

Sime 6221645

Sime Murelle HE25.55 Ionization Probe

USER MANUAL

1. Introduction

This manual provides essential information for the proper handling, installation, operation, and maintenance of the **Sime Murelle HE25.55 Ionization Probe**, Part Number **6221645**. This component is critical for the safe and efficient operation of compatible Sime Murelle boiler systems by detecting the presence of a flame.

The ionization probe, also known as a flame sensor or flame rectification electrode, plays a vital role in the boiler's safety circuit. It confirms that a flame has ignited after the gas valve opens, preventing the continuous flow of unburnt gas if ignition fails.

2. Safety Information

WARNING: Installation and servicing of boiler components should only be performed by a qualified and competent person, such as a Gas Safe registered engineer in the UK, or equivalent certified professional in other regions. Failure to comply with these instructions could result in serious injury, property damage, or death.

- Always disconnect the boiler from the main electrical supply before attempting any installation, maintenance, or repair work.
- Ensure the gas supply to the boiler is turned off and isolated before working on gas-related components.
- Allow the boiler to cool down completely before handling any internal parts to prevent burns.
- Wear appropriate personal protective equipment (PPE), including gloves and eye protection.
- Do not modify the ionization probe or any other boiler component. Use only genuine Sime replacement parts.
- Refer to the main boiler's instruction manual for specific safety procedures and wiring diagrams.

3. Product Overview

The Sime Murelle HE25.55 Ionization Probe (Part Number 6221645) is an essential component for various Sime Murelle boiler models. It is categorized as an Ionization Ignition Electrode, designed to detect the presence of a flame within the combustion chamber.



Figure 1: Sime Murelle HE25.55 Ionization Probe. This image shows the probe with its ceramic insulator and metal electrode, designed to be inserted into the boiler's combustion area. The metal bracket with screw holes is visible for mounting.

This probe is compatible with a wide range of Sime Murelle and other Sime boiler models, including but not limited to: Murelle EV HE 25/55 MET, Murelle HE 25 BFT MET, Murelle HE 30 BF MET, Murelle HE 35 BF MET, and various DEWY and PLANET DEWY series boilers. Always verify compatibility with your specific boiler model using the part number 6221645.

4. Installation

Note: Installation must be carried out by a qualified professional.

1. **Preparation:** Ensure the boiler is completely isolated from electrical and gas supplies and has cooled down.
2. **Access:** Carefully remove the boiler casing and any necessary internal components to gain access to the combustion chamber and the existing ionization probe.
3. **Removal of Old Probe:** Disconnect the electrical lead from the old ionization probe. Unscrew or unclip the old probe from its mounting bracket. Note its exact position and orientation.
4. **Installation of New Probe:** Insert the new Sime Murelle HE25.55 Ionization Probe (Part Number 6221645) into the correct position. Secure it firmly using the existing mounting points.
5. **Connection:** Reconnect the electrical lead to the new probe, ensuring a secure and clean connection.
6. **Reassembly & Testing:** Reassemble any removed boiler components and the casing. Restore gas and electrical supplies. Perform a functional test of the boiler, ensuring proper ignition and flame detection. Check for any error codes.

Refer to your specific boiler's service manual for detailed diagrams and precise installation steps.

5. Operation

The ionization probe operates on the principle of flame rectification. When a flame is present, it ionizes the air between the probe and the burner. This allows a small electrical current to flow through the flame, which is then detected by the boiler's control board. If the control board detects this current, it confirms the presence of a flame and allows the boiler to continue its operation. If no current is detected after the ignition sequence, the control board will shut down the gas supply as a safety measure, preventing unburnt gas from accumulating.

6. Maintenance

Regular inspection and cleaning of the ionization probe are crucial for reliable boiler operation. This should be part of the annual boiler service performed by a qualified professional.

- **Inspection:** Visually inspect the probe for signs of carbon build-up, corrosion, cracks in the ceramic insulator, or physical damage.

- **Cleaning:** If carbon deposits are present, gently clean the metal rod of the probe with fine emery cloth or steel wool. Avoid bending the probe or damaging the ceramic.
- **Gap Check:** Ensure the correct gap between the probe and the burner is maintained as specified in the boiler's service manual.
- **Replacement:** If the probe shows significant wear, damage, or if cleaning does not resolve flame detection issues, it should be replaced with a new genuine Sime part (Part Number 6221645).

7. Troubleshooting

Issues with the ionization probe typically manifest as boiler lockout or failure to ignite. Common symptoms and potential causes include:

| Symptom | Possible Cause | Action (Professional Only) |
|--|---|---|
| Boiler attempts to ignite but locks out (no flame detected). | Dirty or carbonized probe. | Clean the probe. |
| Boiler locks out with a flame detection error code. | Damaged or faulty probe. | Inspect and replace the probe. |
| Intermittent flame detection. | Loose electrical connection to the probe. | Check and secure connections. |
| Boiler ignites but then shuts down shortly after. | Incorrect probe positioning or gap. | Adjust probe position/gap according to boiler manual. |

If troubleshooting steps do not resolve the issue, it is recommended to contact a qualified heating engineer for diagnosis and repair.

8. Specifications

| Attribute | Detail |
|---------------------|--|
| Product Type | Ionization Probe / Ignition Electrode |
| Brand | Sime |
| Part Number | 6221645 |
| Model Compatibility | Sime Murelle EV HE 25/55, Murelle HE 25 BF, Murelle HE 30 BF, Murelle HE 35 BF, and various DEWY/PLANET DEWY series. Refer to boiler manual for full list. |
| ASIN | B09Q1CRLV5 |
| Barcode | 6221623 |
| First Available | 6 Nov. 2022 |

9. Warranty and Support

For specific warranty information regarding the Sime Murelle HE25.55 Ionization Probe (Part Number 6221645), please refer to the documentation provided at the time of purchase or contact your supplier/installer. Warranty terms typically cover manufacturing defects.

For technical support, installation queries, or to report issues, it is recommended to contact a qualified heating engineer or

the official Sime customer support channels available through their [official website](#) or authorized distributors.



Documents - Sime – 6221645

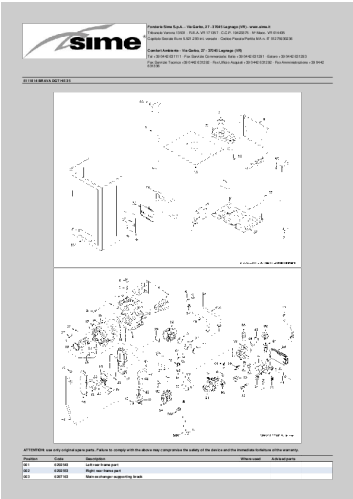


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