



FANMASTER

COOLING HEATING VENTILATION EXTRACTION

INSTRUCTION MANUAL



INDUSTRIAL LPG FAN HEATER (DIRECT-FIRED)

MODEL: IGH2-20

**FOR INDUSTRIAL USE ONLY
ADEQUATE VENTILATION REQUIRED**



GMK10715

TO PREVENT SERIOUS INJURY, READ & UNDERSTAND ALL WARNINGS & INSTRUCTIONS BEFORE USE. PLEASE KEEP THIS DOCUMENT FOR YOUR RECORDS

FOR YOUR INFORMATION

Thank you for purchasing a Fanmaster LPG Fan heater. Please read this instruction manual carefully before using this heater.

Disclaimer:

Fanmaster reserves the right to make alterations to specifications, quantities, dimensions, for production or other reasons, subsequent to publication.

While we believe the information is accurate and complete, we make no warranty or representation for any particular purposes. The information is offered in good faith and with the understanding that any use of the units or accessories in breach of the directions and warnings in this document is at the sole discretion and risk of the user

Disposal Guidelines:

Do not dispose of this product with general household waste. This product must be disposed according to the laws governing Waste Electrical and Electronic Equipment. If required, contact your local authorities for information regarding the available disposal facilities.



1. GENERAL SAFETY RULES & WARNINGS



- PLEASE READ INSTRUCTIONS CAREFULLY.
- PLACE INSTRUCTION MANUAL IN A SAFE PLACE FOR FUTURE REFERENCE. DO NOT ALLOW ANYONE WHO HAS NOT READ THESE INSTRUCTIONS TO ASSEMBLE, ADJUST OR OPERATE THIS HEATER.
- IF THE INFORMATION IN THIS MANUAL IS NOT FOLLOWED EXACTLY, A FIRE OR EXPLOSION MAY RESULT IN CAUSING PROPERTY DAMAGE, SERIOUS INJURY OR LOSS OF LIFE.
- FAILURE TO COMPLY WITH THE PRECAUTIONS AND INSTRUCTIONS PROVIDED WITH THIS HEATER, CAN RESULT IN DEATH, SERIOUS INJURY AND PROPERTY LOSS OR DAMAGE FROM HAZARDS OF FIRE, EXPLOSION, BURN, ASPHYXIATION, CARBON MONOXIDE POISONING, AND/OR ELECTRICAL SHOCK.

1. Work Area Safety

- a) Keep work area clean and well lit. Cluttered or dark areas invite accidents.
- b) Do not operate heaters in explosive atmospheres, such as in the presence of flammable liquids, gases or dust. Heaters create sparks which may ignite the dust or fumes.
- c) Keep children and bystanders away while operating a heater. Distractions can cause you to lose control.

2. Electrical Safety

- a) Heater plugs must match the outlet. Never modify the plug in anyway. Do not use any adapter plugs with earthed (grounded) heaters. Unmodified plugs and matching outlets will reduce risk of electric shock.
- b) Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators. There is an increased risk of electric shock if your body is earthed or grounded.
- c) Do not expose heaters to rain or wet conditions. Water entering a heater will increase the risk of electric shock.
- d) Do not abuse the cord. never use the cord for carrying, pulling or unplugging the heater. Keep cord away from heat, oil, sharp edges or moving parts. Damaged or entangled cords increase the risk of electric shock.
- e) If operating a heater in a damp location is unavoidable, use a residual current device (RCD) protected supply. Use of a RCD reduces the risk of electric shock.

3. Personal Safety

- a) Stay alert, watch what you are doing and use common sense when operating a heater. Do not use a heater while you are tired or under the influence of drugs, alcohol or medication. A moment of inattention while operating heaters may result in serious personal injury.
- b) Use personal protective equipment. Always wear eye protection. Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
- c) Prevent unintentional starting. Ensure the switch is in the off position before connecting to power source.
- d) Remove any adjusting key or wrench before turning the heater on. A wrench or a key left attached to a rotating part of the heater may result in personal injury.
- e) Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewellery or long hair can get sucked into the moving parts of the heater.

1. GENERAL SAFETY RULES & WARNINGS



4. Heater Use and Care

DO NOT move the heater when it is in operation or when plugged into the main supply. Only move heater once it has cooled down and it has been unplugged.

- a) Use the correct heater for your application. The correct heater will do the job better and safer at the rate for which it was designed.
- b) Do not use the heater if the switch does not turn it on and off. Any heater that cannot be controlled with the switch is dangerous and must be repaired.
- c) Disconnect the plug from the power source before making any adjustments. Such preventive safety measures reduce the risk of starting the heater accidentally.
- d) Store idle heater out of the reach of children and do not allow persons unfamiliar with the heater or these instructions to operate the heater. Heaters are dangerous in the hands of untrained users.
- e) Maintain heater. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the heater's operation. If damaged, have the heater repaired before use. Many accidents are caused by poorly maintained heaters.
- f) Use the heater in accordance with these instructions, taking into account the working conditions and the work to be performed. Use of the heater for operations different from those intended could result in a hazardous situation.

5. Service

- a) Have your heater serviced by a qualified repair agent or person, using only genuine parts. This will ensure that the safety of the heater is maintained.

6. Use in environments with no permanent presence of people

- Warning posters must be displayed prohibiting people from being permanently in that room.
- The gas heater must only be used for room drying purposes only, provided that there is a guaranteed unobstructed quantity of air exchange necessary for combustion.
- The necessary quantity of air will be reached when the volume of the room (in m³) is at least 10 times the nominal calorific power (in Megajoules per cubic metres) of all gas heaters used in that room.
- Normal air circulation through doors and windows must be ensured.

7. Use in environments with permanent presence of people

- The industrial air heater can only be used in well-ventilated rooms and when the percentage of polluting substances in the air does not exceed danger levels for health.
- Good ventilation is guaranteed when the room's volume (in m³) is at least 30 times the normal calorific power (in Megajoules per cubic metres) of all heaters used in that room and when an air circulation, window or permanent openings can be guaranteed, the size of which (in m²) is at least 0.003 times the normal calorific power (in Megajoules per cubic metres) of all heaters used in that room.
- The concentration of dangerous substances in the air is acceptable until it reaches maximum levels and the percentage of oxygen in the air exceeds 17% in volume.
- The apparatus should not be used for continuous heatings of stables and farms.

1. GENERAL SAFETY RULES & WARNINGS



- **WARNING:**
Failure to comply with the precautions and instructions provided with this heater, can result in death, serious bodily injury and property loss or damage from hazards of fire, explosion, burn, asphyxiation, carbon monoxide poisoning, and/or electrical shock.
- Only persons who can understand and follow the instructions should use or service this heater.
- If you need assistance or heater information such as instruction manual, labels etc, please contact Fanmaster.
- Check the heater thoroughly for damage. DO NOT operate a damaged heater.
- DO NOT modify the heater or operate a heater which has been modified from its original condition.
- Fire, burn, inhalation and explosion hazard. Keep solid combustibles, such as building materials, paper or cardboard a safe distance away from the heater. Never use the heater in spaces which contain volatile or airborne combustibles or products such as gasoline, solvents, paint thinner, dust particles or unknown chemicals.
- The gas heater must only be used on fire resistant floors. Safety distance: 2m from walls or other objects. The burner must be regularly cleaned if used in dusty environments. All service operations must be carried out by a qualified and authorised person or agent.
- **IMPORTANT:**
Not for domestic use! For industrial use only. Use in open buildings, please abide by the relevant national and local guidelines and regulations.
- For indoor use only. Not for use where exposed to weather.
- Use ONLY in well ventilated areas.
- **CAUTION:**
Due to the high surface and exhaust temperatures, adults and children must observe clearances to avoid burns or clothing ignition. Do not touch. Keep children, clothing and combustibles away.
- Never point the heater directly at persons nearby. Install the heater such that is not directly exposed to water spray, rain and/or water.
- Never use in areas normally for habitation and/or where children may be present. Not for domestic use.
- Operate only on a stable level surface.
- Do not use in a dusty atmosphere. Never restrict or duct inlet or outlet.
- Use only with electrical power supply as stated on the rating plate. The electrical connection and earthing must comply with Australian standards.
- Use only a properly earthed socket and/or extension cord.
- Do not move, handle, or service while the heater is hot or in use.
- Use only in accordance with national and local regulations, directives and all other relevant restrictions.
- Risk of electric shock. Do not open.
This heater is supplied with an Australian plug. The value of the fuse fitted is marked on the pin face of the plug. Should the fuse need replacing, ensure it is the correct rating.

This heater is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the heater by a person responsible for their safety. If the supply cord is damaged, it must be replaced by Fanmaster, its service agent or similarly a qualified persons in order to avoid a hazard.

2. PRODUCT DESCRIPTION & SPECIFICATIONS

PRODUCT DESCRIPTION

Industrial LPG direct-fired portable space/fan heater with open combustion chamber.

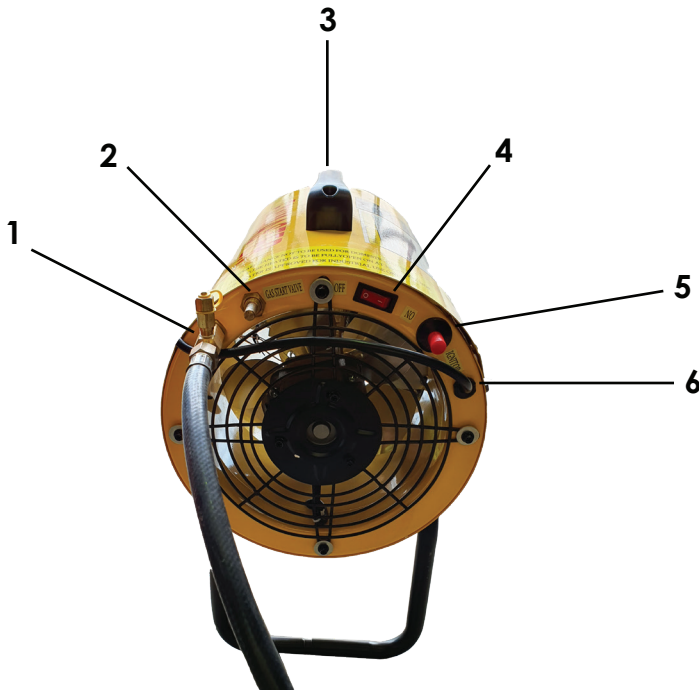
SPECIFICATIONS

MODEL	IGH2-20
Heat Output	20KW 68,240 BTU 70 Mj/hr
Air Flow (L/s)	139
Gas Type	ULPG
Fuel Consumption (kg/h)	1.40
Voltage (V/Hz)	AC 220-240V/50
Regulator Pressure Output	61kpa
Current Rating (A)	0.33
Electrical Power (W)	80W
Net Weight (kg)	8.1
Dimensions (mm)	(L)*(W)*(H)
Tank Capacity (L)	19
Min. Gas Cylinder Size (kg)	15
Minimum Volume of Room	360m ³

3. GETTING TO KNOW YOUR HEATER

Remove the heater from the carton. If the heater is damaged, please contact Fanmaster or where you purchased the heater from.

The packaging materials (plastic bags, polystyrene, etc) must be disposed of in an appropriate manner. These materials must not be left within the reach of children as they are potential hazard.



- 1. Gas Inlet
- 2. Gas Start Valve
- 3. Handle
- 4. On/Off Switch
- 5. Ignition Switch
- 6. Power cord

4. FUEL GASES & VENTILATION

FUEL GASES

GUIDELINES OF FUEL GASES:

This heater is intended for the use of temporary heating of buildings under construction, alteration or repairing. There may also be other local standards or regulations governing the use of fuel gases and heating products of which you can get advice from your relevant local authority. Propane and butane belong to the odourless fuel gases family. Normally gas suppliers will add an odour making agent to help you detect a gas leakage. However, the odor added can fade over time. Fuel gases maybe present even though no odor exists. LPG Supplied in Australia is designed to have an odour. Do not use gas supply if the gas is unodourised. These heaters are intended for use with Propane (I_{3P}) or Butane/Propane mixes ($I_{3B/P}$). Any othe fuel gas is considered misuse and dangerous. To check the leakage of propane/butane please use a professional gas leakage detector or simply with soap and water solution. **NEVER check with a flame!** Propane and butane are heavier than air. If there is a leakage, it sinks to the lowest possible level, collecting there with the surrounding air, forming a potentially explosive mixture. It is prohibited to use these gas heaters in high rise flats, bathrooms, basesments or below ground level.

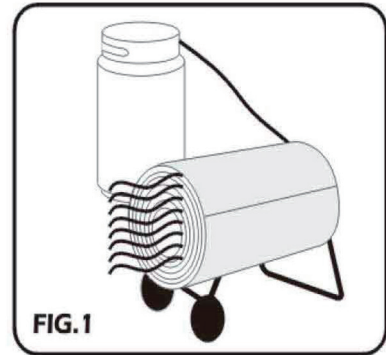


FIG.1

VENTILATION

WARNING:

Be sure that the heater is only ever used with correct ventilation. Make sure that no object obstructs the fan air intake and outlet. (Fig 2.)

OXYGEN DEPLETION:

The combustion of propane will consume a lot of oxygen (of butane even more). The minimum ventilation required by this heater is 30cm³ per (Megajoule per cubic metre) heat output is strongly recommended. Never use the heater in an enclosed space.

CARBON MONOXIDE (CO) POISONING:

Even though the direct-fired system of this heater operates very close to 100% combustion efficiency, it still generates small amounts of CO. Some people are more affected by CO than others. The symptoms of CO sensitivity are headaches, dizziness, burning eyes and nose, nausea, dry mouth or sore throat etc. Be sure to follow advice about ventilation.

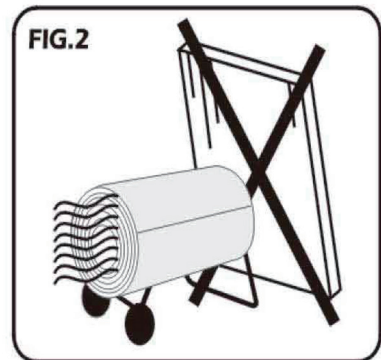
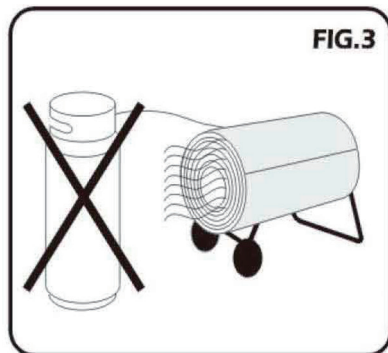


FIG.2

5. OPERATING INSTRUCTIONS

PREPARING FOR OPERATION :

Check the heater thoroughly for damage. Do not use a damaged heater. Be sure the heating area is adequately ventilated, free of moisture and dust, far away from any combustible material. Always put the gas cylinder behind the heater in a stable position. Never put the gas cylinder in front of the heater. (Fig.3).



MINIMUM CLEARANCES:

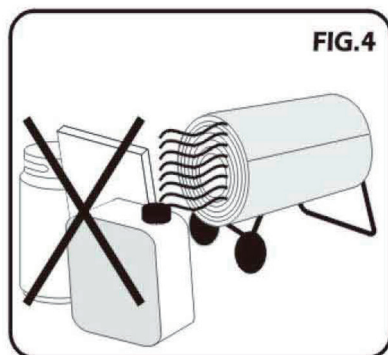
Minimum distance to combustible materials and other surfaces (Fig.4)

Side: 0.6m

Top: 1.8m

Front: 2.4m

Check the outlet pressure of the gas regulator and hose according to the specification on the rating plate. Use only the supplied regulator and hose assembly provided with this heater. Using another regular will make the heater dangerous! Gas hose should be straight without excessive bending and not twisted or kinked, ensure all connections are gas tight.

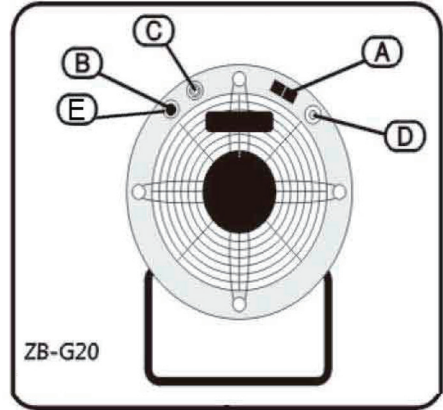


- When connecting to the gas cylinder, ensure the area is flame free to prevent risk of explosion.
- Never use an open flame to check for leaks. Apply a mixture of liquid soap and water to all joints. Bubbles forming indicate a leak. Correct all leaks at once.
- The gas connection to the heater has a right hand thread. Ensure the connection is tight.
- Do not adjust the regulator.
- Tighten connection onto heater with a spanner. Do not over tighten as it can damage the connection. If not opened slowly, excess-flow check valve on gas cylinder may stop gas flow, if this happens close gas supply valve and open again slowly.

5. OPERATING INSTRUCTIONS

START

- Connect the plug to the relevant power source
- Press ON/OFF switch (A) to ON. Let the motor fan run at least 30 seconds to check if the fan work properly and/or to purge any fuel gas left from the last use.
- With the hose attached to the gas inlet (B), open the gas valve on the cylinder slowly. Be sure there is no gas leakage.
- Push in and hold the safety start valve button (C). Push ignition button (D) repeatedly until the burner lights.
If the heater does not light within 10 seconds, wait a minimum 3 minutes before retrying.
- After the burner lights, keep the safety start valve button depressed for at least 5 seconds then slowly release and the heater will continue to operate.

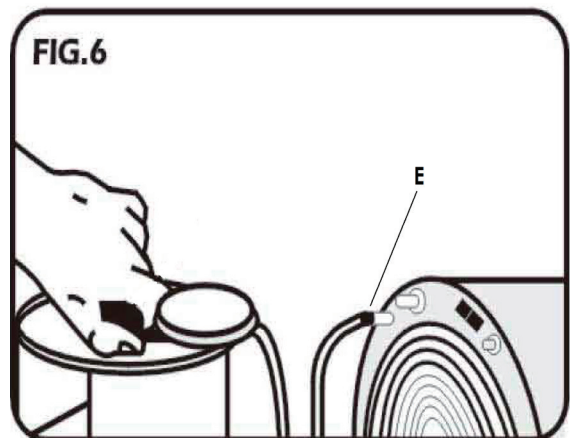


GAS PRESSURE TEST POINT (E)

The cap protects the valve and provides an additional seal. After the cap has been removed either a test thermometer or a gauge adapter with the proper pressure gauge can be inserted through the two, self-closing valves in the Pete's Plug. Readings are made, adjustments or test can be accomplished and when the probes are withdrawn, the two valves close. The protective cap is then reinstalled. Tests should be made as quickly as possible since the valve reseal time is dependent upon time of insertion and pressure. Slower valve reseal time can be expected at lower temperature and lower pressure. Cap retaining straps are standard on all brass fittings.

STOP (Fig.6)

- To switch off the heater, always close the gas cylinder valve first.
- Let the Fan run for at least 2 minutes until the heater is cooled down.
- Switch off the motor, unplug the power cord.
- If the heater will not be used again shortly, disconnect the gas hose from the heater first, then disconnect the hose & regulator from the valve on the gas cylinder



5. OPERATING INSTRUCTIONS

WARNING

Be sure that the valve on the gas cylinder has been shut off firmly before disconnection. Disconnect cylinder from heater before moving heater. Changing the cylinder, be sure the atmosphere is flame free. Should there be any gas leakage during operation, close the gas cylinder valve immediately. Open all windows and doors do not operate any equipment that may cause a spark (light switches etc) and inform the relevant emergency services as necessary.

Gas cylinders are to be installed outdoors when not in use or when empty. Refer to AS/NZS 1596 - storage and handling LP Gas.

6. CLEANING, MAINTENANCE & STORAGE

Regular inspection and cleaning reduces the necessity for maintenance operations and will keep your heater in good working condition.

The motor must be correctly ventilated during the heater's operation. For this reason avoid blocking the air inlets and ensure no build up of dust or anyother particles.

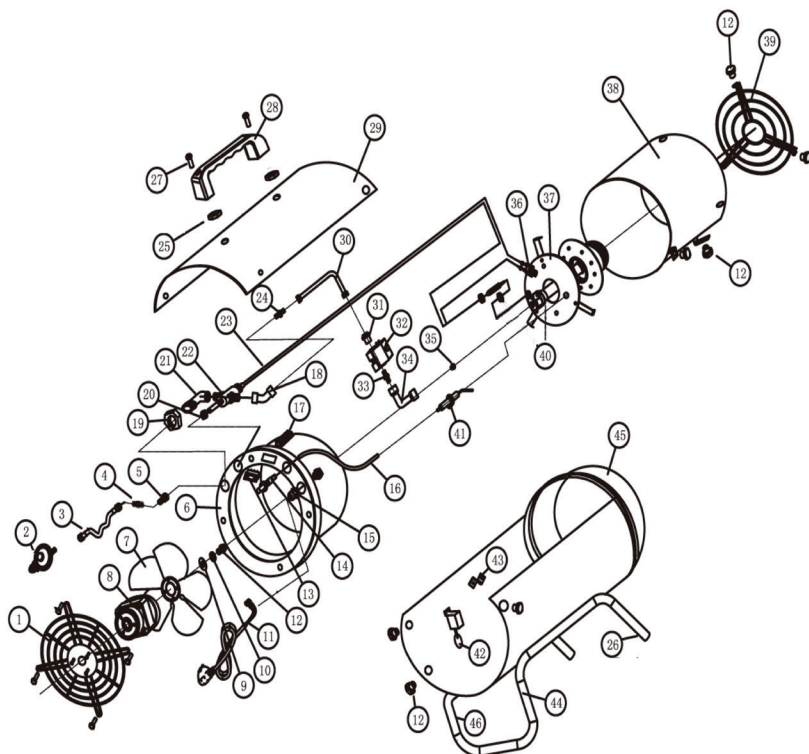
If the replacement of the supply cord is necessary, this has to be done by Fanmaster or agent or qualified persons as authorised by Fanmaster in order to avoid a safety hazard.

- Keep the heater clean, especially the fan motor and blades.
- Store the heater in a dry, clean and safe place away from the reach of children.
- The heater should be inspected at least once a year by a qualified person.
- Check the gas hose and its connections frequently. Do not allow gas regulator to be dragged across the floor when moving the heater.
- Repair can only be made by a qualified person.
- Do not modify the heater, as incorrect operation or function can cause death.

7. TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
Fan doesn't work	1. No electricity	1. Check power supply.
	2. Blade stalled by housing	2. Repair/replace housing
Piezo (ignitor) will not ignite	1. Ignition cable damaged	1. Only by a qualified person
	2. Ignition cable disconnected	2. Only by a qualified person
	3. Distance between electrode and burner is too large	3. Adjust distance within 3-8mm
No gas	1. Gas cylinder is empty	1. Replace new gas cylinder
	2. Gas valve on cylinder is closed	2. Open the valve
	3. Issue with gas valve on heater	3. Attempt re-light sequence
Flame goes out while heater is running	1. Thermo-element was not heated enough	1. Repeat ignition process and keep safety gas valve depressed for a minimum 5 seconds, then release slowly.
	2. Safety thermostat activated	2. Allow the heater to cool down for at least 10 minutes. Check the thermostat and then attempt re-light sequence correctly.
	3. Restricted air flow	3. Check heater inlet & outlet, remove any obstructions

8. PARTS BREAKDOWN



Ref.	Description	Part Number
1	Inlet grille	G20-010000
2	Gas regulator	G20-220100
3	Gas hose	G20-220200
4	Gas pressure test point	G20-260000
5	Nipple	G20-090400
6	Motor mounting housing	G20-020000
7	Fan	G20-030200
8	Motor assembly	G20-030100
9	Washer	G20-030300
10	Spring washer	G20-030400
11	Plug and cable	G10-070000
12	Screw	G20-030500
13	On/off switch	G20-040000
14	Piezo-ignitor	G10-180000
15	Cable Clamp	G10-080000
16	Cable	G20-180200
17	Terminal block	G20-070000
18	Elbow	G20-090300
19	Nut	G20-090600
20	Nut	G20-090700
21	Elbow	G20-090200
22	Safety gas control valve	G20-090100
23	Thermo-element	G10-140000

Ref.	Description	Part Number
24	Nipple	G20-090500
25	Nut	G10-010100
26	Mounting feet set	G20-230000
27	Screw	G10-010300
28	Handle	G10-010000
29	Cover	G20-200000
30	Gas pipe	G20-100000
31	Nipple	G20-110200
32	Solenoid Valve	G20-110100
33	Nipple	G20-110300
34	Elbow	G20-110400
35	Nozzle	G20-110500
36	Thermal overload switch	G10-130000
37	Burner assembly	G20-120000
38	Combustion chamber	G20-160000
39	Outlet grille	G20-180000
40	Furnace head connector	G20-130000
41	Ignition electrode	G20-140000
42	Air flow safety switch assembly	G20-150000
43	Inside bucket of fixed frame	G20-170000
44	The barrel body supporting frame,right	G20-210100
45	Body assembly	G20-190000
46	The barrel body supporting frame,left	G20-210200

9. WARRANTY

Any claim under this warranty must be made within 12 months of the date of purchase of the product. To make a claim under the warranty, take the product (with proof of purchase) to the store where you purchased the product or go to <https://www.fanmaster.com.au/warranty-claims-returns>.

This warranty is given by Fanmaster Pty Ltd
ABN: 45 353 934 457
Unit 1/6-8 Yalgar Rd, KIRRAWEE NSW 2232
P: 1300 900 345
E: warranties@fanmaster.com.au

This warranty is provided in addition to other rights and remedies you have under law: Our goods come with guarantees which cannot be excluded under the Australian Consumer Law. You are entitled to replacement or refund for a major failure and to compensation for other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

Exclusions: This warranty does not cover:

- Any defects caused by an accident, misuse, abuse, improper installation or operation, lack of reasonable care, unauthorized modification, loss of parts, tampering or attempted repair by a person not authorized by the distributor.
- Any product that has not been installed, operated or maintained to a satisfactory level.
- Any damage caused by improper power input or improper cable connection.



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MADE IN CHINA