

# FANMASTER

INSTRUCTIONS FOR  
Forced-air Series Industrial Gas Heater  
Model No. ZB-G20  
IGH2-20

**IMPORTANT:** PLEASE READ THESE INSTRUCTIONS CAREFULLY TO ENSURE THE SAFE AND EFFECTIVE USE OF THIS PRODUCT.

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## GENERAL INFORMATION

Dear Customer:

Congratulations on your purchase of this heater. Its operation will probably be happy. But you must observe certain rules. Before starting work, refer to the contents of this manual. It must be strictly adhered explanations and guidance. Especially pay attention to safety guidelines. After reading, pls keep this manual for future reference.

In case of doubt use, please contact the vendor of the heater for the purpose of clarification.

This heater is a LP Gas mobile industrial direct fired air heater.

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## SPECIFICATION

The zoboTechnology policy of continuous improvement determines the right to change specification without notice.

Stock no	ZB-G20/IGH2-20
Rated voltage	220V - 240V~50Hz
Rated input	80W
Heat output	70Mj/hr
Air flow	500m³/h
Gas consumption	1.42kg/h.
Weight (approx.)	8.5kg
Fuel type	ULPG
Regulator pressure output	61kpa
Min. gas cylinder size	15kg
Air Delivery Temperature classification	Industrial air heater
Minimum volume of room	360m³

## GENERAL SAFETY INSTRUCTIONS

### General Heater Safety Warnings

**⚠ WARNING:** Read all safety warnings and all instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

Save all warnings and instructions for future reference.

#### 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) **Heaters plugs must match the outlet. Never modify the plug in any way. 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. Also appliance is not certified for outdoor conditions.
- 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 an 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 in moving parts of the heater.

#### 4) Heater use and care

**DO NOT move the heater when it is in operation or when plugged into the mains supply. Only move heater once it has cooled 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 power tool.** Heaters are dangerous in the hands of untrained users.
- e) **Maintain heaters. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the heaters operation. If damaged, have the heater repaired before use.** Many accidents are caused by poorly maintained heaters.
- g) **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 person using only identical replacement 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 heaters 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 m<sup>3</sup>) 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.

## ADDITIONAL SAFETY INSTRUCTIONS

### 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.
- A good ventilation is guaranteed when the rooms volume (in m<sup>3</sup>) is at least 30 times the normal calorific power (in Megajoules per cubic metres) of all machines used in that room and when an air circulation, windows or permanent openings can be guaranteed, the size of which (in m<sup>2</sup>) is at least 0,003 times the normal calorific power (in Megajoules per cubic metres) of all machines used in that room. Openings must be also distributed in height.
- 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.

#### - 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 instructions manual, labels etc. Please contact the manufacturer.
- 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.

#### - IMPORTANT:

**Not for domestic use! 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.

#### - WARNING:

**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 do or may contain volatile or airborne combustibles, or products such as gasoline, solvents, paint thinner, dust particles or unknown chemicals.**

#### - 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 it 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 specified on 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.

#### - CAUTION: Risk of electric shock. Do not open.

This appliance is supplied with Australia plug for your safety. The value of the fuse fitted is marked on the pin face of the plug. Should the fuse need replacing, ensure the substitute is of the correct rating.

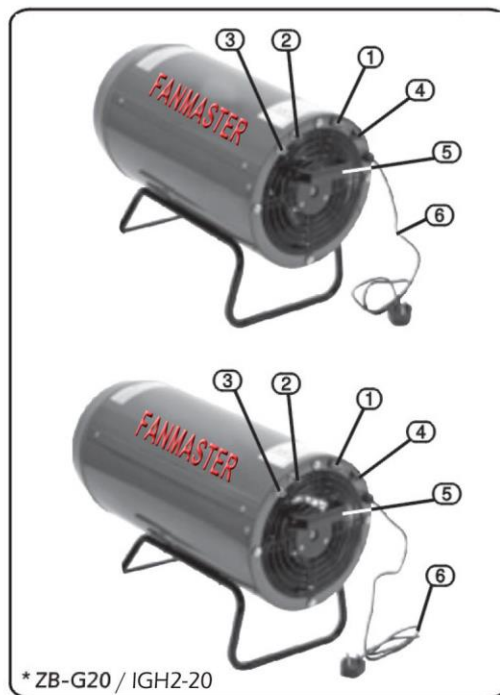
#### - WARNING:

**The gas heaters must only be used on fire-resistant floors. Safety distance: 2 metres from walls or other objects. The gas heater must not be used in rooms containing explosive powders, gas fumes, flammable substances and materials. The burner must be regularly cleaned if used in dusty environments. All service operations must be carried out by duly authorised staff only.**

This appliance 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 appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance. If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.



## GETTING TO KNOW YOUR GAS HEATERS



- ① On/off switch.
- ② Safety start valve button.
- ③ Gas inlet.
- ④ Ignition button.
- ⑤ Handle.
- ⑥ Power cord.

- **UNPACKING:** After removing the packing material, make sure the product is in perfect condition and that there are no visible damaged parts. If in doubt, do not use the product and contact the dealer from whom it was purchased. Do not use until unit has been repaired.

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

## 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 odorless fuel gases family. Normally gas suppliers will add an odor-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 odour. Do not use gas supply if the gas is unodourized.

These heaters are intended for use with Propane (l<sub>3P</sub>) or Butane/Propane mixes (l<sub>3B/P</sub>). Any other fuel gas is considered mis use 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, bedrooms, bathrooms, basements or below ground level.**

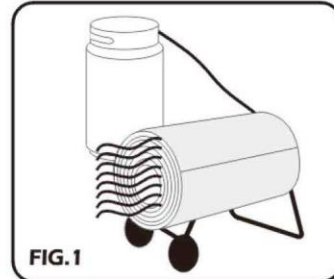


FIG.1

## VENTILATION

### - WARNING:

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

### - OXYGEN DELETION:

The combustion of propane will consume a lot of oxygen (of butane even more). The minimum ventilation required by these heaters is 30cm<sup>3</sup> 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 headache, dizziness, burning eyes and nose, nausea, dry mouth or sore throat, etc. Be sure to follow advice about ventilation.

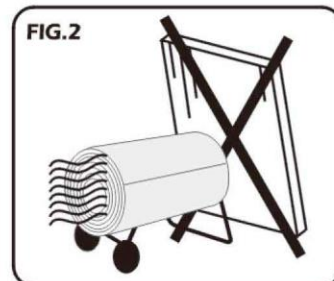


FIG.2

## OPERATION AND USE

### - PREPARING FOR OPERATION (Fig.3):

- 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.).

### - IMPORTANT:

- Locate heater at a safe distance from any combustible materials. Minimum distance to combustible materials and other surfaces :side-0.6m,top-1.8m,front-2.4m . (Fig.4.)
- Check the outlet pressure of the gas regulator and gas hose according to the specification on the rating plate. Use only the supplied regulator and hose assembly provided with this appliance. Using another regulator will make the appliance dangerous! Gas hose should be in its straight form without excessive bending and not twisted or kinked, ensure all connections are gas tight.

### - WARNING:

- 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 leak. Apply a mixture of liquid soap and water to all joints. Bubbles forming show a leak. Correct all leaks at once.

- Screw fasten the gas hose with regulator to the cylinder valve. Ensure the connection is tight.

### - NOTE:

- The gas connection to the heater has a right hand thread.

### - WARNING:

- Do not adjust regulator.
- Screw fasten the gas hose to the heater ensuring that the hose is not twisted or kinked. Ensure the connection is gas tight.
- Tighten connection onto appliance with spanner. Do not over tighten as it can damage the connection. If not opened slowly,excess-flow check valve on propane tank may stop gas flow. If this happens, close propane supply valve and open again slowly.

### - START (Fig.5.):

- Plug in the mains lead to a wall socket.
- Press the ON-OFF switch (A) on. Let the motor fan run at least 30 seconds to check if the fan works 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 of 3 minutes before retrying the correct ignition circuit.**

- 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.

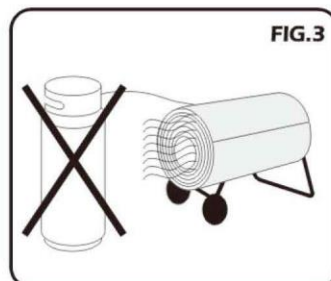


FIG.3

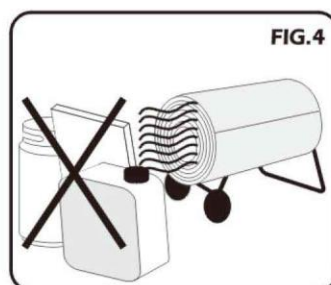
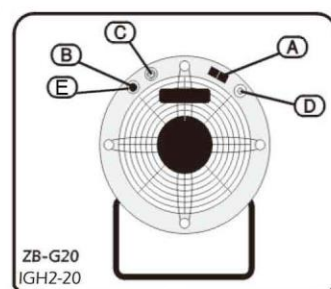


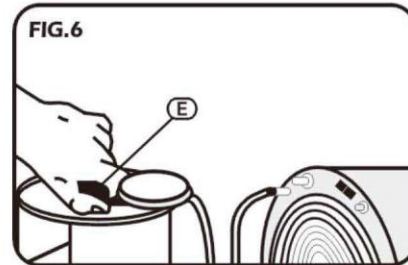
FIG.4



## OPERATION AND USE

### - (E) GAS PRESSURE TEST POINT

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 II. 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, time, and pressure. Slower valve reseal time can be expected at lower temperature and lower pressures. Cap retaining straps are standard on all brass plugs.



### - STOP (Fig. 6.):

- To switch off the heater, always close the gas cylinder valve first.
- Let the motor fan run for at least 2 minutes until the heater has 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 and regulator from the valve on the gas cylinder.

### - WARNING:

Be sure that the valve on the gas cylinder has been shut off firmly before disconnection. When disconnect cylinder from appliance before moving appliance. 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 fire brigade as necessary.

Gas cylinders are to be installed outdoors when not in use or when empty. Refer to AS1596 - storage and handling of LP Gas.

- **IMPORTANT:** The in-use period between every repeat operation should not be less than 3 minutes.

## MAINTENANCE AND 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.

If the replacement of the supply cord is necessary, this has to be done by the manufacturer or his agent in order to avoid a safety hazard.

Remove the plug from the socket before carrying out any adjustment, servicing or maintenance.

- Keep the heater clean, especially the motor grid and fan 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 screw connections frequently. do not allow gas regulator to be dragged across floor when moving appliance.
- Repair can only be made by a suitably trained and qualified person.
- Do not modify the appliance as incorrect operation or function can cause DEATH!



## TROUBLESHOOTING

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

## DISPOSAL

- At the end of the machine's working life, or when it can no longer be repaired, ensure that it is disposed of according to national regulations.
- Contact your local authority for details of collection schemes in your area.

In all circumstances:

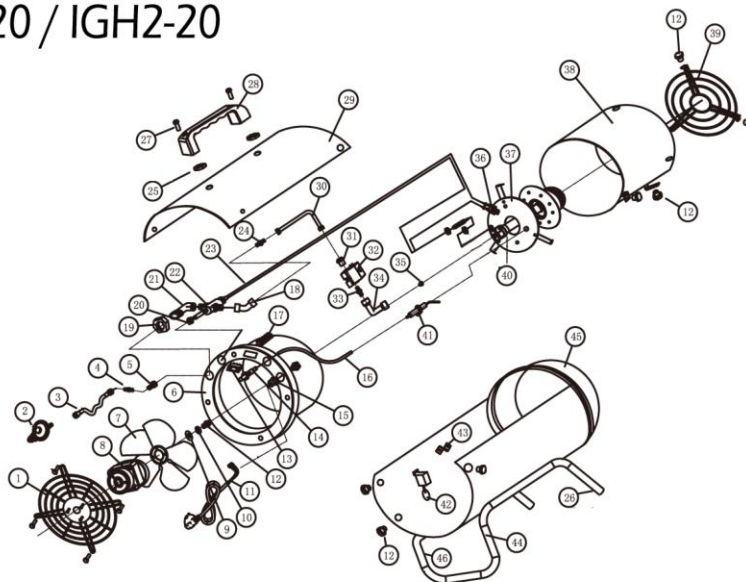
- Do not dispose of power tools with domestic waste.
- Do not incinerate.
- Do not abandon in the environment.
- Do not dispose of WEEE\* as unsorted municipal waste.



\* Waste Electrical & Electronic Equipment.

## Parts Breakdown and list:

### ZB-G20 / IGH2-20



Ref.	Description	Part Number	Ref.	Description	Part Number
1	Inlet grille	G20-010000	24	Nipple	G20-090500
2	Gas regulator	G20-220100	25	Nut	G10-010100
3	Gas hose	G20-220200	26	Mounting feet set	G20-230000
4	Gas pressure test point	G20-260000	27	Screw	G10-010300
5	Nipple	G20-090400	28	Handle	G10-010000
6	Motor mounting housing	G20-020000	29	Cover	G20-200000
7	Fan	G20-030200	30	Gas pipe	G20-100000
8	Motor assembly	G20-030100	31	Nipple	G20-110200
9	Washer	G20-030300	32	Solenoid Valve	G20-110100
10	Spring washer	G20-030400	33	Nipple	G20-110300
11	Plug and cable	G10-070000	34	Elbow	G20-110400
12	Screw	G20-030500	35	Nozzle	G20-110500
13	On/off switch	G20-040000	36	Thermal overload switch	G10-130000
14	Piezo-ignitor	G10-180000	37	Burner assembly	G20-120000
15	Cable Clamp	G10-080000	38	Combustion chamber	G20-160000
16	Cable	G20-180200	39	Outlet grille	G20-180000
17	Terminal block	G20-070000	40	Furnace head connector	G20-130000
18	Elbow	G20-090300	41	Ignition electrode	G20-140000
19	Nut	G20-090600	42	Air flow safety switch assembly	G20-150000
20	Nut	G20-090700	43	Inside bucket of fixed frame	G20-170000
21	Elbow	G20-090200	44	The barrel body supporting frame, right	G20-210100
22	Safety gas control valve	G20-090100	45	Body assembly	G20-190000
23	Thermo-element	G10-140000	46	The barrel body supporting frame, left	G20-210200

# FANMASTER

Manufacturers and Suppliers of Industrial Fans, Heaters & Ventilation Equipment

Unit 1, 6-8 Yalgar Rd  
Kirrawee NSW 2232  
P: 1300 900 345  
F: 02 9524 0999

## WARRANTY TERMS

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 contact *Fanmaster Pty Ltd*.

*Fanmaster Pty Ltd* will pay your reasonable, direct expenses of claiming under this warranty. You may submit details and proof of your expense claim to *Fanmaster Pty Ltd* for consideration.

This warranty is given by *Fanmaster Pty Ltd*  
ABN: 45 353 934 457  
Unit 1/6-8 Yalgar Rd, KIRRAWEE NSW 2232  
P: 02 9524 9999  
E: [info@fanmaster.com.au](mailto:info@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.