

RHINO

DH20L 20LTR DOMESTIC DEHUMIDIFIER 400W

230V

OPERATING INSTRUCTIONS



RHINO DH20L: H03602



RHINO - designed and distributed by Toolstream Limited.

Version Date: 09/22/23

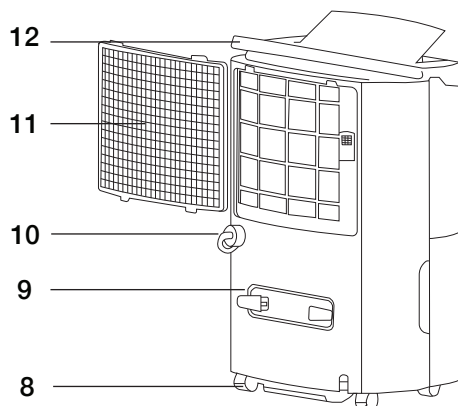
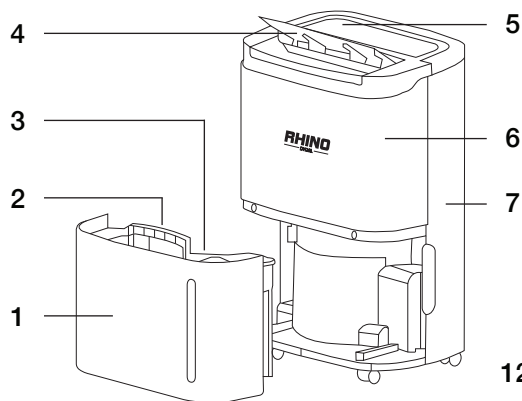
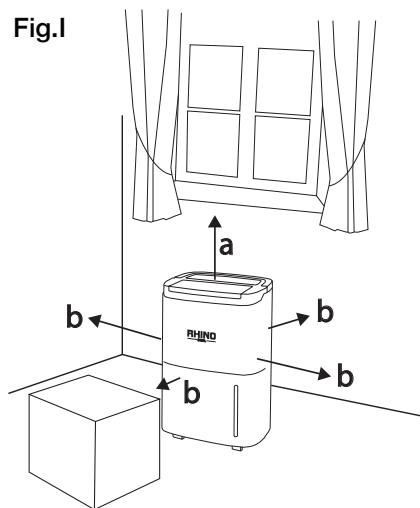
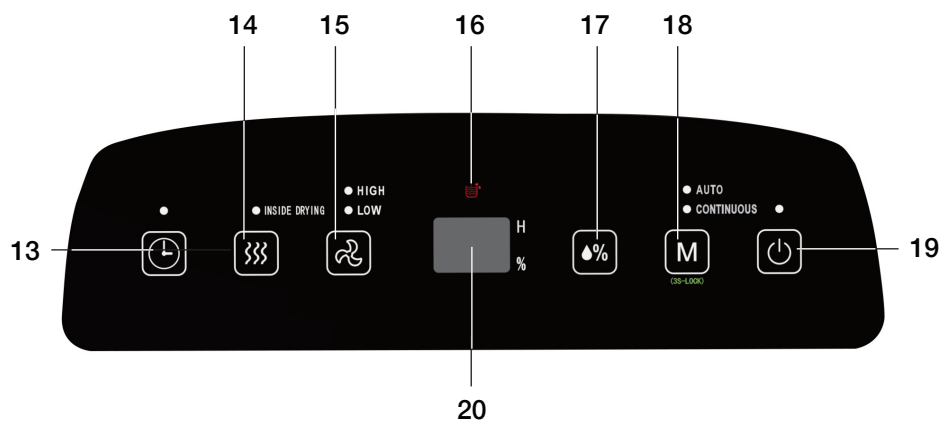
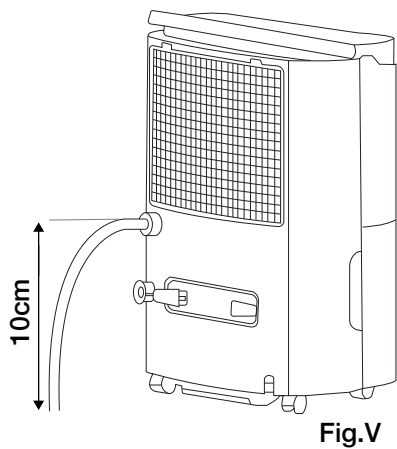
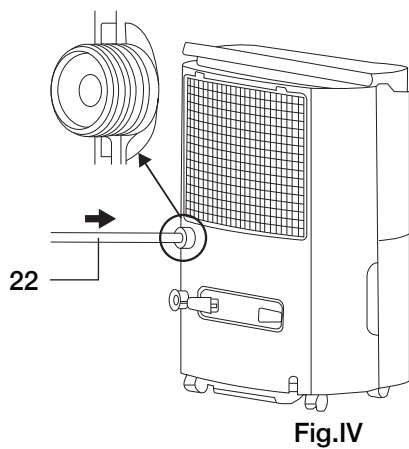
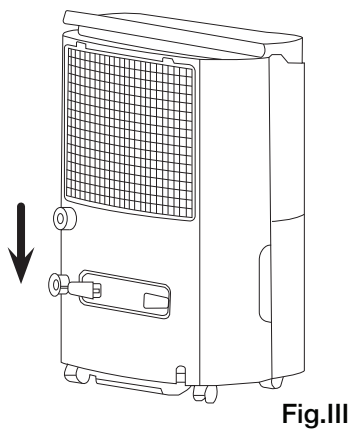
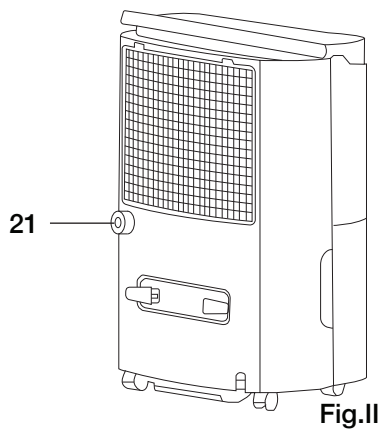


Fig.I



- a. Minimum 50cm
- b. Minimum 20cm



English 06

Introduction

Thank you for purchasing this Rhino product. This manual contains information necessary for safe and effective operation of this product. This product has unique features and, even if you are familiar with similar products, it is necessary to read this manual carefully to ensure you fully understand the instructions. Ensure all users of the product read and fully understand this manual. Keep these instructions with the product for future reference.

Description of Symbols

The rating plate on your tool may show symbols. These represent important information about the product or instructions on its use.



Wear hearing protection.



Wear eye protection.



Wear breathing protection.



Wear head protection.



Wear hand protection.



WARNING – To reduce the risk of injury, user must read instruction manual



Class I construction (protective earth)



Conforms to relevant legislation and safety standards.



Caution, risk of fire



Caution!



Environmental Protection
Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with your local authority or retailer for recycling advice.

Technical Abbreviations key

V	Volts
~	Alternating current
A, mA	Ampere, milli-Amp
Hz	Hertz
W, kW	Watt, kilowatt
MPa	Megapascals
m³/hr	Cubic metres per hour
rpm	Revolutions per minute
min⁻¹	Operations per minute

Specification

Voltage:220-240V 50/60Hz
Power:400W
Water tank capacity:......5Ltr
Dehumidification rate:20Ltr/day
Operational ambient temperature range:5-32°C
Preferred operational ambient temperature range:16-32°C
Refrigerant/charge:R290/52g
Refrigerant maximum allowable pressure:.....Low pressure side: 3.8MPa
.....High pressure side: 1.3MPa
Refrigerant permissible excessive operating pressure:.....Suction: 2.8MPa
.....Discharge: 0.8MPa
Minimum room size:......15m²
Protection class:......⏏
Ingress protection:.....IPX1
Dimensions (L x W x H):......343 x 240 x 511mm
Noise level:.....44dB
Cord length:1.8m
Drainage hose length:600mm
Drainage hose inner diameter:......9mm
Weight:15kg

As part of our ongoing product development, specifications of Rhino products may alter without notice.

Appliance Safety Warnings

Note: This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge **if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.**

 **WARNING:** Read all safety warnings, instructions, illustrations and specifications provided with this appliance. Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury.

Save all warnings and instructions for future reference.

The term “appliance” in the warnings refers to your mains-operated (corded) appliance or battery-operated (cordless) appliance.

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- a) Keep appliance away from heat, sharp objects, oil and other hazards.
- b) Do not place the cord under carpets or other textile coverings such as clothes or dust sheets.
- c) Do not place the cord in areas where it may pose a trip hazard.
- d) Do not use the appliance if the cable or plug is damaged.
- e) Do not use the appliance if the switch does not turn it ON and OFF. Any appliance that cannot be controlled with the switch is dangerous and must be repaired.
- f) Ensure appliance is switched OFF before connecting to mains power supply.
- g) Disconnect the plug from the source and/or remove the battery pack, if detachable, from the appliance before making any adjustments, changing accessories, or storing appliances. Such preventive safety measures reduce the risk of starting the appliance accidentally.
- h) Store idle appliances out of the reach of children and do not allow persons unfamiliar with the appliance or these instructions to operate the appliance. Appliances are dangerous in the hands of untrained users.
- i) Maintain appliances and accessories. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the appliance's operation. If damaged, have the appliance repaired before use. Many accidents are caused by poorly maintained appliances.
- j) Children must not play with the appliance. Cleaning and user maintenance must not be made by children without supervision.
- k) DO NOT use appliance in wet or damp conditions, such as in bathrooms.
- l) DO NOT touch appliance switch, controls, cabling, plug or connection with wet hands.
- m) When moving from one place to another, consider the weight of the machine.
- 1) Electrical safety
 - a) Appliance plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) appliances. Unmodified plugs and matching outlets will reduce risk of electric shock.
 - b) Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the appliance. Keep cord away from heat, oil, sharp edges or moving parts. Damaged or entangled cords increase the risk of electric shock.
 - c) When used in Australia or New Zealand, it is recommended that this appliance is ALWAYS supplied via Residual Current Device (RCD) with a rated residual current of 30mA or less.
 - d) Use proper extension cord. Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating.
 - e) Always check that the power supply corresponds to the voltage on the rating plate. The electric motor is designed for a single voltage only.
- 2) Service
 - a) Have your appliance serviced by a qualified repair person using only identical replacement parts. This will ensure that the safety of the appliance is maintained.

Dehumidifier Safety Warnings

- a) Do not place heavy objects on dehumidifier.
- b) Ensure appliance is on a level surface. Failure to do so may cause leakage.
- c) Never insert any object or body part into dehumidifier body.
- d) Switch off appliance before disconnecting power. Do not turn off by pulling out the plug.
- e) Do not use flammable substances such as deodorant or insecticide spray near the dehumidifier.
- f) Do not immerse the dehumidifier in water or other liquid.
- g) Do not incline dehumidifier over 45° or turn upside down.
- h) Do not hang curtains or wet fabric in front of the air outlet. This may cause the appliance to overheat.
- i) Do not perforate any of the components in the refrigerant circuit. Refrigerant gas may be odourless.
- j) Do not use in spaces where there is a high concentration of gases, solvents or volatile organic compounds.
- k) Do not use in any environment where the air composition is flammable.

Even when used as prescribed it is not possible to eliminate all residual risk factors. Use with caution. If you are at all unsure of the correct and safe manner in which to use this appliance, do not attempt to use it.

Product Familiarisation

1. Water Tank
2. Water Tank Handle
3. Water Tank Cover
4. Air Outlet Louvre
5. Control Panel
6. Front Cover
7. Back Cover
8. Wheel
9. Cord Storage Hooks
10. Water Outlet
11. Filter Frame
12. Handle
13. Timer Button
14. Inside Drying Mode Button
15. Fan Speed Button
16. Full Tank Icon
17. Humidity Setting Button
18. Mode Selector
19. On/Off Button
20. Display
21. Water Outlet Cover
22. Drainage Hose

Intended Use

Dehumidifier for domestic use with water tank, directional air outlet louvre, filter and drainage hose.

Note: Not intended for commercial use.

The tool must ONLY be used for its intended purpose. Any use other than those mentioned in this manual will be considered a case of misuse. The operator, and not the manufacturer, shall be liable for any damage or injury resulting from such cases of misuse. The manufacturer shall not be liable for any modifications made to the tool, nor for any damage resulting from such modifications.

Unpacking Your Appliance

- Carefully unpack and inspect your product. Fully familiarise yourself with all its features and functions.
- Ensure all parts of the product are present and in good condition.
- If any parts are missing or damaged, have such parts replaced before attempting to use this product.

Before Use

IMPORTANT: When choosing the location for the dehumidifier, a space of 50cm above and 20cm around each edge (see Fig. I) must be left clear.

- The dehumidifier should be operated on a level, smooth surface to reduce vibration and noise
- To further reduce vibration and noise, the dehumidifier may be placed on rubber anti-vibration pads or a mat
- Ensure the Water Tank (1) is empty before turning on the appliance
- Close all doors and windows in the area of intended use for maximum effect and to conserve energy

Note: At colder temperatures and lower humidities, a decreased dehumidifying effect may be observed. This is normal and does not constitute a fault.

Operation

Switching ON and OFF

To turn the dehumidifier ON or OFF, press the On/Off Button (19).

Drainage

When the Water Tank (1) is full, the compressor and fan will stop running, the Full Tank Icon (16) will flash and the buzzer will sound 10 times.

To remove and empty the tank:

1. Place both hands on the sides of the Back Cover (7) and gently remove tank
2. Open Water Tank Cover (3) on right side of body
3. Empty tank through the opening
4. Close Water Tank Cover and rotate Water Tank Handle (2) down
5. Check float moves freely, then replace tank

Continuous drainage

To drain the dehumidifier into a waste waterway or larger tank, connect the Drainage Hose (22) to the Water Outlet (10) on the back of the dehumidifier.

1. Locate the Water Outlet Cover (21) (Fig. II)
2. Remove Water Outlet Cover (Fig. III)
3. Connect Drainage Hose to the Water Outlet (Fig. IV)
4. Check that the Drainage Hose is firmly connected to prevent leakage

To reduce the risk of leakage:

- Ensure the Drainage Hose lies at least 10cm beneath the Water Outlet (Fig. V)
- Ensure that the Drainage Hose has no blockages or kinks

Timed automatic shutdown

To set the dehumidifier automatic shutdown time:

1. Ensure dehumidifier is on
2. Press Timer Button (13). The Display (20) will show the time currently set
3. Press the Timer Button repeatedly to cycle through to the time required from 1 to 24 hours. When the dehumidifier reaches the time set, it will shut down automatically
4. When the Timer Button is left for at least 5 seconds, the automatic shutdown time will set

The Timer Button will stay lit until the set time is reached and the dehumidifier turns off.

Timed automatic start

To set the dehumidifier automatic start time:

1. Ensure dehumidifier is off
2. Press Timer Button (13). The Display (20) will show the time currently set
3. Press the Timer Button repeatedly to cycle through to the time required from 1 to 24 hours. When the dehumidifier reaches the time set, it will start automatically
4. When the Timer Button is left for at least 5 seconds, the automatic start time will set

The Timer Button will stay lit, and the time set will be shown on the Display.

Modes and functions

The dehumidifier features several functions and modes.

Note: The Light on the top of the unit changes colour dependant on humidity level, <40% - light blue, 40-60% - light green & >60% - light red.

Auto Mode

This mode enables dehumidifying of the area to a selected humidity level. During this mode the compressor and fan will operate until the specified level is achieved. If the humidity level falls beneath the set humidity % value by 5%, the compressor will shut off, but the fan will stay on.

1. Press the On/Off Button (19) to switch the appliance on
2. Press the Mode Selector (18) to choose 'auto' function
3. Press the Humidity Setting Button (17) to choose desired humidity level. Press the button again to cycle through the levels. The humidity level will appear on the display and may be changed in 5% increments between a range of 30 – 80%.

Clothes Drying Mode/Continuous Mode

In this mode, the dehumidifier will work at a constant rate, regardless of the humidity level in the room.

1. Press the On/Off Button (19) to switch the appliance on
2. Press the Mode Selector (18) to choose 'Dry Clothes' function
3. Press the Fan Speed Button (15) to set the speed

Inside Drying Mode

This mode dries the inside of the dehumidifier for maintenance, transport and storage.

- Press and hold the Inside Drying Mode Button (14) for at least 2 seconds to start Inside Drying Mode. The fan will work at high speed for 30 minutes, then at low speed for 15 minutes
- Press and hold the Inside Drying Mode Button for at least 2 seconds to cancel Inside Drying Mode
- Press the On/Off Button (19) to return the dehumidifier to standby

Air Outlet Louvre Swing Mode

The Air Outlet Louvre (4) can operate in Static Mode, to direct the flow of treated air in one set direction, or in Swing Mode, which moves the flow of treated air up and down. Press the Timer Button (13) and the Inside Drying Mode Button (14) for at least 2 seconds to start or end Swing Mode.

Child Lock on/off

Press the Mode Selector (18) button for 3 seconds to turn on the Child Lock. Press the Mode Selector button for 3 seconds again to turn Child Lock off.

Dehumidifier Light on/off

Press the Mode Selector (18) and the Humidity Setting Button (17) at the same time for at least 2 seconds to turn the dehumidifier light on or off.

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Display codes

The Display (20) will show codes as follows:


Display Code	Meaning
FL	Water Tank (1) full
E1	Coil sensor error
E2	Ambient temperature sensor error
P1	Appliance in defrost mode, normal
CL	Appliance in internal drying mode, normal
LC	Child lock activated

Accessories

- A full range of accessories including filters is available from your Rhino stockist
- Spare parts including filters can be obtained from www.toolstream.com

Maintenance

IMPORTANT: Refrigerants can be dangerous when handled by unskilled operatives. Do not disassemble. Return to Rhino service agent for repairs and servicing.


 **WARNING:** Always disconnect from the power supply before carrying out any maintenance/cleaning.

Cleaning

- Keep the appliance clean at all times. Dirt and dust will cause internal parts to wear quickly and shorten the device's service life
- Clean the body of the appliance with a soft damp cloth. Do not get the dehumidifier wet
- Clean the Water Tank (1) and Water Tank Cover (3) regularly with a soft wet cloth to prevent mould formation
- Clean the plastic filter at least every 2 weeks with water
- Remove and clean the ionic carbon filter regularly with a soft brush to remove dust and debris. Air-dry in sunlight
- Replace ionic carbon filter annually
- Do not spray appliance with or immerse in water or other liquids
- Never allow water or liquid to drip into dehumidifier body
- Do not use caustic agents such as solvents or paint thinner to clean the appliance. If required, use a neutral detergent to remove dirt. Do not use hot water to clean any part of the appliance

Storage

- Store this appliance carefully in a secure, dry place out of the reach of children
- Store in a well-ventilated area of at least 15m²
- When this appliance is stored for a long period of time ensure it is not exposed to excessive dust, extremes of temperature, UV radiation or direct sunlight

 **WARNING:** Do not store in a room with continuously operating open flames (e.g. an operating gas appliance, such as a hob) or ignition sources (e.g. an operating electric heater).

Long-term storage

If the dehumidifier will not be used for an extended period of time, carry out the following steps:

1. Drain Water Tank (1) completely and dry with a soft cloth
2. Use Internal Drying Mode to fully dry the system (see 'Inside Drying Mode').
3. Unplug unit and fold up the power supply cord
4. Remove and clean air filter (see 'Cleaning'). Allow it to dry and reinstall it

The dehumidifier is now ready for storage.

Contact

For technical or repair service advice, please contact the helpline on (+44) 1935 382 222.

Web: www.toolstream.com

UK Address:

Toolstream Ltd.
Boundary Way
Lufton Trading Estate
Yeovil, Somerset
BA22 8HZ, United Kingdom

Disposal

Always adhere to national regulations when disposing of appliances that are no longer functional and are not viable for repair.

- Do not dispose of power tools, batteries or other waste electrical and electronic equipment (WEEE), with household waste
- Contact your local waste disposal authority for information on the correct way to dispose of power tools, electrical appliances and batteries

Troubleshooting

Problem	Possible cause	Solution
Dehumidifier does not operate	No power	Check power supply is fully functional and socket is switched on
	Defective control	Have control panel replaced by an authorised Rhino service centre
	Water Tank (1) full or not in correct position	Empty Water Tank and position correctly
	The ambient temperature is below 5°C or above 32°C	This dehumidifier functions in temperatures between 5-32°C
Dehumidifier does not remove humidity effectively	Room temperature or humidity too low	At low humidity or temperature dehumidification is reduced
	Air outlet/intake blocked	Clean ionic carbon filter and plastic filter according to instructions
	Area is not enclosed	Close any doors and windows
Air not blown out	Air outlet/intake blocked	Clean ionic carbon filter and plastic filter according to instructions
	Dehumidifier unstable/not level	Place dehumidifier on a smooth, level surface
Warm air blown from outlet	This is normal during dehumidifying cycles	No action required
Cold air blown from outlet	This is normal during defrost cycles	No action required
Noise is abnormal during operation	Air outlet/intake blocked	Clean ionic carbon filter and plastic filter according to instructions
Noise is abnormal during operation 'tittering sound'	Sound of normal flow of refrigerant	No action required
Water leakage	Loose Drainage Hose (22) connection	Tighten Drainage Hose
	Water Outlet (10) blocked	Remove blockage / straighten hose where necessary
Display reads 'P1'	Dehumidifier is in Defrost Mode	No action required; dehumidifier defrosts automatically

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