

SIP Industrial Products Limited

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Shepshed
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Leicestershire
LE12 9NH
United Kingdom



SIP FIREBALL INDUSTRIAL

Infrared Diesel Heater



09236 - 09241

For help or advice please contact
your distributor, or sip directly on:

Tel.: 01509 500400

Email:

sales@sip-group.com

or

customerservice@sip-group.com

Please read and fully understand the instructions in this manual before
operation. Keep this manual safe for future reference.



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Note: Images used in this manual are for illustration purposes only, and may not be an exact representation of the product.

Safety Symbols Used Throughout This Manual



Danger / Caution: Indicates risk of personal injury and / or the possibility of damage.



Note: Supplementary Information.



Important: Please read the following instructions carefully, failure to do so could lead to serious personal injury and / or damage to the Heater.

Safety Instruction

IMPORTANT: Please read the following instructions carefully, failure to do so could lead to serious personal injury and / or damage to the heater.

DISCONNECT THE HEATER FROM THE MAINS SUPPLY: When not in use, before servicing and when refuelling etc.

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Safety Instructions Cont...

IMPORTANT: Please read the following instructions carefully, failure to do so could lead to serious personal injury and / or damage to the heater.

ALWAYS Use the correct AC 220-240V power supply only.

DO NOT use a damaged mains cable, plug, or a loose outlet.

DO NOT take out the plug by pulling the mains cable or with wet hands.

DO NOT extend the mains cable by connecting another cable in the middle. If an extension lead is to be used, ensure it is of the correct cross sectional size.

DO NOT clean or undertake maintenance whilst the product is plugged in, or the heater is still hot.

DO NOT place or use anything flammable near the heater including fuel, gas, thinner, benzene, spray, solvents, volatile organic compounds, etc.

ALWAYS ensure a fuse of the correct rating is installed and functional

ALWAYS turn the machine off by the product power switch, before powering off at the outlet.

DO NOT place any flammable material near the heater including curtain, carpet, paper, matches, clothes, etc.

KEEP CHILDREN AND UNTRAINED PERSONNEL AWAY FROM THE WORK AREA: All visitors should be kept at a safe distance from the work area.

STORE THE HEATER SAFELY WHEN IT IS NOT IN USE: The heater should be stored in a dry, locked cupboard, or similar when not in use wherever possible and out of the reach of children.

STAY ALERT: Always watch what you are doing and use common sense. Do not operate the heater when you are tired or under the influence of alcohol or drugs.

Safety Instructions Cont...

DO NOT use this heater in the areas higher than 1,500m above sea level. Frequent ventilation is needed in the areas of 700-1,500m above sea level.

Due to the lack of oxygen, carbon monoxide levels can rise and increase the risk of carbon monoxide poisoning.

DO NOT ABUSE THE MAINS LEAD: Never carry the heater by the mains lead or pull it to remove the plug from the mains socket. Keep the mains lead away from heat, oil and sharp edges. If the mains lead is damaged, it must be replaced by the manufacturer or its service agent or a similarly qualified person in order to avoid unwanted hazards.

HAVE YOUR HEATER REPAIRED BY A QUALIFIED PERSON: The heater is in accordance with the relevant safety requirements. Repairs should only be carried out by qualified person using original spare parts, otherwise this may result in considerable danger to the user.

DO NOT leave the heater unattended

USE ONLY new clean fuel

General Precautions

Even though this heater operates very close to 100 percent combustion efficiency, it still produces small amounts of carbon monoxide.

- Carbon Monoxide (CO) is toxic.
- Pregnant women, persons with a heart or lung condition, anaemia or under the influence of alcohol, or those at high altitude, are more likely to be effected by Carbon Monoxide.
- CO can build up in a confined space and failure to provide adequate ventilation can be fatal.

The early symptoms of asphyxiation caused by inadequate ventilation are:

- Headache
- Dizziness
- Nausea
- Dry mouth or sore throat

Should anyone show these symptoms, they must GET FRESH AIR IMMEDIATELY. Turn off the heater and have it serviced before using again.

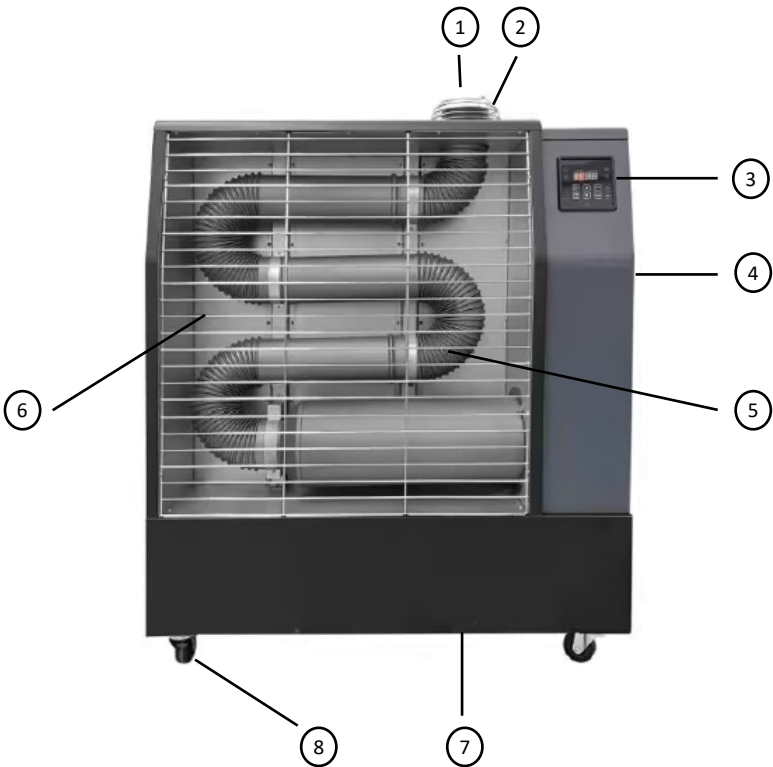
WE RECOMMEND THE USE OF A CARBON MONOXIDE DETECTOR

Please refer to page 13 for further information regarding the use of ventilation and flue kits.

Technical Specification

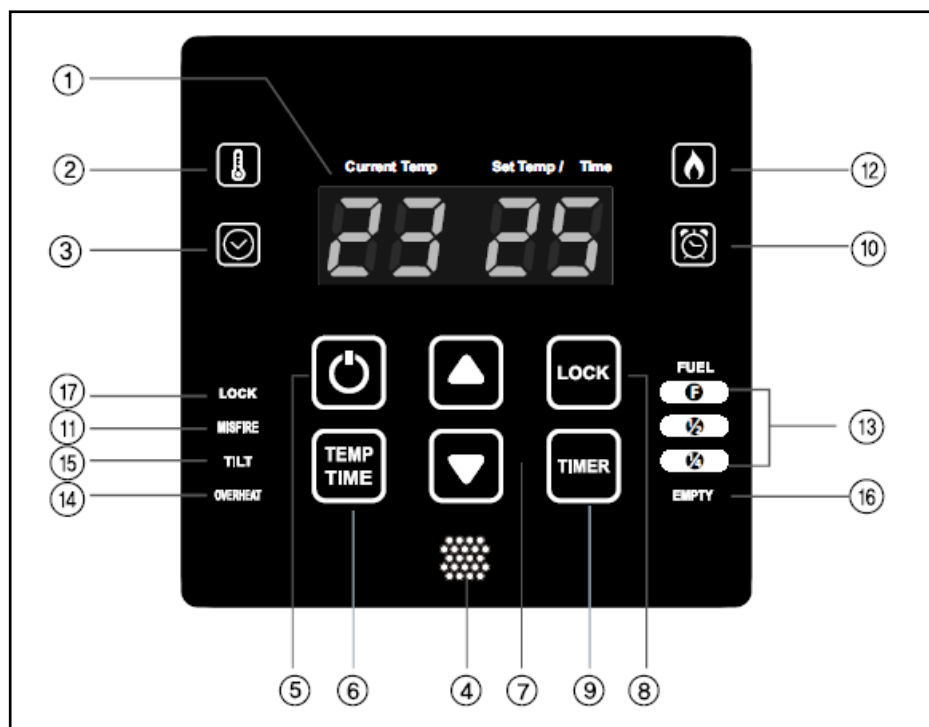
Model No.	09236	09241
Operating Voltage	240V	240V
Rated Input Current (A)	13A	13A
Fuse Rating	5	5
Rated Input (A)	0.33	0.33
Fuel Consumption (L/hr)	0.95-1.14	1.18-1.45
Fuel Tank Capacity	50L (45L Max Fill)	50L (45L Max Fill)
Max Heat Output (kW/btu)	13/44357	16/54594
Dimensions (L x W x H)	1100x310x870	1100x310x945
Weight	45kg	50kg

Getting to know your Infrared Diesel Heater



Item	Description	Item	Description
1	Exhaust	5	Heating Tube
2	Safety Grille	6	Front Protective Grille
3	Control Panel	7	Fuel Tank
4	Side Access Panel	8	Caster Wheels

Getting to know your Infrared Diesel Heater



Item	Description	Item	Description
1	LED Display (Displays Machine Status)	10	Timer Indicator
2	Temperature Control Mode	11	Misfire Indicator
3	Time Control Mode	12	Operation Indicator
4	IR Receiver (Remote Control)	13	Fuel Guage
5	ON/OFF	14	Overheating Warning Indicator
6	Temp/Time Selection Button	15	Tilt Indicator
7	UP/DOWN Selector	16	Low Fuel Indicator
8	Control Panel Lock	17	Panel Lock Indicator
9	Timer		

Guarantee

This item is covered by a 24 month parts and labour warranty covering failure due to manufacturers defects.

This does not cover failure due to misuse or operating the item outside the scope of this manual - any claims deemed to be outside the scope of the warranty may be subject to charges Including, but not limited to parts, labour and carriage costs.

Consumable items such Handles, Nozzles etc are not covered by the warranty.



Note: Proof of purchase will be required before any warranty can be honoured.

Electrical Connection

Plug Wiring



Warning: The wires in the power cable of this product are coloured in accordance with the following code:

Blue = Neutral

Brown = Live

Yellow and Green = Earth



As the colours of the flexible cable of this appliance may not correspond with the coloured markings identifying terminals in your plug proceed as follows:

- Connect the GREEN & YELLOW wire to terminal marked “E” - Earth or 
- Connect the BROWN wire to terminal marked “L”
- Connect the BLUE wire to terminal marked “N”

If this appliance is fitted with a plug which is moulded onto the electric cable (i.e. non-rewirable) please note:

1. The plug must be thrown away if it is cut from the electric cable. There is a danger of electric shock if it is subsequently inserted into a socket outlet.
2. Never use the plug without the fuse cover fitted.
3. Should you wish to replace a detachable fuse carrier, ensure that the correct replacement is used (as indicated by marking or colour code).
4. Replacement fuse covers can be obtained from most electrical stockists.
5. The fuse in the plug must be replaced with one of the same rating (5 Amp) and this replacement must be ASTA approved to BS1362.

Operating Environment

Minimum Air Requirements

Ventilation of 1inch^2 (25mm^2) Per 1000 Btu/hr (0.3Kw) is a minimum requirement.

These heaters are specified as requiring a minimum fresh air ventilation of;

09236 - 44inch^2

09241 - 55inch^2

Environment

DO NOT obstruct the air intake to the heater and allow the following clearances from combustible surfaces.

Outlet: 1.0m

Top: 1.0m

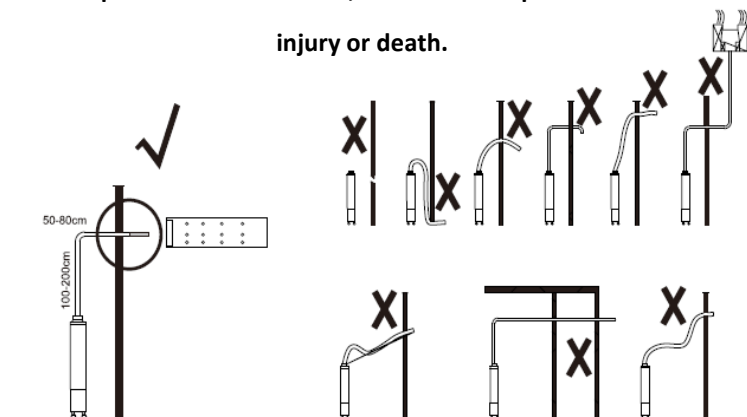
Sides: 0.15m

Rear: 0.15m

Exhaust Flue Installation

For a permanent installation, or an installation in where sufficient ventilation cannot be provided. The use of an exhaust flue is required.

The use of the product without a flue, in a confined space can lead to serious injury or death.



Danger / Caution: The installation of the flue **MUST** be completed by a competent/qualify person.

Operating Instructions

Re-fuelling Preparation

Before refuelling the heater ensure that the following checks have been completed;

- Heater is disconnected from the mains supply.
- Heater has been allowed sufficient time to fully cool.
- Ensure all combustibles have been removed from the area.
- Ensure the correct PPE is worn (Gloves, Visor etc...)
- Ensure the fuel tank is free of contaminants (Water, Dirt etc...)

Re-fuelling

- Place the Heater on a level and stable surface
- Unscrew the fuel tank cap
- Add fuel, ensure to leave a sufficient air gap at the top of the tank. A minimum of 20mm from the top of the tank is required to prevent leaking from the vented fuel cap.
- Re-install the fuel cap, and ensure it is correctly tightened.

Operating Instructions Cont...

Starting Instructions

1. START WITH PRESSING "ON/OFF" SWITCH.

•Heater will be turned ON with a "beep" sound, and automatically operated.

•If you wish to stop the unit press "ON/OFF" switch one more time.



2. SELECT THE DESIRED OPERATION TYPE USING "TEMP/TIME" SWITCH.



3. Set the time or temperature by pressing ▲ ▼ switch.

•You can set the desired temperature between "0~40°C".

•Set the desired time limit between 5min ~ UP →ON



Operating Instructions Cont...

Temperature Control Mode

1. Push On/Off button.



2. By pushing Temp/Time button, please select Temperature control mode.
• At that time, Temperature control lamp is lit.



3. By pushing "▼/▲" button, please select desire temperature.

- The setting range : 0~40°C
- The default value : 25°C
- During the time you push "▼/▲", the setting temperature is increased/decreased very fast.
- The range of current temp display : -9~50°C



4. During operation, the current temp, and setting temp. both are displayed, and if you push On/Off button and make the operation stop, only current temp. is shown.



5. When the setting temp. is higher 2°C than current temp., it starts operation, and the setting temp. is less than 1°C than current temp., the operation is stopped.

- Current temp. < Setting temp.... Operation (+2°C)
- Current temp. > Setting temp.... Operation stop (-1°C)



♣ Tips

- The current temp is less than -9°C(16°F), the display of the temp. is 'LO', and more than 50°C (99°F) it displays as 'HI' (50°C is not same value as 99°F, actually 37°C is same value as 99°F)
- The setting temperature is increased/decreased 1°C by pushing of "▼/▲" button, if you push the button more than for 2sec. the value is increased/decreased 1°C in 0.2 sec.

Operating Instructions Cont...

Time Control Mode

1. Push On/Off button.



2. By pushing Temp/Time button, please select Time control mode. At that time, Time control lamp is lit.



3. By pushing "▼/▲" button, please select desired repetition time. When you increase or decrease the repetition time by pushing "▼/▲" button, the time is blinking, and if you don't push button for 3sec., this displayed blinking time is set as 'Repetition time'. At that time, the former Repetition time is automatically erased.



4. At the operation mode, the operation symbol and repetition time both are displayed, and when you turn it off by pushing On/Off button, STOP symbol (--) only displayed. When the heater is in Interval Pause Time1, STOP symbol (--) and repetition time both displayed.



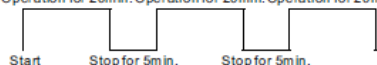
--20

Repetition time of 20 refers to a 5-minute pause every 20 minutes of work

5. The repetition time can be set from 5 min. to 55min. The operation is as much as setting time, and 5min. pause time, which is repeated. When you increase one more from max. time 55min. It goes to 'Constant operation'.

This means, without pause time, the operation is constantly made.

Operation for 20min. Operation for 20min. Operation for 20min.



--20

In case of setting the repetition time as 20min.

[]

Constant operation status

Maintenance



Warning: Disconnect the heater from the electrical supply before carrying out maintenance.

Monthly

- Check the igniter for cleanliness and correct operation.
- Ensure that all connections are clean and secure.
- When necessary, clean the fan and the inside of the heater thoroughly, using a non abrasive cloth, and non flammable cleaning solution.

Storage

- Drain all fuel from the fuel tank.
- Wipe product clean using a damp cloth, and allow to air dry.
- Return product to its original packaging .
- Store in a cool dry area, away from damp and raised off of the floor

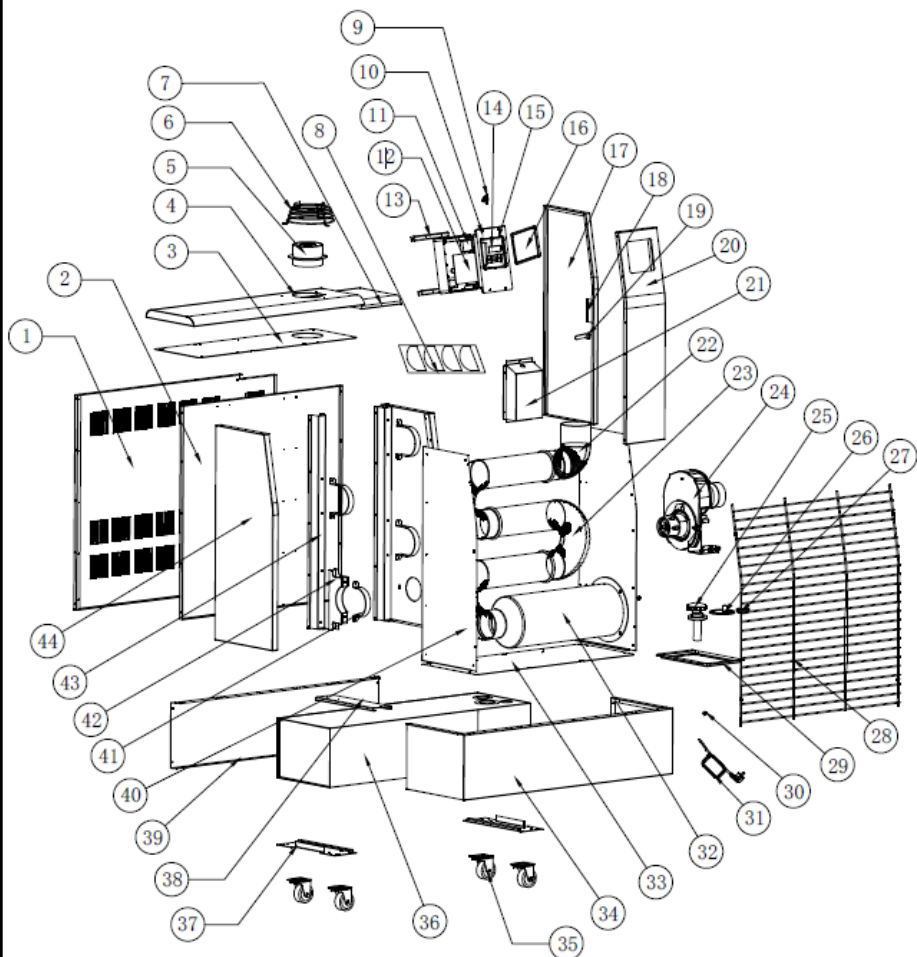
Troubleshooting

Problem		Cause	Solution
Machine fails to power on when switched on	No power supply		Check the supply is the correct rating
	Check the mains plug in connected		Securely connect the plug into the supply
Fan motor fails to run when machine is being operated	“Fuel Light” is illuminated	Fuel level is to low, or sensor failure	Refill the fuel tank with diesel, and restart.
	Temperature setting is lower than ambient		Increase the temperature setting above ambient
	“Misfire” light is illuminated	Airlock in the diesel pump	Bleed the pump fuel system, and restart
	“Overheat” light illuminated	The heater has exceeded its maximum temperature	Remove any blockages, allow machine to cool. And restart
	“Tilt” light is illuminated	Heater has exceed its tilt limit	Check the ground surface is suitable and level. Relocate if needed
	“Er02” is shown on the LED Display	Temperature sensor	Change the control setting from temperature to time control
Heater fails to ignite	Fuel filter is clogged	Contaminated fuel	Check fuel for contamination, replace filter and fuel where necessary.
	The air inlet valve has moved out of tolerance	Poor Maintenance or damage during transport	Call SIP Customer Service, or an SIP Service Agent
	Voltage is below tolerance		Check input voltage is within tolerance at outlet .

Troubleshooting Cont...

Error Code	Cause	Processing Method
Er01	Temperature sensor open circuit or failure	Check connection or replace sensor
Er02	Tip Over	Product has exceeded is tilt limit, restart product
Er04	Photocell has detected light before ignition	Check connection or replace photocell
Er05 + Misfire	Airlock in diesel line	Restart machine
	No diesel	Check fuel level, refill accordingly
	Diesel filter is clogged	Change the diesel filter
	Fan motor failure	Contact SIP customer Service, or a SIP Service Agent to arrange repair
	Igniter failure	
	Diesel pump failure	
Er06	Temperature Limit Exceeded	Check for items covering the product, allow to cool.
Er09	Diesel Level Sensor Fault	Check connection or replace sensor
OVERHEAT	The temperature setting is below ambient temperature	Increase the temperature setting to above ambient.

IDX44 - IDX56 Diesel Heater



Parts List

Ref. No	Description	Ref. No	Description
1	Rear Panel	23	Internal Exhaust Straight
2	Inner Rear Panel	24	Burner Assembly
3	Inner Top Panel	25	Fuel Filler Cap
4	Top Panel	26	Fuel Level Detector
5	Exhaust Pipe Mounting Panel	27	Fuel Tank Breather
6	Exhaust Outlet Safety Grille	28	Front Guard Grille
7	Control Cabinet Top Panel	29	Fuel Tank Mounting Plate
8		30	Cable Gland
9	Thermostat	31	Power Cable
10	Control Box Cover	32	Inner Exhaust Outer Sleeve
11	Control Box	33	Base Top Plate
12	Power Control PCB	34	Base Front Plate
13	Control Box Mounting Bracket	35	Castors
14	Control Panel Decal	36	Fuel Tank
15	Control Panel	37	Castor Mounting Plate
16	Control Panel Fascia Plate	38	Fuel Tank Mounting Bracket
17	Control Cabinet Right Side Door	39	Base Rear Plate
18	Right Side Door Latch	40	Inner Left Panel
19	Right Side Door Handle with Lock and Key	41	Inner Exhaust Bracket Cap
20	Control Cabinet Front Panel	42	Inner Exhaust Bracket
21	Power Cable Storage Box	43	Inner Exhaust Mounting Rail
22	Internal Exhaust Elbow	44	Left Side Panel

UK - DECLARATION OF CONFORMITY

We
SIP (Industrial Products) Ltd
Gelders Hall Road
Shepshed
Loughborough
Leicestershire
LE12 9NH
England

As the manufacturer within the UK, England, Scotland & Wales, declare that the

09236 - SIP FIREBALL IDX44 Industrial Infrared Diesel Heater

09241 - SIP FIREBALL IDX54 Industrial Infrared Diesel Heater

Conforms to the requirements of the following regulation(s), as indicated.

Electric Equipment (Safety) Regulations 2006

Electromagnetic Compatibility Regulations 2016

Regulation 2016/426: Appliances Burning Gaseous Fuels

The restriction of the use of certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012

And the relevant harmonised standard(s), including

BS EN 60335-32-102:2016

BS EN 60335-1:2012 + A11:2014 + A13:2017 + A1:2019 + A14:2019

BS EN 62233:2008

BS EN 55014-1:2017 + A11:2020

BS EN 55014-2:2015, BS EN 61000-3-2:2014, EN 61000-3-3:2013

BS EN 1596:1998 + A1:2004

IEC 6232-3-1:2003, IEC 62321-4:2013, IEC 62321-5:2013, IEC 62321-6:2015, IEC 62321-7:2015,

IEC 62321-7-2:2017, IEC 62321-8:2017



Mr P. Ippaso - Managing Director

SIP (Industrial Products) Ltd

Date: 16/04/2024



EU - DECLARATION OF CONFORMITY

We

SIP (Machinery Europe) Ltd
ASM Chartered Accountants
First Floor Block One
Quayside Business Park
Dundalk
County Louth
Republic of Ireland

As the manufacturers authorised representative within the EC declare that the

09236 - SIP FIREBALL IDX44 Industrial Infrared Diesel Heater

09241 - SIP FIREBALL IDX54 Industrial Infrared Diesel Heater

Conforms to the requirements of the following directive(s), as indicated.

2014/35/EU	Low Voltage Equipment Directive
2014/30/EU	Electromagnetic Compatibility Directive
2016/426	Appliance Burning Gaseous Fuels
2011/65/EU	Restriction Of Hazardous Substances

And the relevant harmonised standard(s), including

EN 60335-32-102:2016

EN 60335-1:2012 + A11:2014 + A13:2017 + A1:2019 + A14:2019

EN 62233:2008

EN 55014-1:2017 + A11:2020

EN 55014-2:2015, BS EN 61000-3-2:2014, EN 61000-3-3:2013

EN 1596:1998 + A1:2004

IEC 6232-3-1:2003, IEC 62321-4:2013, IEC 62321-5:2013, IEC 62321-6:2015, IEC 62321-7:2015,
IEC 62321-7-2:2017, IEC 62321-8:2017



Mr P. Ippaso - Managing Director
SIP (Machinery Europe) Ltd
Date: 16/04/2024



Please dispose of packaging for the product in a responsible manner. It is suitable for recycling. Help to protect the environment, take the packaging to the local amenity tip and place into the appropriate recycling bin.

Never dispose of electrical equipment or batteries in with your domestic waste. If your supplier offers a disposal facility please use it or alternatively use a recognised recycling agent. This will allow the recycling of raw materials and help protect the environment.



FOR HELP OR ADVICE ON THIS PRODUCT
PLEASE CONTACT YOUR DISTRIBUTOR,
OR SIP

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