DUAL VOLTAGE PROPANE SPACE HEATER 210,000-400,000BTU/HR SPACE WARMER®

MODEL NO: **LP401.V3**

Thank you for purchasing a Sealey product. Manufactured to a high standard, this product will, if used according to these instructions, and properly maintained, give you years of trouble free performance.

IMPORTANT: PLEASE READ THESE INSTRUCTIONS CAREFULLY. NOTE THE SAFE OPERATIONAL REQUIREMENTS, WARNINGS & CAUTIONS. USE THE PRODUCT CORRECTLY AND WITH CARE FOR THE PURPOSE FOR WHICH IT IS INTENDED. FAILURE TO DO SO MAY CAUSE DAMAGE AND/OR PERSONAL INJURY AND WILL INVALIDATE THE WARRANTY. KEEP THESE INSTRUCTIONS SAFE FOR FUTURE USE.


Refer to Instructions


Warning! Hot Surface


Warning! Automatic Start-up


Warning! **DO NOT** cover

1. SAFETY

NOT TO BE USED FOR THE HEATING OF HABITABLE AREAS OF DOMESTIC PREMISES; FOR USE IN PUBLIC BUILDINGS, REFER TO NATIONAL REGULATIONS.
YOUR SAFETY IS IMPORTANT TO YOU AND TO OTHERS, SO PLEASE READ THESE INSTRUCTIONS BEFORE YOU OPERATE THIS HEATER.
GENERAL HAZARD WARNING:
FAILURE TO COMPLY WITH THE PRECAUTIONS AND INSTRUCTIONS PROVIDED WITH 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.
NOT FOR HOME OR RECREATIONAL VEHICLE USE.

1.1. **ELECTRICAL SAFETY**

❑ **WARNING!** It is the user's responsibility to check the following:
✓ Check all electrical equipment and appliances to ensure that they are safe before using.
✓ Inspect power supply leads, plugs and all electrical connections for wear and damage.
✓ Ensure that the insulation on all cables and on the appliance is safe before connecting it to the power supply.
× **DO NOT** use worn or damaged cables, plugs or connectors.
✓ Ensure that any faulty item is repaired or replaced immediately by a Sealey qualified technician.
✓ If the cable or plug is damaged during use, switch off the electricity supply and remove from use.
✓ Sealey recommend that an RCD (Residual Current Device) is used with all electrical products.
Important: Ensure that the voltage rating on the appliance suits the mains power supply.
× **DO NOT** pull or carry the appliance by the power cable.

1.2. **DO NOT** pull the plug from the socket by the cable.
✓ 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.

1.3. **GENERAL SAFETY**

✓ **Use only in a well ventilated area and away from combustible materials**
✓ Children from age 8 years and above, persons with reduced physical, sensory, or mental capabilities those with lack of experience and knowledge can use the appliance, if they have been given supervision or instruction concerning use of the appliance in a safe way to understand the hazards involved.
✓ Children shall NOT play with the appliance.
✓ Cleaning and user maintenance on the appliance shall not be made by children without supervision.
✓ The appliance shall be disconnected from its power source during service and when replacing parts.
✓ Turn off gas at the cylinder, by means of the gas cylinder's isolating valve, when heater is not in operation.
✓ Ensure that the fan is operating correctly before lighting the burners.

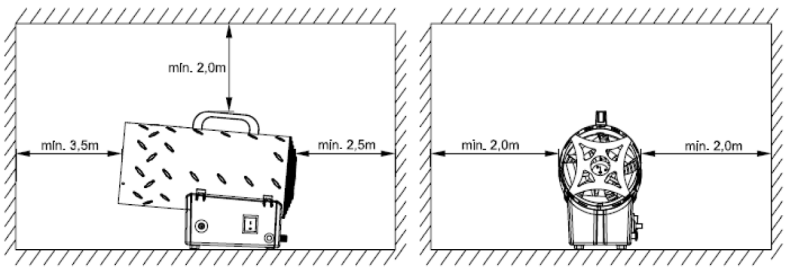
1.4. **REGULATOR SAFETY**

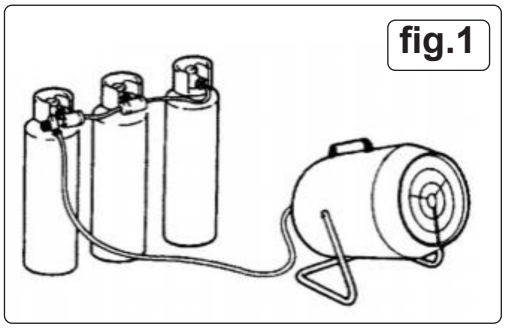
✓ When the regulator is to be used outdoors, it shall be positioned or protected against direct penetration by any trickling water.
✓ When the regulator is installed downstream of another regulator, the supply pressure range shall be correct for the regulated pressure range of the upstream regulator, plus any pressure losses in the interconnecting pipe work.
✓ This regulating device shall not be positioned lower than the tank or cylinder outlet valve, to avoid gas vapour which may have re-liquefied from draining into the regulator. Pipes and hoses used to connect to the inlet of the regulating device, shall slope continuously back to the tank or cylinder.
✓ In normal conditions of use, in order to ensure correct operation of the installation it is recommended that this device is changed within 10 years of the date of manufacture.

1.5. **SPECIFIC HEATER SAFETY**

× **DO NOT** cover.
× **CAUTION!** Some parts of this product can become very hot and cause burns. Particular attention has to be given where children and vulnerable people are present.
✓ Only to be used on a level surface capable of holding the weight of heater and gas bottle/s.

1.5.1. **CLEARANCE FROM OBJECTS**





1.5.2. **VENTILATION REQUIREMENTS**

- ✓ The heater must only be used outdoors or in well ventilated surroundings.
- ✓ For every KW it is necessary to have permanent ventilation of 25cm³, equally distributed between the floor and high level, with a minimum outlet of 250cm³.
- × **DO NOT** exceed 100W/m³ of free room. The minimum volume of the room must be larger than 100m³.
- ✓ Gas cylinders must be used and kept in accordance with current regulations.
- ✓ Never direct the hot air flow towards the cylinder.
- ✓ Use only the supplied pressure regulator.
- ✓ Never use the heater without its cover.
- × **DO NOT** obstruct the inlet or outlet sections of the heater.
- ✓ If the heater has to work for a long period at its maximum capacity, it's possible that ice will form on the cylinder. This is due to excessive vapour withdrawal. Not for this reason, or for any other, should the cylinder be heated. To avoid this effect, or at least to reduce it, use a large cylinder or two cylinders linked together, fig.1 above.
- ❑ **WARNING! DO NOT** use the heater in cellars, basements or in any room below the ground level.
- ✓ In case of malfunction, please contact the stockist.
- ✓ After use, turn the gas cylinder tap off.
- ✓ The gas bottle must always be replaced away from any possible source of ignition.
- ✓ Avoid torsional stresses in the gas supply flexible tube. The gas hose must not be twisted or bent.
- ✓ The heater must be placed where there is no risk of fire, the hot air outlet must be at least 3m from any flammable wall or ceiling and must never be directed towards the gas bottle.
- ✓ Only use original gas hose and spare parts, hose must be not less than 1 meter in length.
- ✓ In the case that a gas leak is found or suspected, immediately close the gas cylinder, switch the heater off and do not use it again until it has been checked by a qualified service centre. If the heater is installed indoors, provide a good ventilation by opening door and windows completely. Do not produce sparks or free flames. If in any doubt contact your supplier.

2. INTRODUCTION

Dual Voltage Propane Space Warmer® with 210 – 400,000Btu/hr(61.5-117KW. Features safety solenoid valve which prevents the unit from leaking gas and safely ignites by the Piezo push-button system. Supplied with a fully approved gas regulator and hose. The Space Warmer® is fan assisted and as the fuel is completely burned so it leaves no oily residue like you may experience when using other types of fuel heaters. There is no odour, except for the few seconds during start-up and the unit runs a little quieter, since a compressor is not needed to drive the fuel to the burner. Heats an area of 72,000ft³(2,038m³) with a fuel consumption of between 4.3-8.2kg/hr. Mounted on a sturdy frame with heavy duty wheels for easy manoeuvrability this space warmer is ideal for large garages, workshops or warehouses.

3. SPECIFICATION

Model No: LP401.V3
Airflow: ..... 3500 m³/h
Fuel: ..... Propane
Fuel Consumption: 4.3-8.2kg/hr
Fuse Rating: 5A
Heated Area: ..... 72,000ft³(2,038m³)
Output: ..... 210,000-400,000Btu/hr(61.5-117kW)
Plug Type: ..... 3-Pin BS
Power Supply Cable Length: 1.6m
Power: 61.5-117kW
Supply: 230V/110V

3.1. REGULATOR SPECIFICATION

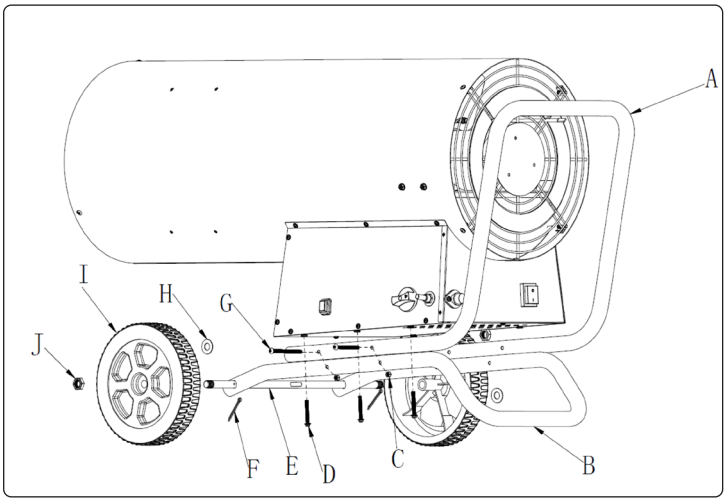
Manufacturer:
Integrated Gas Technologies
Gydevang 39-41
3450 Allerod
Denmark

Regulator operating temperature range: ..... -20°C - 50°C
Inlet Pressure (bar): 1.5-1.6
Nominal Outlet Pressure (bar): 1.5/2.0/2.5/4.0
Capacity: 8kg/h

3.1.1. **SPECIFICATION:**

Type B 310, Operating media: liquid gas (LPG) according to EN 589 Propane/Butane, Exit: hose assembly, exit pressure preset 4.0 bar see specification plate, with external thread for coupled connection.

4. CONTENTS



Part	Description	Qty.
A	Handle	1
B	Feet pipe	1
C	M5 nut	4
D	M5*40mm screw	6
E	Axle	1
F	Split pin	2
G	M5*60mm screw	4
H	Ø12mm plain washer	2
I	Wheel	2
J	M12 nut	2

5. ASSEMBLY (SEE ABOVE)

5.1. Insert axle E through feet pipe B, secure with split pin F.
5.2. Fit plain washer H over end of each axle end.
5.3. Fit wheels I on axle, secure with nut J.
5.4. Lower heater body onto feet pipe assembly B. Secure with 6 x M5*40mm screw D from underneath through feet pipe B into base plate of heater.
5.5. Fit handle A to feet pipe B, secure with 4x M5*60mm screws G.

6. INSTALLATION

6.1. Connect the heater to a suitable mains supply.
6.2. Make sure that the machine is properly earthed.
6.3. Connect the gas supply hose to the pressure regulator and connect the regulator to a suitable LPG cylinder.
6.4. Open the tap of the cylinder and check the supply hose and fittings for gas leaks. For this operation it is recommended to use an approved leak detector.
❑ **WARNING!** NEVER USE NAKED FLAMES.
6.5. **ELECTRICAL CONNECTIONS**
❑ **WARNING!** READ THESE ELECTRICAL SAFETY INSTRUCTIONS THOROUGHLY BEFORE CONNECTING THE PRODUCT TO THE MAINS SUPPLY.
6.5.1. Remove the voltage indicator protective cover (see fig.2) and select the required voltage with the rocker switch.
6.5.2. Refit protective cover to indicate which voltage has been selected.

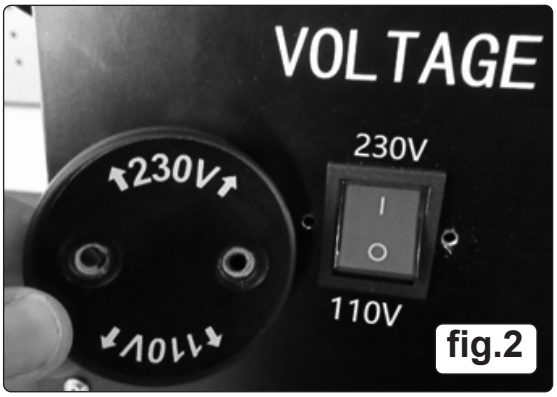


fig.2

fig.2A

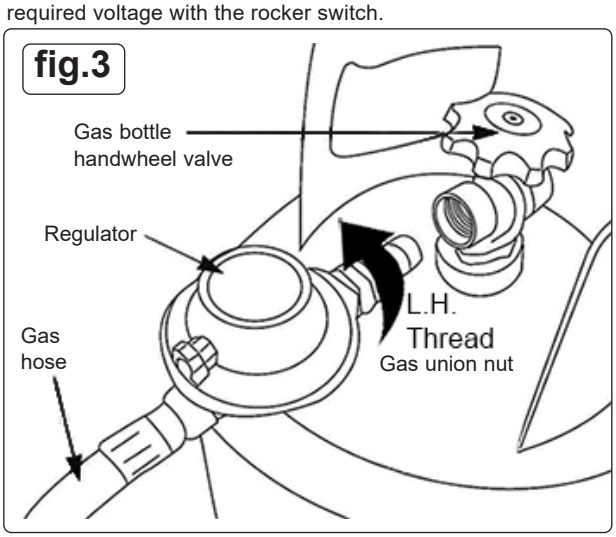


fig.3

Supplied mains leads

6.5.3. Insert the correct mains lead into the mains lead support to match the voltage selected, as above.
6.5.4. If the mains lead is wrong for the voltage selected, the heater will not work.

6.6. **PREPARATION FOR OPERATION**

6.6.1. Check heater and regulator for transit damage.

6.6.2. Always ensure the gas bottle stands upright.

6.6.3. **REGULATOR USE AND OPERATION**

Before assembly check for transit damage and completeness.
Assemble with a flat wrench of appropriate size.
Prior to fitting conduct a visual check for possible metal shavings or other residues in the connection. These are to be removed without fail to avoid potential functional defects.
Ensure correct assembly in respect to flow of gas.
Gaskets are to be fitted and must be clean and undamaged.
Spanner tighten the hexagon nut.

6.6.3.1. **LEAK CHECK**

Close off all shut off valves on the consuming appliance and open the gas bottle valve.
Check all connection areas with the help of a suitable foam creating substance **NEVER WITH A FLAME.**

6.6.3.2. **OPERATION**

Pressure regulator is operable after installation and having passed a leak check.
Operation occurs by slowly opening the bottle valve in the direction of its indicated arrow.
The bottle must not be moved during operation.
Valve is to be protected from exposure to the weather at all times.
The gas regulator is to be renewed within 5 years of the manufacture date.
When not in use for extended periods the gas bottle valve is to be closed.
Liquid gas is a highly flammable fuel gas, Safety informations and local regulations must be followed at all times.
TURN OFF: close gas bottle valve by turning in direction of the arrow indicated on the valve tap.

6.6.3.3. **ATTACHING THE PRESSURE REGULATOR TO THE GAS BOTTLE**

Ensure: all gas taps of the end gas appliance are closed, regulator is correctly attached to the gas appliance.
Remove protective cap of the hand turning valve on the gas bottle.

- **WARNING! Make sure there are no open flames nearby.**

Ensure gasket if there is one, is present and functional. Use a wrench to fully tighten the union nut. Pay attention to the turning direction gas fittings have reverse threads. The union nut should be tightened moderately, however a leak free connection must be ensured.
Use soapy water to check.
Hold the regulator and turn the union nut, the regulator itself should not be turned.

6.6.3.4. **GAS BOTTLE VALVE OPERATION**

When the regulator is properly installed the supply of gas occurs when the hand wheel on the gas bottle is turned in the direction of its arrow. To stop gas delivery turn the gas bottle hand wheel in the opposite direction.

6.6.3.5. **GAS BOTTLE CHANGE**

Turn off all end consumer appliance taps. Close gas bottle handwheel. Remove regulator by loosening gas union nut.

6.6.4. **GAS HEATER OPERATION**

6.6.5. Connect the hose and regulator assembly to the LPG cylinder by rotating the nut counterclockwise into the LPG cylinder's valve outlet and securely tighten.

6.6.6. Open the cylinder's gas valve and check all gas connections with a soap and water solution.

6.6.7. Connect to mains supply.

6.6.8. Ensure there is sufficient gas and that it is correctly connected.

6.6.9. Open the supply valve on the gas cylinder.

6.6.10. Set the flame intensity control valve, to a low setting, fig.4.

6.6.11. Set the fan On/Off switch to the ON (I) position. Check the fan operates.

6.6.12. Hold in the gas valve button until the thermocouple is energised and the heater ignites.

6.6.13. If the heater fails to ignite, there may be air in the hose so keep the gas valve button pushed in and wait for about 15 seconds.

6.6.14. Wait 30 seconds for unburned fuel to exit the heater. Repeat the step above.

fig.4

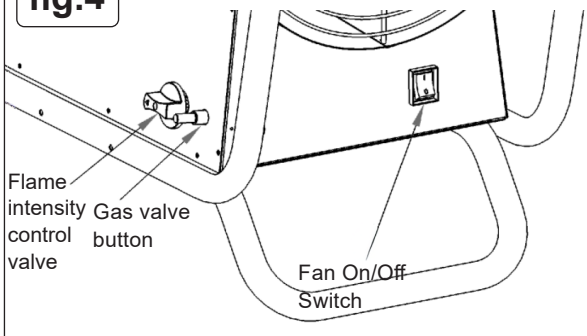
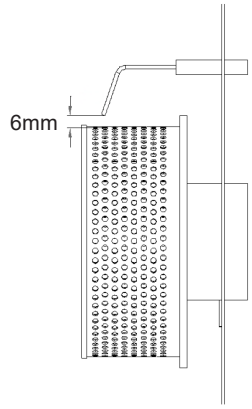


fig.5



CAUTION: If ignition is difficult or irregular before repeating the ignition operations make sure that the fan is not locked and the air inlet and outlet are unobstructed.

6.6.15. SWITCH OFF

To stop the heater, shut off the gas cylinder tap. Let the fan run until the flame shuts down and then turn the fan On/Off switch to position O.

6.7. **AIR CONDITIONING**

6.7.1. The heater can also be used as a ventilator. In this case remove the gas supply hose and connect the plug of heater to a suitable electrical supply.

6.7.2. Set the fan switch to position I, (see fig.4).

❑ **WARNING! ASPHYXIATION HAZARD**

× **DO NOT** use heater for heating domestic habitation.

× **DO NOT** use in unventilated areas.

❑ **WARNING!** The flow of combustion and ventilation air must not be obstructed. Proper ventilation air must be provided to support the combustion air requirements of the heater being used. Lack of proper ventilation air will lead to improper combustion.
Improper combustion can lead to carbon monoxide poisoning leading to serious injury or death. Symptom of carbon monoxide poisoning can include headaches dizziness and difficulty in breathing.

6.8. **FUEL GAS ODOUR**

LP gas and natural gas have man made odours added specifically for detection of fuel gas leaks.
If a gas leak occurs you should be able to smell the fuel gas. Since Propane (LP) is heavier than air you should smell for the gas odour low to the floor. ANY GAS ODOUR IS YOUR SIGNAL TO:

× **DO NOT** take any action that could ignite the fuel gas.

× **DO NOT** operate any electrical switches.

× **DO NOT** pull any power supply or extension cords.

× **DO NOT** light matches or any other source of flame.

× **DO NOT** use your telephone.

Get everyone out of the building and away from the area immediately.
Close all propane (LP) gas tank or cylinder fuel supply valves.
Propane (LP) gas is heavier than air and may settle in low areas. When you have reason to suspect a propane leak, keep out of all low areas.
Use your neighbour's phone and call your fuel gas supplier and your fire department. **DO NOT** re-enter the building or area.
Stay out of the building and away from the area from the area until declare safe by the firefighters.
FINALLY, appropriate persons need to check for escaped gas. Have them air out the building and area before you return. Properly trained service people must repair any leaks, check for further leakages, and then relight the appliance for you.

7. MAINTENANCE

❑ **WARNING!** Repairs or maintenance operations must only be carried out by qualified personnel.

❑ **WARNING!** Before starting any maintenance operation on the heater disconnect from both gas and electrical supplies.

7.1. The unit must be checked by a qualified technician at least once a year.

7.2. Regularly check the condition of gas hose and gas regulator. If it must be replaced, only use original spare parts.

7.3. If the unit has not been used for a long period we advise that a technician carries out a general check up before using. It is important to control the following:
Periodically check the gas supply hose conditions and, should it be changed, use only original spare parts.
Check the starting electrode position (see Fig.5).
Check the connections of the safety thermostat and of the thermocouple: they must always be clean.
If necessary clean the fan blade and the inside of the heater using compressed air.

7.4. **PROFESSIONAL SERVICING INSTRUCTIONS**

This section's instructions are intended to be used only by competent professional servicing personnel.
(A) That the appliance be checked for soundness.
(B) Where applicable, that the appliance be checked for setting pressure.
(C) The method for verifying the correct operation of the burner:
(D) Precautions to be taken if the appliance cannot be left in a safe condition: Remove from gas supply, store in a secure area, correctly labelled to prevent further use, until professionally repaired.

8. TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
The motor does not work	No electricity supply	Check the terminal board with a tester
	The safety thermostat is on	Wait about one minute then restart
The motor works, but the burner does not light up and after few seconds the heater stops	The cylinder gas tap is closed	Open the gas tap
	The cylinder is empty	Use a new cylinder
	The nozzle is obstructed	Remove the nozzle and clean it
	The solenoid gas valve is not open	Check that the solenoid valve works
	There is no spark	Check the position of the electrode
The burner lights up but after few seconds the heater stops	No connection with the earthing system	Check and connect properly
	Defective connection between sensor and safety device	Check and connect properly
	Defective safety device	Replace the safety device
The heater stops during operation	Excessive gas supply	Check the pressure reducer and if required replace it
	Insufficient air flow	Check that the motor works properly
	Insufficient gas supply due to ice formation on the cylinder	Check and use a larger cylinder or two cylinders connected together

9. END OF LIFE

At the end of its useful life this product should be dismantled and recycled according to regulations in force.

WEEE REGULATIONS

Dispose of this product at the end of its working life in compliance with the EU Directive on Waste Electrical and Electronic Equipment (WEEE). When the product is no longer required, it must be disposed of in an environmentally protective way. Contact your local solid waste authority for recycling information.

ENVIRONMENT PROTECTION

Recycle unwanted materials instead of disposing of them as waste. All tools, accessories and packaging should be sorted, taken to a recycling centre and disposed of in a manner which is compatible with the environment. When the product becomes completely unserviceable and requires disposal, drain any fluids (if applicable) into approved containers and dispose of the product and fluids according to local regulations.

Note: It is our policy to continually improve products and as such we reserve the right to alter data, specifications and component parts without prior notice. Please note that other versions of this product are available. If you require documentation for alternative versions, please email or call our technical team on technical@sealey.co.uk or 01284 757505.
Important: No Liability is accepted for incorrect use of this product.
Warranty: Guarantee is 12 months from purchase date, proof of which is required for any claim.

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