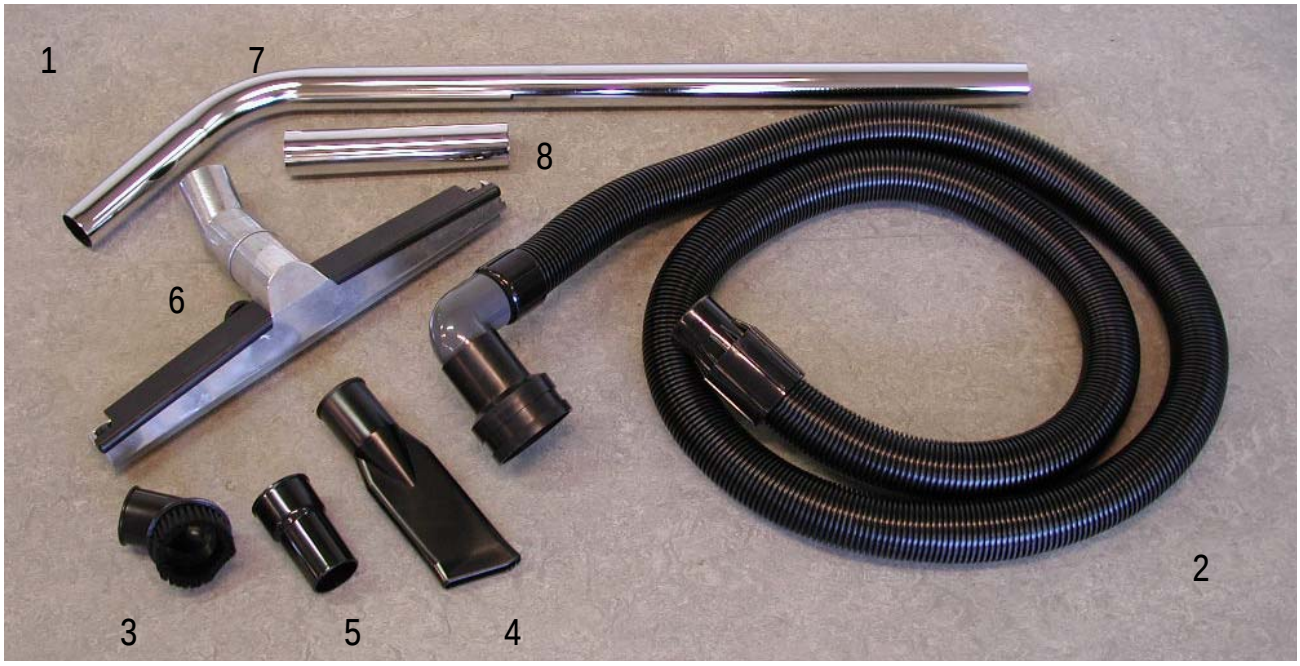
Check that the voltage and fuse of the power source correspond with the data mentioned on the data plate of the machine and with the technical data in this manual.

Below you will find the technical data of the machine.

Suction motor by-pass	2400	Watt
Suction motor voltage	230	Volt
Suction capacity	2400	mmWC
		kPa
Air volume, max.	120	l/sec
	432	m^3/t
Suction power, max.	706	W
Noise level, 1 m	72	dB (A)
Noise level, 4 m	63	dB (A)
Collection basket, max. 20 kg	42	l
Container capacity	58	l
Height	1150	mm
Length	1155	mm
Width	550	mm
Weight without accessories	45	kg
Pump, lifting height	7,5	m
Pump, max. flow	11,2	m^3/t
Number of suction motors	2	

Standard Accessories

RONDA® 2-58 Duo is supplied with a complete set of accessories comprising tubes, hose and all the necessary nozzles.



Accessories can be re-ordered on the item numbers below:

1. 50 mm Professional's Set V 500 ..... 80.33.5015
2. Plastic hose 3,1 m 84.54.5015
3. Round brush 80.34.5001
4. Crevice tool 80.34.5000
5. Adaptor for round brush etc. 80.34.5002
6. Floor nozzle V-500 with wheels 84.38.5011
7. Tube with bend 80.52.5000
8. Short extension tube, 0,25 m 80.52.5020

Design and Description of the Machine

RONDA® 2-58 is a heavy duty industrial vacuum cleaner which has been developed for the vacuuming and transport of large quantities of liquid. A description of the design and the main parts of the machine will follow below.

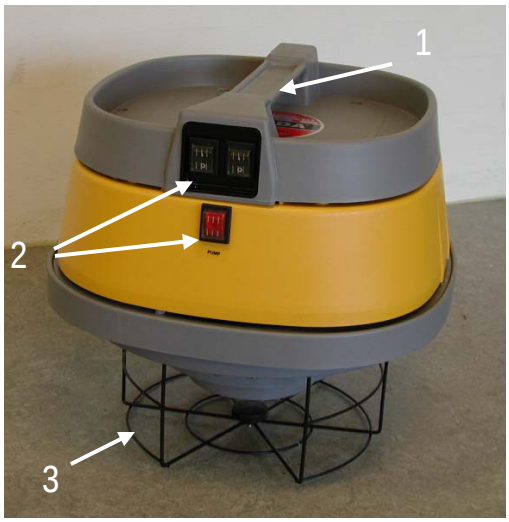
RONDA® 2-58 Duo has 2 separator containers.

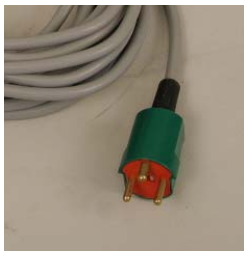
Container 1 is a separator with a coarse-meshed collection basket, which separates all coarse particles such as chips etc. Only the finest particles and the liquid will continue to separator container 2.

The liquid will gather in separator container 2 and can next be transported to the drain by the built-in submersible pump.

Motor Top with Suction Motor, Micro Pre-Filter and Filter Grid

The motor top is provided with an integrated handle (1) and switches (2) to the suction motors and the built-in submersible pump. The filter grid (3) keeps the micro pre-filter stretched.
The powerful suction motors of the RONDA® 2-58 Duo are placed in the motor top.



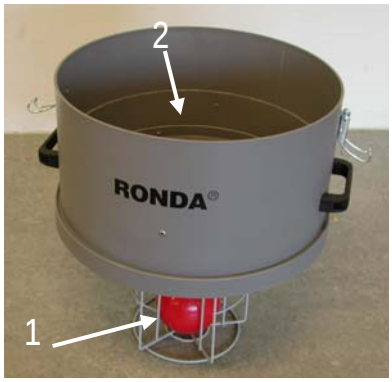


The submersible pump, which works submerged in the liquid sucked up, and both suction motors have for safety reasons earth connection. Therefore the electric cable has a separate cable (conductor) for earth connection.

The micro pre-filter is held in place by the filter grid under the motor top. The micro pre-filter holds back the fine and smallest dust particles and protects at the same time the turbine blades of the two suction motors. The turbine blades can be damaged if there are wearing particles in the air current.

The built-in submersible pump is connected in the socket on the back of the motor top. When the motor top is to be dismounted, the plug of the submersible pump is taken out of the socket, after which the motor top can be removed.

Adaptor Ring with Liquid/Dust Separator and Float Valve

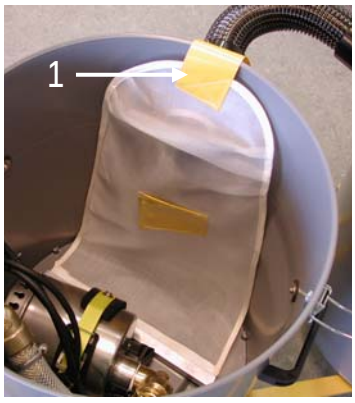


The motor top is mounted on an adaptor ring and is secured with two container clips. The float valve (1) mounted under the adaptor ring blocks the air current if the collection container is filled to overflowing. In this way the suction motors are protected against water being sucked up into the motors.

At the inside the adaptor ring is provided with an air guide plate (2), which diffuses the direct air current. This reduces the air velocity, and the suction motors are protected against the small water particles that might be in the air current.

Container 2 with Submersible Pump and Filter Bag

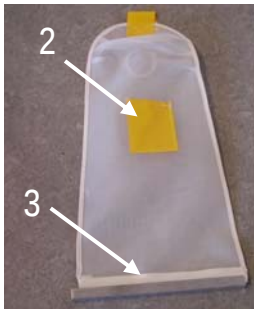
The built-in submersible pump is placed in container 2 and is secured to the container with a yellow belt and a clamping fixture. The submersible pump is easy to dismount in connection with cleaning. The quick coupling of the pump fits the coupling of the external quick coupling, and the cable of the pump is so long that the pump also can be used alone in connection with big emptying jobs with clean water where filtration is not necessary.



The fine-meshed filter bag is mounted on the connection piece in container 2. The yellow support patch (1) carries the filter bag, and holds it over the connection piece while the filter bag is being filled.

The filter bag is provided with a small pocket (2) for anti-foaming agent.

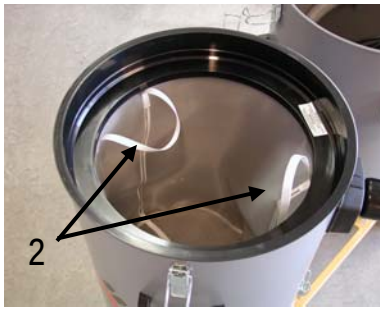
The filter bag is closed at the bottom by an aluminium rail (3). Emptying is done when you push the rail to the side.



Container 1 with Collection Basket

The lid of container 1 is secured with two container clips and is provided with a guide pipe (1).

The collection basket is placed in a ring and is to be lifted in the two handles (2) in connection with emptying.



Scope of Application

RONDA® 2-58 Duo is a vacuum cleaner according to DS/EN 60335-2-2 and CEI/IEC 60335-2-69 and may only be used as such. RONDA® 2-58 Duo may be used for the suction of liquids containing particles.

RONDA® 2-58 Duo must not be used for the suction of dust hazardous to health according to CEI/IEC 60335-2-69 Annex AA or for the suction of hot, sour or basic liquids or liquids with a high concentration of small and wearing particles. Suction of strongly wearing, small particles will shorten the lifetime of the machine.

RONDA® 2-58 Duo is not approved for the suction of inflammable, explosive, poisonous or other kinds of dust, liquids or gases, which are extremely hazardous to health, and must therefore not be used for these purposes.

Safety Directions

- The machine is not approved for inflammable, explosive, poisonous or other kinds of dust, liquids or gases, which are extremely hazardous to health.
- The user must make sure that the machine is adjusted to the task, and that the requirements of the authorities are met.
- Avoid damaging the electric cable. In case of replacement of the electric cable only an original electric cable must be used. The replacement has to be done by a professional.
- The machine is to be connected to mains voltage by means of a reliable earth connection (Active protection against contact).
- Before any repair or maintenance of the machine - also cleaning – the plug must be removed from the power source.

- RONDA® 2-58 Duo is connected to 230 V mains voltage. Check that the voltage and fuse of the power source correspond with the data of the data plate of the machine and with the technical data of this manual.
- This machine is also suitable for commercial use, for example in hotels, schools, hospitals, factories, shops, offices, rental businesses and for other than normal housekeeping purposes.
- CAUTION: If foam/liquid comes out, switch off immediately.
- Guidelines in Connection with Disposal of the Machine

The product you have purchased is subject to Directive 2002/96/EC of the European Parliament and the Council of the European Union on waste electrical and electronic equipment (WEEE) and should not be disposed of as unsorted municipal waste. Please utilize your local WEEE collection facilities in the disposition of this product and otherwise observe all applicable national requirements.

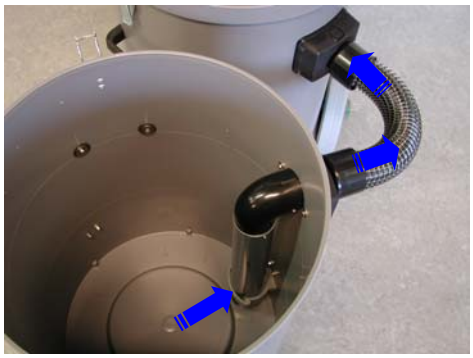
If the use, safety or construction of this machine raises any questions, please do not hesitate to contact either your dealer or V. BRØNDUM A/S.

Mode of Operation

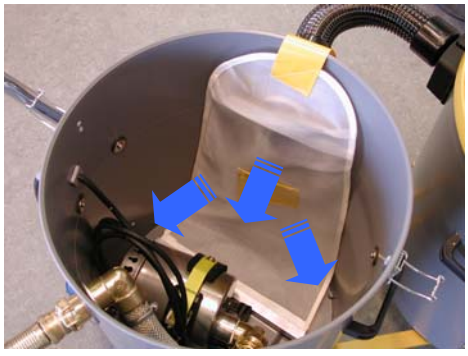
When the suction motors of the machine are turned on, the air will be drawn through the machine and collect the liquid, which is near the floor nozzle.

By means of the high air velocity the liquid will be transported into collection container 1.

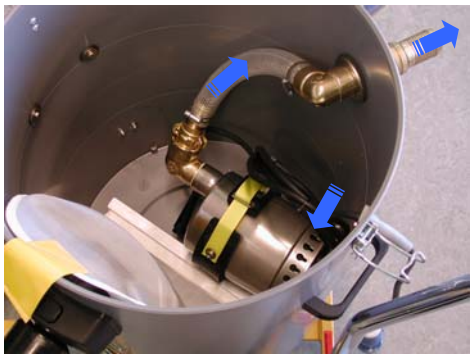
The liquid is led through the guide pipe, which will hold back all the large particles, chips etc.



The suction pipe ending near the bottom of collection container 1 will draw the filtered liquid from container 1 through the connection hose to container 2.



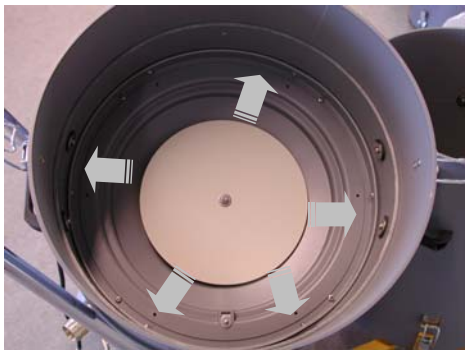
The fine-meshed filter bag will hold back the small particles. The cleaned liquid will run through the filter bag and will gather in container 2.



The built-in pump can transport the sucked up and now filtered liquid directly on to drain during operation.

The air current passes the float valve and continues up into the liquid/dust separator.

If the submersible pump is not in operation, the float valve will block the air current, when the pump is lifted out of the liquid sucked up.



In the liquid/dust separator the air current will hit the stop plate. This lowers the air velocity as the air current is conducted round the stop plate.

Possible water particles will run back into container 2.

The air is finally filtered by the micro pre-filter, which holds back possible small particles in the air current. In this way you can be sure that the exhaust air has been cleared of dust, which is also an advantage to the suction motors.

The purified air current is drawn up through the suction motors in the motor top.

Finally the air is blown through the exhaust filters of the motor top and leaves the motor top under the yellow motor top part.

IMPORTANT!
The motor top must not be covered when the machine is operating. If the air current from the suction motors cannot leave the machine there is a risk of the motor top being overheated and damaged.

Assembling

- Unpack your RONDA® 2-58 Duo and check that all the parts ordered are present.
- Assemble the 2 parts of the tube and mount the nozzle or another piece of accessory.
- Fasten the rubber coupling of the suction hose to the tube and put the other connection piece (Ø90 mm) of the suction hose into the container coupling on top of the lid of container 1.
- Check that the collection containers are empty and that the collection basket, filter bag and micro pre-filter are placed correctly in the collection containers. Check that the filter of the machine is intact and undamaged (see the chapter concerning replacement of filters).
- If the liquid sucked up is to be pumped directly to drain during operation, the drain hose is connected to the drain connection piece on the back of container 2.
- Check that plug and lead are undamaged before the plug is connected to a power source. If the lead or the plug is damaged, a professional must replace the parts.
- Connect the machine to 230 V mains voltage with a reliable earth connection (Active protection against indirect contact).

RONDA® 2-58 Duo can now be used for the suction of liquids. The suction is described more precisely in the following chapter.

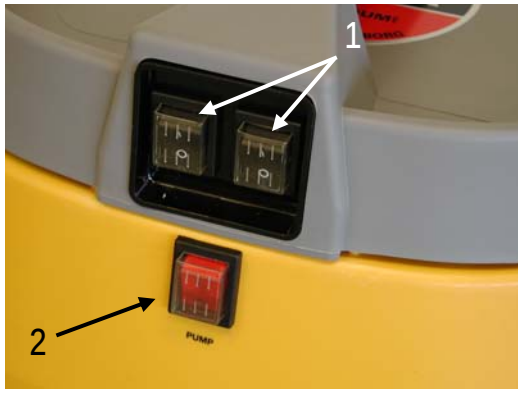
Start and Suction of Liquids

During operation RONDA® 2-58 Duo can be moved on the three big wheels and the swivel wheels mounted on the trolley.

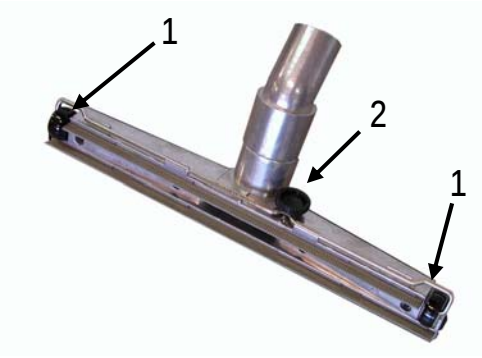
When the machine has been correctly assembled and connected, it can be started on the switches of the motor top.

The two suction motors have a switch each (1). When heavily foaming liquids are to be sucked up, the formation of foam can be reduced if only one motor is in use. This will reduce the air velocity.

The built-in submersible pump is turned on at the red switch marked "PUMP" (2).

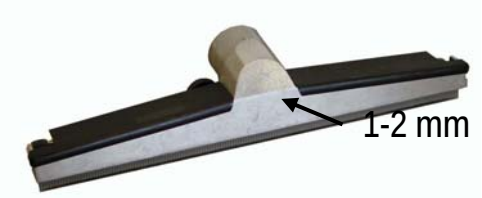


Suction of liquids can take place with or without water nozzle. The water nozzle is suitable for the suction of liquids from large, even surfaces. When the water nozzle is passed over the wet, even surface, the liquid will be sucked up by the strong air current and leave the surface almost dry.



The floor nozzle is equipped with two wheels (1), which keep the nozzle at the same height over the floor.

In order to obtain an effective suction the rubber blades must always be at the correct height over the floor. The height is adjusted at the knob (2) of the nozzle.



Adjust the height of the rubber blades over the floor to 1 to 2 mm.

The rubber blades are made of robust material, but they will gradually be worn. As the rubber blades are worn it will be necessary to adjust the height of the blades over the floor.

Suction of Large Quantities of Liquid or Liquid from Containers

Large quantities of water can be sucked up without the water nozzle. In connection with this kind of suction you must pay attention to the fact that the RONDA® 2-58 Duo has a maximum effective suction height of approx. 2 m, when the suction hose is completely filled with liquid.

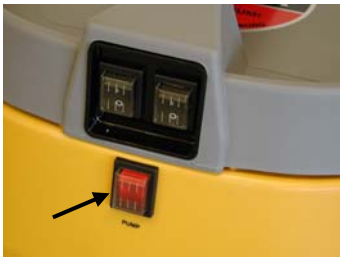
If liquids are to be sucked up at a greater suction height, the suction hose must not be full.

This can be done if the pipe or the suction hose is not submerged in the liquid, but only sucks up a mixture of air and liquid from the surface of the liquid. The mixture of air and liquid is adapted – depending on the suction height – so that no liquid will run out of the tube or the hose. If the liquid runs back from the tube or the hose, a larger quantity of air must be added – and vice versa.

Suction in Collection Container or Simultaneous Transport

RONDA® 2-58 Duo can be used for the suction of liquids in two ways. The liquid sucked up can either be collected in the collection container or be transported on to drain or the like by means of the built-in submersible pump. Below you will find a more detailed description of the two methods.

Suction in Collection Container:



- Check that the switch to the submersible pump is in ”OFF”-position (no light in the switch).

- Turn on the suction motors by pressing the switches to the suction motors in ”ON”-position.

Now the suction can begin.

When collection container 2 is full, the float valve will close for the air current to the suction motors, and the suction will stop.

- Turn off the suction motors immediately so that these are not loaded unnecessarily.

- Empty the collection container. (See the chapter concerning emptying).

Suction and Simultaneous Transport:

- Check that the drain hose (special equipment) is firmly secured to the connection piece of the drain tap, and that the drain hose is properly led to approved drain.

The hose union is secured to the connection piece of the container by means of a claw clutch. The claw clutch is fastened with a lock nut.

- Turn the lock nut clockwise to lock the claw coupling.

A stiff drain hose gives the least resistance and makes the largest liquid flow possible. If a coiled up drain hose is used, the pump must “make an effort to open the hose”, and consequently the liquid flow will be

reduced.

- Turn on the suction motors at the switch on the motor top of the machine and suck up a certain quantity of liquid before the pump is turned on. In this way you can be sure that the pump does not work without liquid, which spares the impeller of the submersible pump.

Now the suction and simultaneous transport of liquid can start.

Emptying the Collection Container:

If it is not be possible to send the liquid sucked up directly to drain, the liquid can be collected in container 2 and emptied after suction.

- Move RONDA® 2-58 Duo to the place where the liquid sucked up can be drained off.

- Open the drain tap, and let the built-in submersible pump pump the liquid sucked up out of the container.

Note: The machine is to be cleaned after every use! See the chapter: Cleaning and Maintenance.

Suction of Dry Dust

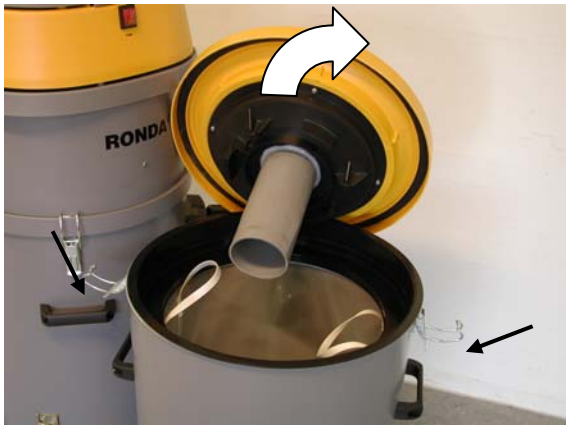
RONDA® 2-58 Duo has not been developed for the vacuuming of dry dust and can only be used for the vacuuming of small quantities of dry dust if a sufficient quantity of liquid is sucked up at the same time.

Dry dust can damage the submersible pump, if the pump is started when there is not sufficient liquid in the collection container. If a small quantity of fine, dry dust has been suspended in a large quantity of liquid, the dust can be pumped away together with the liquid without damaging the pump.

If RONDA® 2-58 Duo is to be used for the vacuuming of dry dust, perhaps together with a small quantity of liquid, a 10-layered collection and filtration bag (Item No. 82.64.0050) must be used. The filtration bag keeps back the particles, and the small quantity of liquid sucked up, if any, will be sucked through the bag.

Emptying the Filter Bag and Collection Basket

Emptying the Collection Basket



The collection basket in container 1 keeps back the large particles and is emptied when needed. When the collection basket is almost full, the vacuuming is stopped. Let the machine empty container 1 of any liquids before the machine is switched off.

- Release the lid of container 1 by loosening the two container clips that secure the lid.
- Lift the lid away from container 1. Be careful about the air guide pipe when the lid is put aside.

- Lift the collection basket out of container 1. Don't lift the collection basket in the black mounting ring. Lift collection basket in the two handles.
- The collection basket should be cleaned after having been emptied. easiest way to do that is to rinse the basket with plenty of water.

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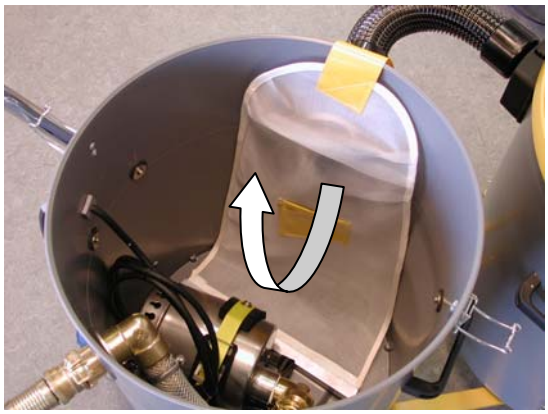
Emptying the Filter Bag:

The filter bag placed in container 2 holds back sludge and small particles and is emptied when needed.

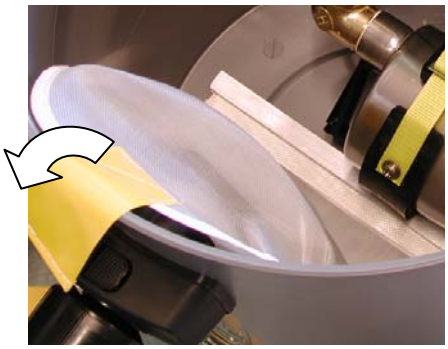
- Release the cable of the built-in pump from the socket on the motor top (1).
- Loosen the two container clips on the side of the collection container and demount the motor top of the machine with adaptor ring (2).
- Lift the motor top with adaptor ring away from the trolley frame in the two handles on the side of the adaptor ring (3).
- Carefully place the motor top and adaptor ring on an even and clean surface so that the grid of the float valve will not be damaged.



Release the filter bag from the connection piece of the container.

Lift the filter bag out of the collection container.

- Pull the bottom rail to the side, and now the particles and sludge collected can be shaken out of the filter bag.
- The filter bag ought to be cleaned after having been emptied. The easiest way to do that is to rinse it with plenty of water.
- Before the filter bag is remounted over the connection piece the bottom rail is pushed back again.



- Make sure that the support flap of the filter bag folds over the container edge. The support flap will help carrying the filter bag.

NB: When the filter bag is being emptied it ought to be checked, whether there are holes in the filter bag. If there is a hole, the large particles will not be held back, and they might damage the impeller of the pump.

Replacement of Collection Basket (Item 84.67.4099) and Filter Bag (Item 84.67.4025)

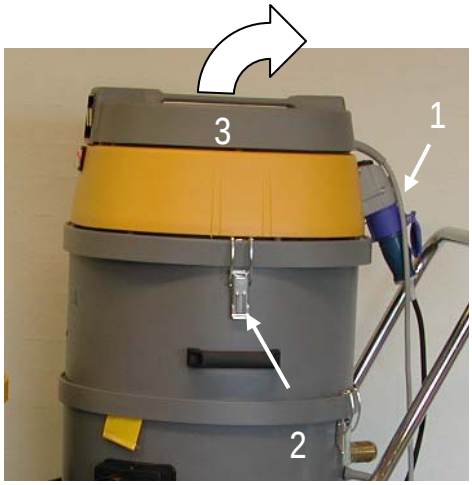
The collection basket and the filter bag are made of robust filter material, and the seams have been reinforced. The basket and the filter bag have long lives, but they will gradually be worn. It must regularly be checked whether the basket and the filter bag are intact, and whether the filter material is undamaged and without holes. If there are holes in the filter material, possible particles cannot be held back, and the pump might get damaged.

When disposing of the worn-out filter bag or the used polyester filter you must make sure that it is done in accordance with the requirements of the authorities.

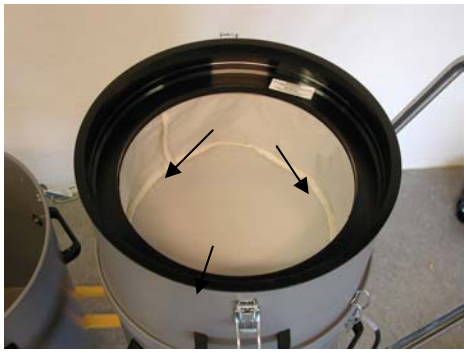
Inspection and Replacement of Micro Pre-Filter

The micro pre-filter is placed in the adaptor ring under the motor top of the machine, and it holds back the fine particles.

The filter is made of robust filter cloth, but it will gradually be worn, and holes in the filter cloth may arise. The easiest way to check the filter for damages is to inspect the inside of the filter. If there are dust particles here, it is a sign of a damaged filter, which must be replaced.



- Release the cable of the built-in pump from the socket on the motor top (1).
- The motor top of the machine is dismounted by loosening the two container clips of the adaptor ring (2)
- Lift the motor top up by using the handle (3) and place the motor top carefully on a clean and even surface. Be careful about the filter grid under the motor top.



- Inspect the inside surface of the micro pre-filter. If there are dust particles on the inside surface, it is a sign that there are holes in the filter cloth.
- If there are holes in the filter cloth, the micro pre-filter must be replaced.

Reordering of Filters etc.

Collection basket..... 84.67.4099
Filter bag..... 84.67.4025
Micro pre-filter..... 84.67.2024

Cleaning and Maintenance

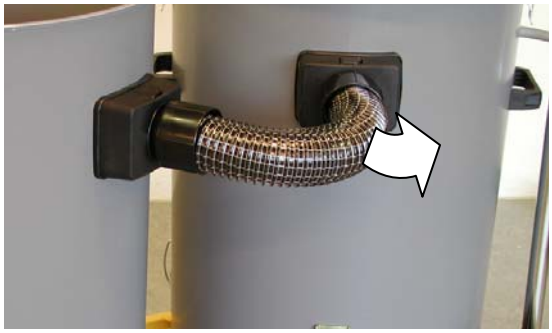
The machine must not be connected to the mains supply during maintenance and cleaning.

IMPORTANT!
The machine must not be connected to the mains supply during maintenance and cleaning.

The machine must be cleaned every time it has been used. If the machine is left with dirty water, there is a risk of formation of germs in the rotten water. Dried up sludge in the impeller of the submersible pump might furthermore damage the pump when it is subsequently started.

The easiest way to clean the machine is as follows:

- Let the machine suck up and pump some clean water for a few minutes so that any sludge and impurities on the impeller of the submersible pump and in the collection container will be rinsed away.
- Remove the motor top and the adaptor ring from container 2 as described in the chapter about emptying the filter bag.
- Remove the lid from container 1 as described in the chapter about emptying the collection basket.
- Clean the collection basket and the filter bag and rinse the sticking particles and other impurities away with clean water.



- Remove the suction hose, which connects the two containers.

- Release the two containers by loosening the container clips, which secure the containers to the trolley frame.
- Rinse away any sticking particles and other impurities in the containers with clean water.

Maintenance of Motor Top

The motor top is made of maintenance-free parts, and the daily maintenance is therefore limited to inspection of electric cables, switches, plugs and sockets for damages.

The easiest way of cleaning the motor top is with a moist cloth.

NB: Aim no jets of water direct at the motor top!

To avoid stop in operation it is recommended that an authorized technician inspects the electric parts once a year.

It is recommended that an authorized service centre checks the brushes of the suction motors after approx. 800 hours of operation and changes them if necessary. This prolongs the life of the suction motors.

Troubleshooting

If the Machine Does Not Suck up in a Satisfactory Way:

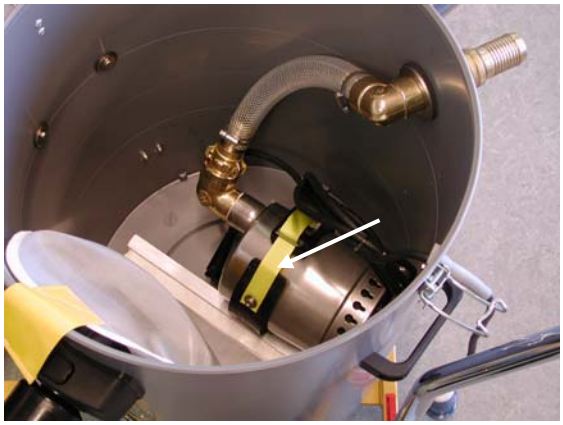
- The suction hose, tube or nozzle may be blocked.
  Stop the machine and remove the blocking.

- Collection container 2 may be filled to overflowing. The float valve is designed to protect the suction motors by blocking the air to the motors when collection container 2 is filled with liquid.
  Stop the machine and empty the container of liquid.

- The collection basket or filter bag may be blocked.
  Take out the collection basket / filter bag and rinse with large quantities of clean water so that any sticking particles will be removed. (See the chapter concerning emptying). Rinse with large quantities of clean water by conducting the water in the opposite direction of the normal flow direction of the air.

If the Submersible Pump Does Not Empty the Machine:

Read the instructions enclosed for the built-in submersible pump.



- Release the pump by loosening the yellow belt and the clamping fixture.

- Clean the pump casing and the discharge pipe.

- Check the hose connections. This also includes a check whether the discharge hose might have been bended so that the liquid flow is reduced.

- Check that the lead of the submersible pump is connected to the socket on the motor top.

- Check whether the discharge hose is blocked.

Service and Repair

Service and repair are free of charge within the warranty period. (Invoice must be presented) on the following conditions:

- The defect is caused by a design fault or defective material. (Normal wear and tear, misuse and insufficient maintenance are not covered by the warranty.)

- No repair attempts have been made by parties other than V. BRØNDUM A/S, or authorized service centres approved by V. BRØNDUM A/S for warranty repairs.

Service and repair free of charge includes the replacement of defective parts and also the costs for related working hours.

The machine is handed in through the dealers of V. BRØNDUM A/S or sent direct carriage paid to:

V. BRØNDUM A/S
Sadolinsvej 14-16
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Fax: (+45) 8680 3363
E-mail: v@broendum.com
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V. BRØNDUM A/S reserves the right to introduce changes without further notice.