

# **ANATOMY OF A PROFESSIONAL CHIMNEY SWEEP**

**A transparent, step-by-step guide to maintaining safety, maximizing efficiency, and securing insurance compliance for New Zealand homes.**

Based on AS/NZS 2918 Servicing Standards

# The invisible risks inside an unmaintained flue.



## Fire Hazards

Soot transforms into glazed creosote—a highly flammable tar-like residue that can ignite at temperatures as low as 370°C, causing catastrophic chimney fires.



## Structural & Environmental Wear

New Zealand's unique conditions accelerate decay. Wellington's wind and damp, coastal salt air corrosion, and post-earthquake structural shifts compromise flue integrity and safe airflow.



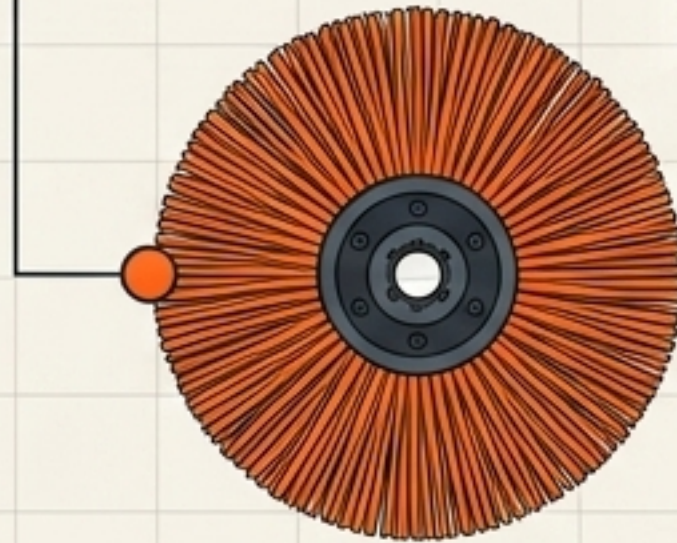
## Legal & Insurance Compliance

Neglected maintenance invalidates insurance claims. Annual sweeps are an absolute requirement for landlords to meet their legal obligation for safe heating systems.

# The modern technician's arsenal is built for precision and containment.

## Polypropylene Rotary Brushes

Flexible nylon-bristle heads driven by power drills at 200–500 rpm. Flexes around bends to strip creosote without scoring stainless steel liners.



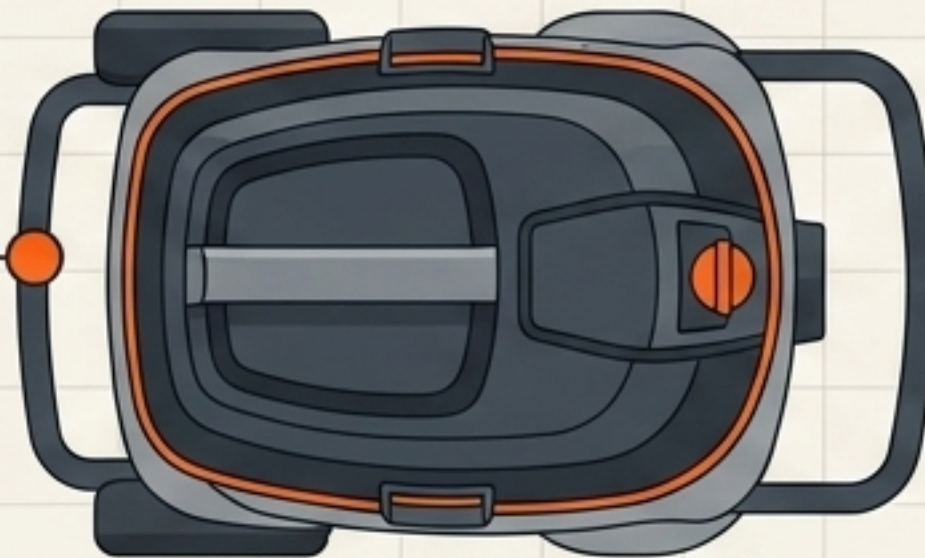
## Pole-Mounted CCTV Camera

Flexible-rod HD inspection camera with LED ring lighting to detect hairline cracks and hidden blockages.



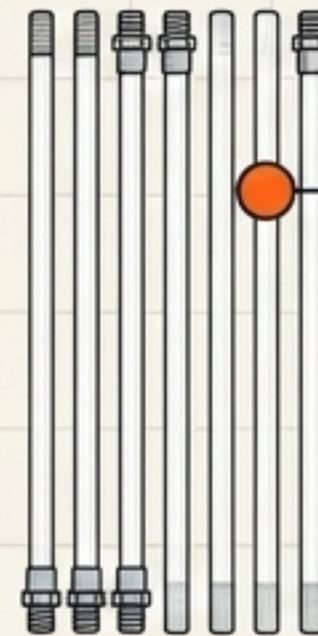
## HEPA-Filtered Vacuum System

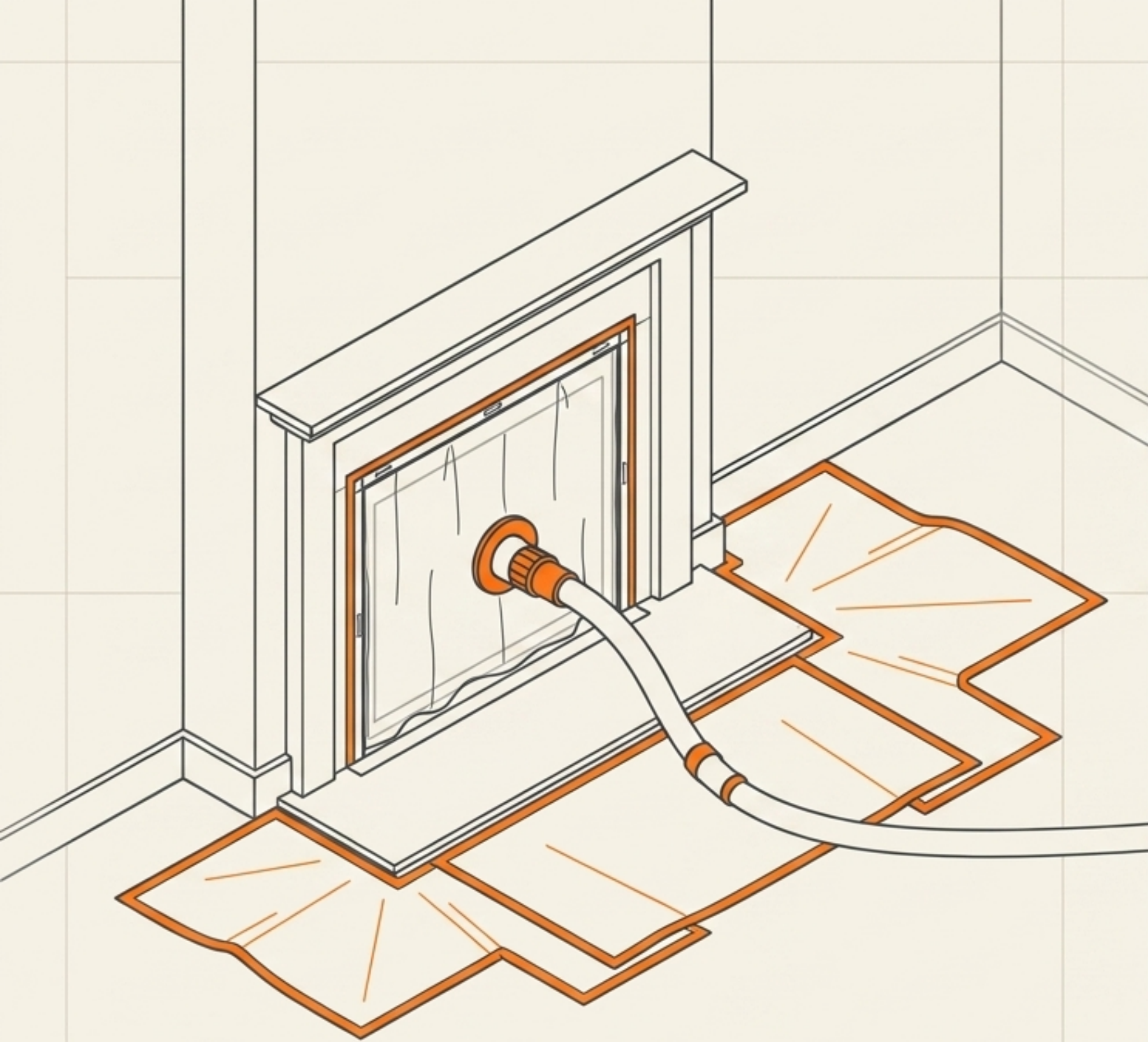
Industrial-grade suction that creates negative pressure at the firebox, capturing airborne soot at the source before it enters the room.



## Sectional Fibreglass Rods

1-metre to 2-metre screw-together sections that feed the brush safely up the flue.





# 1 Complete containment of the living space.

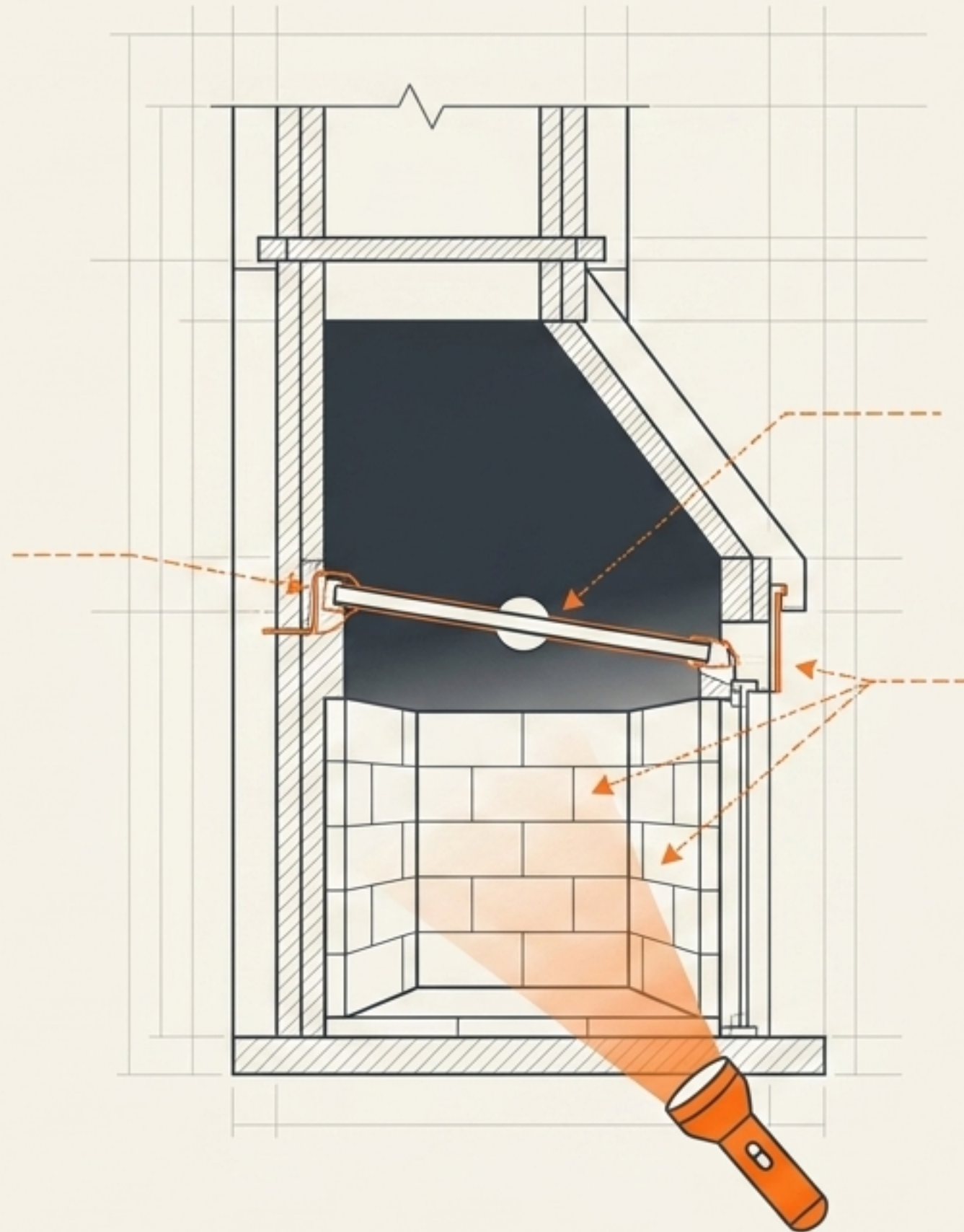
**Duration:** 5 minutes.

## **The Action:**

The technician lays drop sheets across the hearth and seals the firebox opening entirely, introducing a vacuum hose through a gasketed port.

## **The Rationale:**

Ensures zero soot escapes into the home. Modern sweeping relies on this containment barrier so the living area remains perfectly clean. The fire must be completely unlit for 24 hours prior to prevent melting equipment.



## 2

### Baseline visual inspection of the lower structure.

**Duration:** 5–10 minutes

**The Action:** A thorough check of the firebox interior, damper mechanism, and the smoke chamber immediately above the damper.

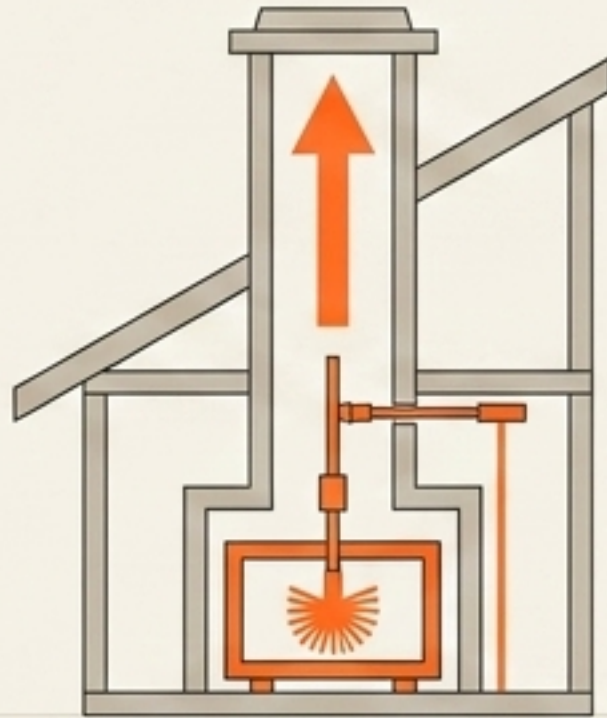
**The Rationale:** Identifies pre-existing damage like cracked firebricks, missing mortar, or a seized damper before introducing mechanical stress. The smoke chamber is specifically checked as it accumulates the heaviest initial creosote deposits.

# 3

## Mechanical brushing to strip combustion deposits.

Duration: 15–25 minutes

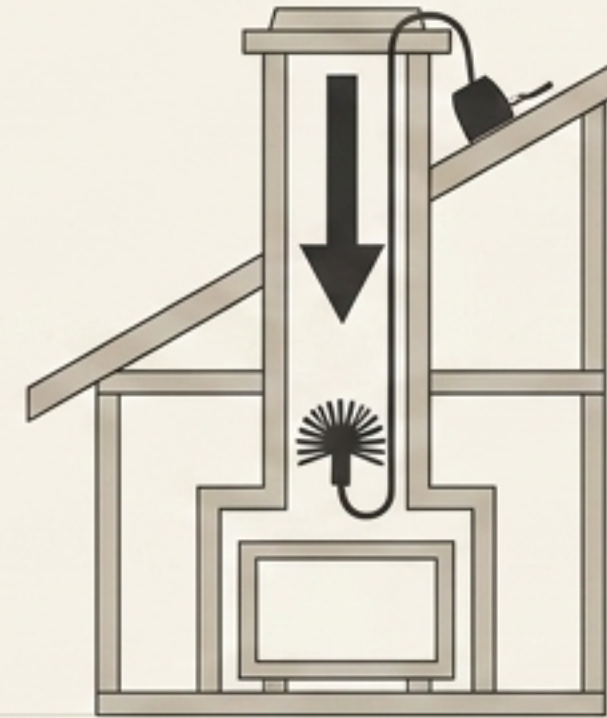
### Bottom-Up Method



**How it works:** Brush is fed up the flue from inside the firebox using progressively connected rods.

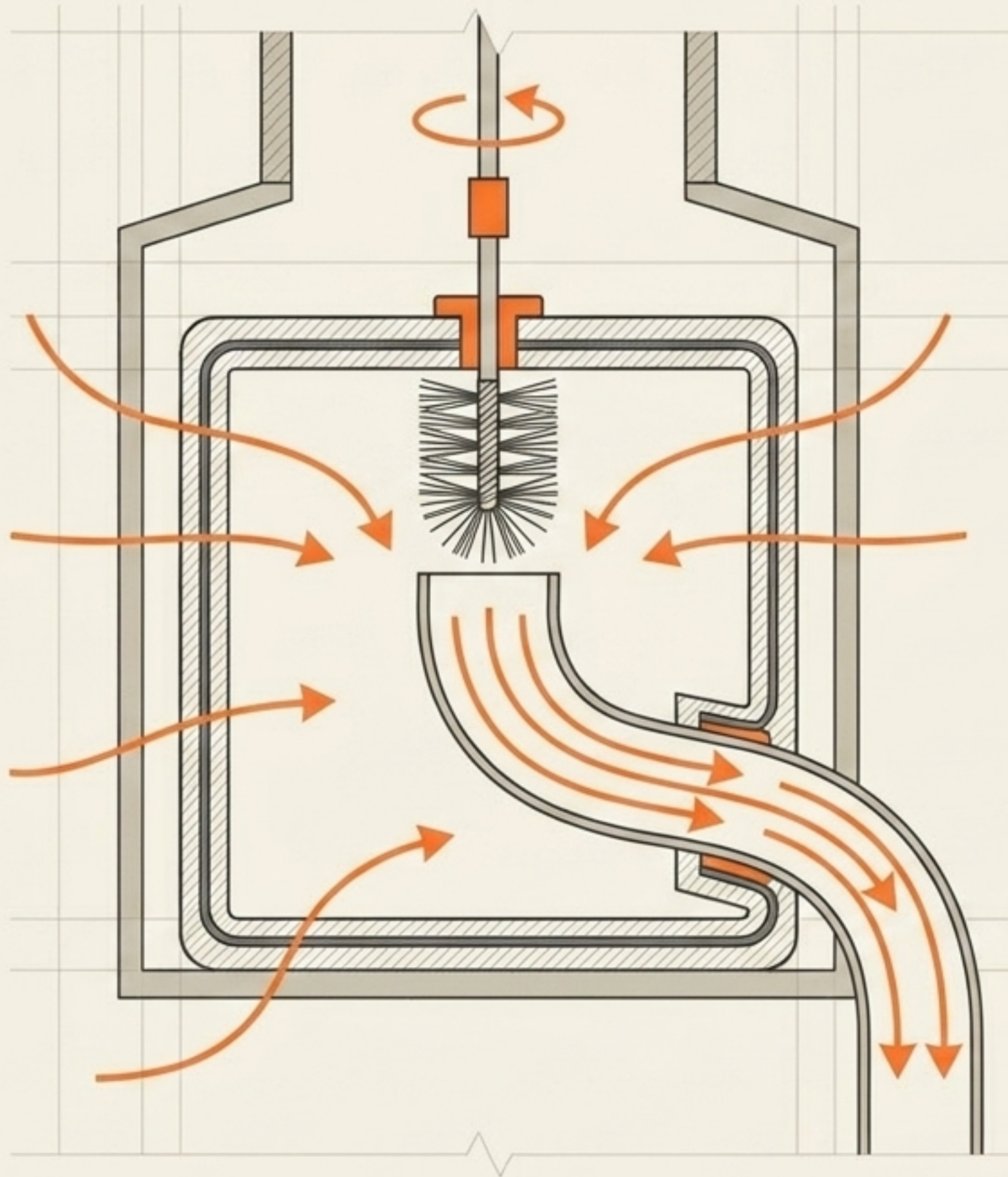
**Best for:** Most NZ wood burners and enclosed fireplaces. Safer in wet weather; standard residential default.

### Top-Down Method



**How it works:** Brush is lowered down the flue from the roof using weighted cables or rods.

**Best for:** Open fireplaces, tall chimneys with offsets, or dislodging stubborn bird nests. Requires safe, dry roof access.



# 4

## Active HEPA vacuum extraction.

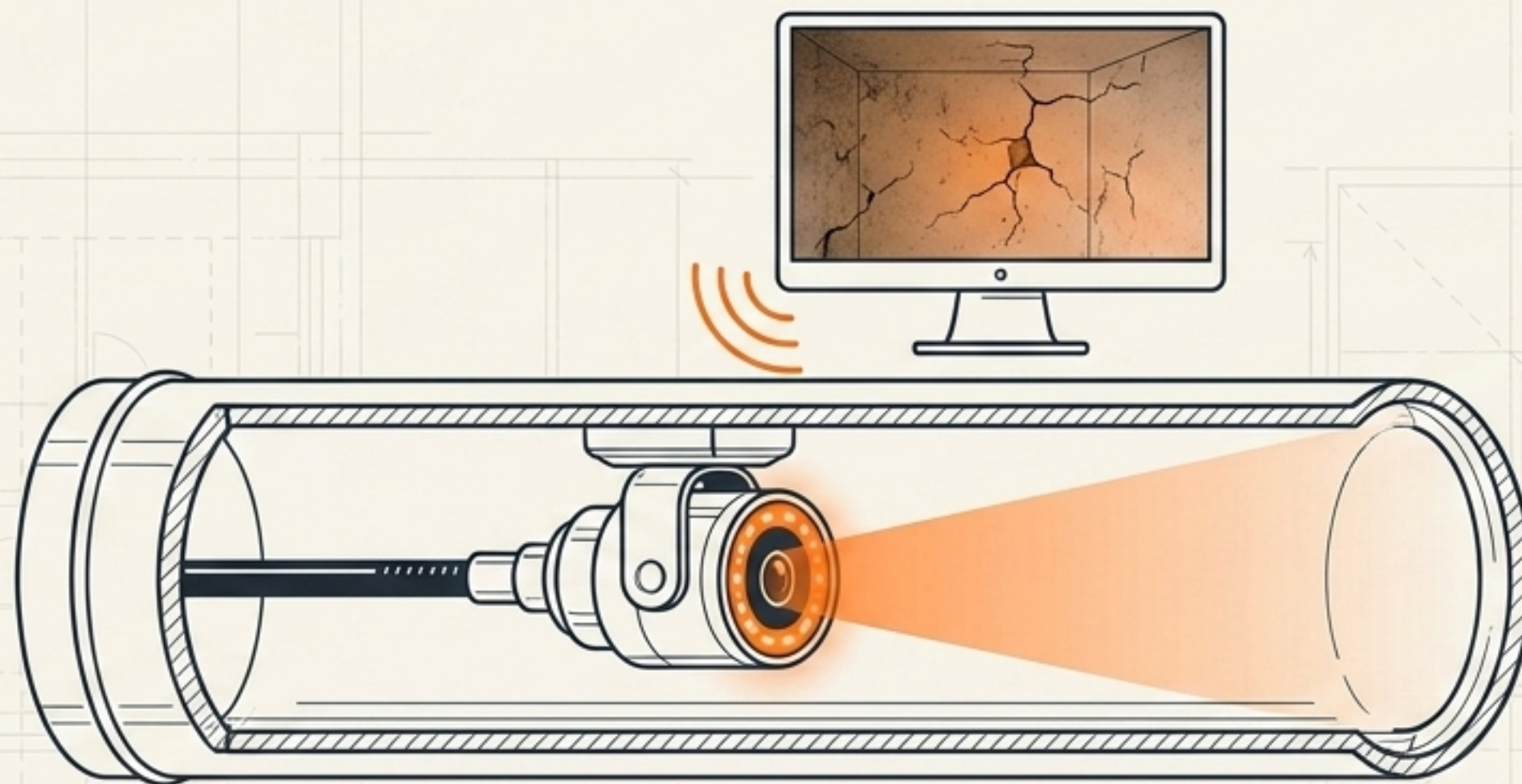
**Duration:** Concurrent with brushing.

**The Action:** While brushing occurs, the industrial vacuum runs continuously, maintaining slight inward airflow at the firebox seal.

**The Rationale:** Creates a negative-pressure environment. Loosened creosote, fly-ash, and soot are instantly pulled toward the HEPA filter rather than drifting into the home.

# 5 Optional CCTV integrity verification

Duration: 10–15 minutes



**The Action:** A high-definition, LED-illuminated camera is fed through the entire length of the flue on a 30-metre flexible cable.

**The Rationale:** Visualizes the otherwise invisible upper sections of the chimney. Highly recommended for pre-purchase property inspections, older masonry, or following any earthquake of magnitude 5.0 or greater within 50 km.

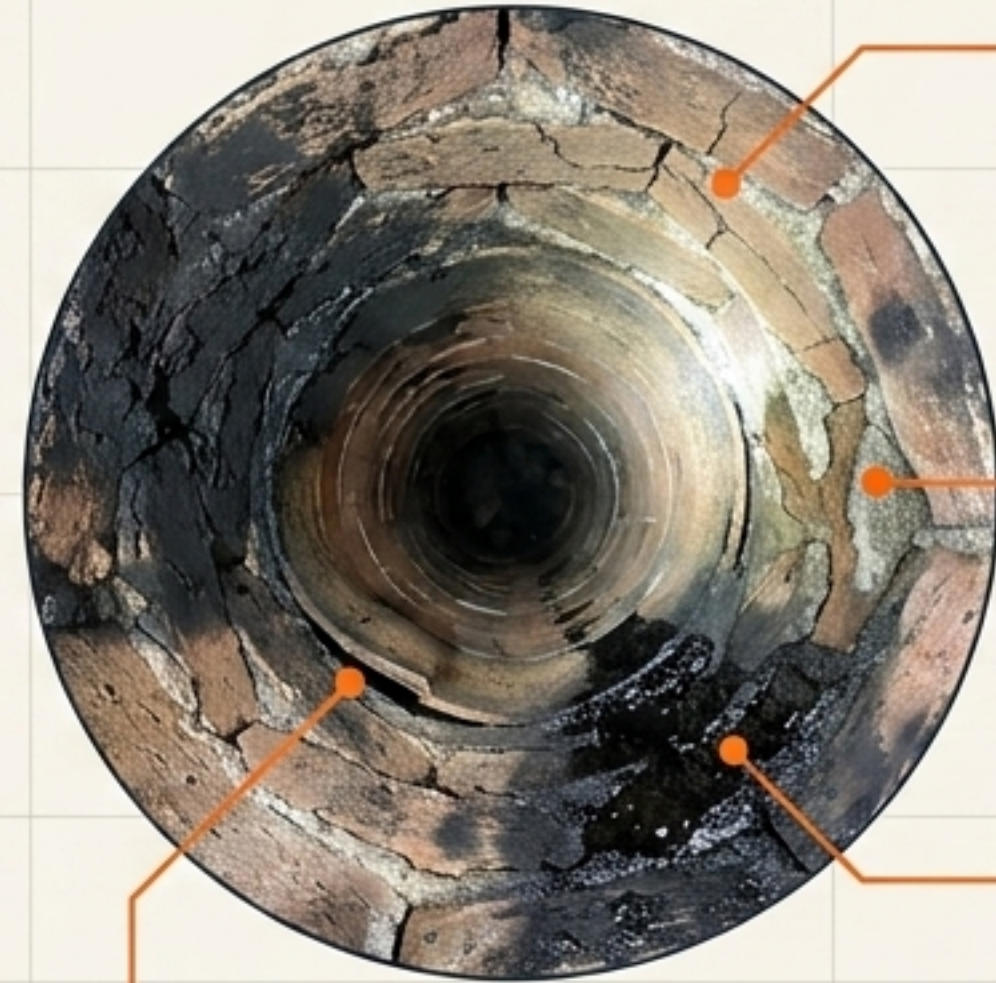
# Revealing the hidden threats inside the flue.

What the eye sees



Naked Eye Inspection

What the camera sees

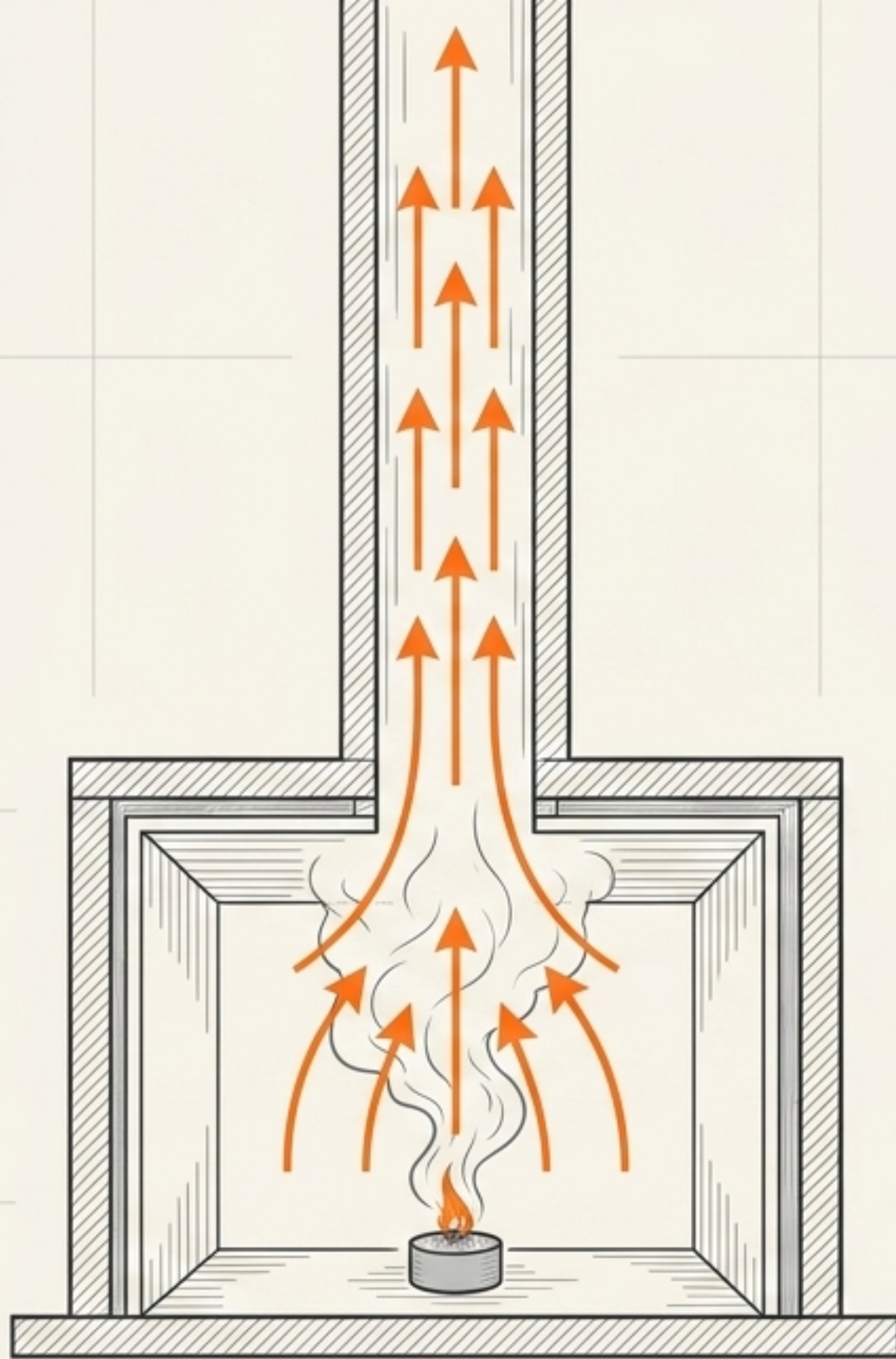


Hairline cracks in clay or steel liners.

Mortar joint failure and water-damaged bricks.

Hidden pockets of glazed Stage 3 creosote at flue offsets.

Liner separation where toxic flue gases could escape into the wall cavity.



## 6 Post-sweep airflow and draught testing.

**Duration:**  
5 minutes.

**The Action:**

Igniting a smoke pellet or match just inside the firebox to observe the upward draw. Some technicians also use combustion analysers to measure gas temperatures.

**The Rationale:**

Confirms the blockage is cleared and safe combustion is restored. If smoke spills back into the room, it flags deeper structural issues like negative house pressure, insufficient air supply, or incorrect chimney height requiring builder intervention.



## 7 The written safety report.

### **Duration:**

5 minutes.

### **The Action:**

The technician debriefs the homeowner and provides a 1-to-2 page written report detailing the pre-sweep condition, work completed, and completed, and structural concerns.

### **The Rationale:**

Translates technical findings into plain language. Includes any necessary CCTV stills and clear recommendations for follow-up repairs, allowing the homeowner to easily coordinate with builders or installers if needed.

# The Insurance Certificate: Your proof of compliance.

NZ insurers (FMG, AMI, AA, Tower) require this specific document as proof of maintenance in the event of a fire claim. It must be kept for at least 6 years.

## NZHHA Membership Number

Proves the work was performed by a certified, AS/NZS 2918-compliant operator.

## Appliance & Flue Details

Ties the service record directly to the specific hardware installed at the property address.

The image shows a sample 'CERTIFICATE OF COMPLIANCE' form from NZMHA. The form is divided into several sections: 'NZHHA MEMBERSHIP NUMBER' (NZHHA-12345), 'Date of Sweep' (15/04/2024), 'PROPERTY DETAILS' (123 Sample St, Auckland), 'APPLIANCE & FLUE DETAILS' (Appliance Make/Model: Contessa 2000, Flue Size: 150mm, Serial Number: -), 'SWEEP DETAILS' (Power Model: Contessa 2000, Property: Sample St, Auckland), and 'SAFETY STATUS' (PASS: checked, FAIL: unchecked, ACTION REQUIRED: unchecked). Callout boxes are connected to the membership number, date of sweep, appliance details, and safety status sections.

CERTIFICATE OF COMPLIANCE	
NZHHA MEMBERSHIP NUMBER NZHHA-12345	Date of Sweep 15/04/2024
PROPERTY DETAILS Property Address 123 Sample St, Auckland	
APPLIANCE & FLUE DETAILS	
Appliance Make/Model Contessa 2000	Flue Size 150mm
Serial Number Serial Number	Serial Numb Number -
Serial Number -	Appliance Make/Model None
Setos Number	
SWEEP DETAILS	
Power Model Contessa 2000 September 2023 /134	Property for Sample St, Auckland
SAFETY STATUS	
<input checked="" type="checkbox"/> PASS <input type="checkbox"/> FAIL <input type="checkbox"/> ACTION REQUIRED SAFE TO OPERATE	

## Date of Sweep

Confirms the work occurred within the insurer's required maintenance window.

## Pass/Fail Safety Status

The definitive safe to operate verdict.

# Customizing your maintenance schedule.

	Sheltered / Inland Environment	Coastal / Wellington Damp / High Wind
Light Usage (Occasional)	Every 2 years	<b>Annual sweep is strictly required due to wind-driven debris and accelerated salt-air corrosion.</b>
Moderate Usage (2-3x / week)	Annual sweep	
Heavy Usage (Daily in winter)	Annual sweep	

Landlord Legal Requirement: Regardless of usage, rental properties **must** maintain annual records to validate insurance and ensure tenant safety.

# A systematic approach to household safety.



## The Mechanical Clean

Removing hazardous creosote and blockages to prevent fires.



## The Expert Inspection

Identifying earthquake damage and wear before it causes system failure.



## The Verified Documentation

Providing the exact paperwork NZ insurers demand.

The visible part is the brushing. The valuable part is the rigorous inspection and certification. A professional annual sweep is a methodical investment that keeps your heating system safe, efficient, and compliant for decades.