0301(E)－AB

Grindresa

Operation Manual & Cautions



SDG

Thank you very much for purchasing the Grindresa.

This manual explains the specifications for the Grindresa.
Please read the operating instructions and cautionary information carefully to ensure that the Grindresa is used in a safe and efficient manner. Special attention should be given to cautionary information which bears the ⚠ mark.

Keep this manual in a secure location where it can be easily accessed.

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1. Cautionary information indications used in this manual

" ⚠ WARNING" mark indicates cautionary information that, if not heeded, could result in serious injury or death, and could also pose a fire hazard.

" ⚠ CAUTION" mark indicates cautionary information that, if not heeded, could result in injury and/or equipment damage.

2. Meanings of symbol marks used in this manual


A prohibited action (Target is unspecified)


Follow instructions carefully


Failing to heed the instructions could result in accidents


Disassembly prohibited


Electrical ground required


Electrical shock hazard

All warnings and instructions must be strictly observed.

3. Using the Grindresa in a safe manner

This product is designed to secure a comfortable work environment by collecting oil mist generated from the surface grinder. It shall not be used for any purpose other than intended use.

⚠ **WARNING**: DO NOT INSTALL in a hazardous area

This machine is not constructed to be explosion-proof. If operated in a potentially explosive atmosphere, a very dangerous ambient gas explosion could occur if the motor burns out.

WARNING: Fire and explosion prevention
Never allow explosive gases , organic solvents , or flames to be sucked into the suction port.



WARNING: To prevent fire or shock hazard
The wiring of Grindresa must be performed by a licensed electrical worker in accordance with technical standards for electrical equipment and interior wiring regulations.



WARNING: Maintenance and inspections prohibited during impeller rotation
Always wait at least 2 minutes after a power OFF before performing filter replacement work or inspections (to allow the impeller's inertial rotation to come to a complete stop).



CAUTION: No disassembly!
Never attempt any disassembly of the motor and casing.
This will result in failure or accident.



4. Items to check at product delivery

Although all our products are thoroughly tested and inspected prior to shipment, the customer should nonetheless check the following items when taking delivery of the Grindresa.

- Verify that the delivered product (model, etc.) is the same as that which was ordered.
- Verify that the product has not been damaged or deformed, etc., during shipment.
- Verify that all the product accessories are present.

5. How to store Grindresa

Ensure Grindresa is stored in the following environment:

- Indoors and away from direct sunlight
- At an ambient temperature of between 0 and 40°C
- Humidity of between 10 and 90 percent (no condensation)

If you keep the machine without operation for an extended period (more than three months), please note the following:

(1) If you keep it in a packaged state:

Please keep it in a dry indoor location and at a relatively constant temperature.

(2) If you keep it at a standstill when installed:

Please avoid exposing the device to thumping vibrations or heat generated by other equipment.

We recommend that you cover it with plastic to protect Grindresa against water, grease or dust.

6. Product labels

(1) Product nameplate(motor nameplate) ……At main body or base frame…

The nameplate label contains the following information: product model, rated voltage, rated frequency, rated current, insulation class, max. static pressure, max. airflow rate, manufacture No., etc.

Note 1: The "ratings" are the operating limit values.

Note 2: The static pressure is the force which a gas flow applies to faces which are parallel to that flow.

(2) Label indicating the rotation direction



The rotation direction of the impeller is indicated by this arrow. Please ensure that the rotation direction is correct before the test operation.If operated with inverse rotation, the air volume and static pressure will be decreased and the unit may become overloaded, causing the motor to burn out.

(3) Ground connection ……Inside the terminal box

The " ⏚ " mark indicates a ground connection.Be sure that the mark-indicated part is securely grounded.

(4) "Keep Hands Out" Label



Do not put your hands into the inlet or outlet.
There is a risk of injury.

7. Ambient conditions in the area of installation

⚠ CAUTION

Resulting in motor burnout and deterioration of the components. Be sure to use within the range described following.

Ambient temperature	0°C to 40°C
Intake temperature	40°C or lower
Relative humidity	10% to 90%
Altitude	1,000 meters or lower

- Install the Grindresa indoor.
- Make sure that the installation floor has a sufficient bearing strength commensurate with the machine weight.
- Install the Grindresa where it stays away from strong vibration or impact.
- Install the Grindresa on a level, flat surface.
- Do not install in an environment where explosive gases, etc., may be present.

8. Suction port cautions

⚠ WARNING

Never allow explosive gases, organic solvents, sparks, or burning cigarettes to be sucked into the suction port. These materials could cause explosions, fires, and product damage.

9. Product installation

(1) Installation method

CAUTION

①Please activate caster stoppers to keep Grindresa from moving after installation.

②Please check and ensure the ball valve is closed before running the machine.

③Leave a space of around 500 mm in each direction for maintenance checkups, such as when changing filters and so on.

(2) Power supply connection

WARNING

①Please use a power supply with the rated voltage and frequency.

・Allowable power fluctuation range

In succession …… Within the range of ± 5 percent of the rated voltage

Temporarily …… Within the range of ± 10 percent of the rated voltage

②Always connect the ground wire.

③Please connect the power supply to the input terminal of the inverter.

④The rotational direction of the impeller is clockwise as viewed from the electric motor side.

⑤When using a crimping terminal, either place insulating tubing on the swaged part of the crimped terminal or use an insulated and crimped terminal.

Screw size	Tightening torque
M3.5	0.87N・m(max0.96N・m)

10. Piping

(1) Duct hose material

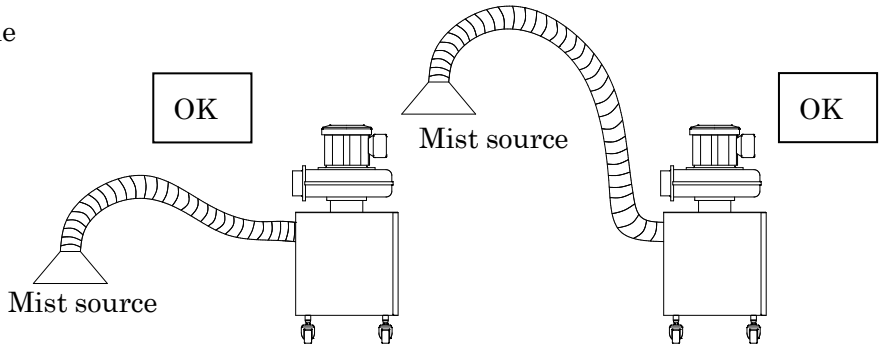
Because the life of the duct hose will vary according to the type of mist being sucked in, the use of an oil-resistant duct hose is recommended.

(2) Intake duct piping

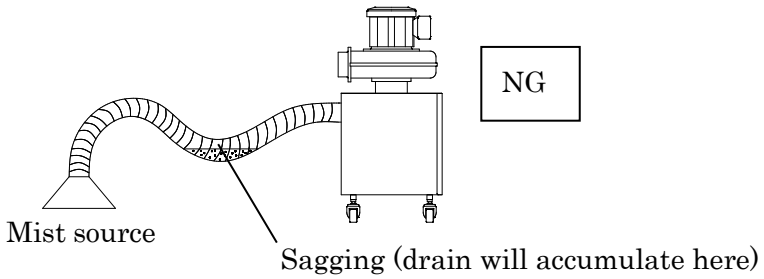
①A flexible duct should be used to facilitate easy duct maintenance and vibration resistance.

②The duct should be somewhat longer than strictly necessary (slight length surplus), but it must not sag when connected.

OK example



NG example



(3) Drainpipe

Ensure the ball valve is closed when operating. If open, the suction power and trapping efficiency may decline.

11. Operating cautions

(1) Due to fire risk, never suction explosive gas, organic solvent, sparks and burning cigarette ends.

(2) Under circumstances such as oil-based (water-insoluble) mist, involving a large suction amount or small particle size, the collection efficiency varies depending on the service condition, which may mean an inability to collect the oil mist properly or rescattering.

(3) Please take care not to create an occluded state (e.g. blocked air circulation) due to a clogged filter (demister), etc. The suction power may decline.

12. Inverter (frequency changer) operation

This machine comes originally equipped with an inverter as standard. Please note the following points:

(1) Lower- and upper-limit frequencies

①Lower-limit frequency

The lower-limit frequency should be set to exceed 30 Hz. (If lower than 30 Hz, the starting torque is insufficient, so the motor may not start up. If the motor does not start when a low frequency is set, please use it at a frequency of 30 Hz or more, whereupon starting should be possible. If left unable to start, the motor may burn out.)

②The upper-limit frequency should be set lower than the frequency stated on the nameplate. (Using the motor at a frequency exceeding this value equates to overload, which may cause it to burn out. It may also result in deformation or breakage of the bladed wheel due to the increased centrifugal force.)

(2) Although the machine is operational up to the frequency stated on the nameplate, it may become noisier in some cases. We strongly advise operating it below 54 Hz.

(3) Possible events occurring when using an inverter

①Unusual noise

Changing the carrier frequency may help reduce unusual noise. When using an inverter, please comply with its instruction manual. (When operating an inverter, unusual noise may be generated due to the influence of high harmonic and bad waveforms compared to a commercial power supply.)

②Resonance

If the product is exposed to significant vibration during use, it could shorten the product life. Accordingly, please avoid exposing to resonance. (At a specific frequency, the machine resonates, which may result in increased vibration depending on the natural frequency of Grindresa. This can be due to improper plumbing and installation methods.)

③Temperature rise

When using an inverter, the increase in winding temperature is higher compared to a commercial power supply.

④Start-up / Shut-down

Depending on the amplitude of the inertia moment of the bladed wheel, extended start and stop times may cause the inverter to trip. (Please change the start / stop time setting of the inverter.)

⑤Others

For detailed information, please refer to the instruction manual for your inverter.

13. Maintenance and inspections

(1) Periodic inspections

An inspection should be performed every 3 months to check for abnormal vibration and sounds. The insulation condition should be checked once per year.

(2) Filter and demister inspection/replacement schedule

Part Name	Material	Quantity	Inspection/ Replacement Schedule	Washable YES/NO Status
demister	Aluminum	1	1 to 6 months	YES
filter	PS/600	3	1 to 6 months	YES

⚠ CAUTION

To prevent injuries, always wear rubber gloves, etc., when inspecting the filters and demisters.

(3) Procedure for inspecting, exchanging and rearranging the filters/demister

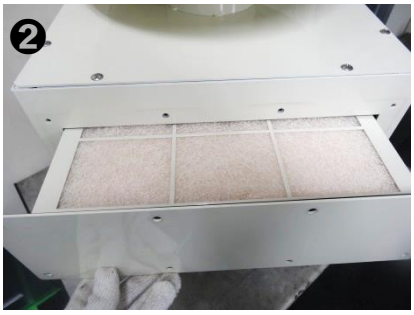
Be sure to verify that the power switch is OFF before beginning the filter replacement procedure. During the replacement procedure, place a placard on the power switch which says "Maintenance In Progress. Do not turn the power switch ON".

Exchanging the filters and demister

(The filters and demister are reusable after washing.)



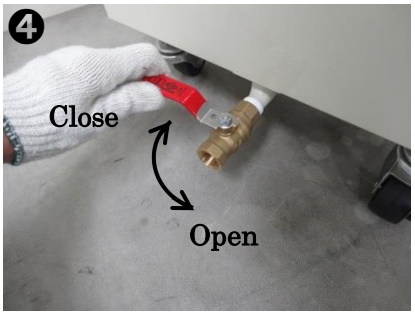
Remove the truss head screws on the filter box using a cross slot screw driver. (Eight locations)



Slide the filter box to remove it.

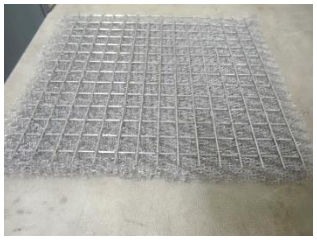


Withdraw the demister (one sheet) and the filters (three sheets) from the filter box



If you find any machine dust and powder dust accumulated inside, wash it away and discard it through the ball valve.







After inspection and withdrawing the filters and demister
Ensure the demister (one sheet) and the filters (three sheets) face in the same direction (the short side should be vertical) and insert four sheets together in the filter box.
※The demister should be placed at the edge of the box.
※Please ensure the filters are set in the right direction. The large-meshed side should be facing the demister side.





Insert the filter box with the demister facing down toward the main body of the machine and screw it in with truss head screws using a cross slot screwdriver. (Eight locations)
※It doesn't matter which side of the filter box is placed upside.

【CAUTION】

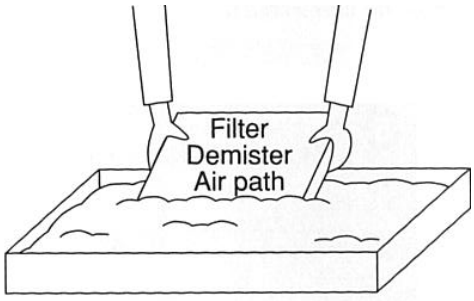
Please check to ensure that no machining dust is accumulated within the ball valve when inspecting, exchanging and rearranging the demister and filters. If you find any accumulated machining dust, please unclog it using a stick ten millimeters or so in diameter. Accumulated dust can impair performance when discharging oil.

⚠ CAUTION

Use our genuine filter and do not operate the machine with the filter removed. Doing so may cause malfunction or failure.

(4) Filter washing procedure

Filters and demisters which have a "washable" status can be cleaned by Air-blowing them, or by soaking them with a neutral detergent until clean.



(5) Filter discarding procedure

After filter washing is completed, the waste water and filter waste material must be discarded in accordance with the local waste water and waste material disposal regulations.

14. Warranty

(1) Scope of warranty

When a malfunction occurs even if operating the unit according to the instruction manual and the cautions on the attachment labels, etc. within the warranty period, we will repair the failure for free.

However, if this unit is assembled into the customer's other equipment, expenses for removal from the equipment and attachment to the equipment, accompanying work expenses, transportation costs, and other indirect damages cost such as opportunity loss or operational loss of customers are beyond the scope of warranty.

When requesting repair, contact our nearest branches and sales offices.

(2) Warranty period

The warranty period shall be one year from delivery.

(3) Even within the scope of warranty, the following cases shall require charge for repair in principle.

① Malfunctions and damages due to incorrect use other than as described in the instruction manual and cautions list.

② Malfunctions and damages due to repair and modification (including drilling into the unit) by third parties.

③ Malfunctions and damages due to transportation, dropping, etc. after purchase.

④ Malfunctions and damages due to fires, earthquake, wind and flood damages, other disasters, abnormal voltages, use of unspecified power supply (voltage and frequency), etc.

⑤ Malfunctions and damages due to use of parts other than those specified by us.

⑥ Malfunctions and damages due to mixing in of foreign materials.

⑦ Discoloration and flaws from age deterioration or from long-term use and malfunctions due to natural consumption of consumable parts.

(4) Damages caused by malfunctions occurring during use of this unit shall not be indemnified.

15. Contact information

For technical inquiries regarding this product,

If you have any problems or requests for repairs, please contact us via our web site, support, or contact form.

16. Specifications

Type	GRM-H04T
Power supply	3-phase　50Hz 200V　60Hz 200V／220V
Output kW	0.4
Frequency Hz	50／60
Current A	2.3／2.3／2.1
Weight kg	37

SDG CO., Ltd.

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