

Engineering Acoustic Excellence into Commercial Offices

2 months ago



In today's commercial property market, the role of building services extends far beyond simply keeping occupants warm. High-performance heating must now integrate seamlessly with architectural design, ESG strategies, and occupant wellbeing. Nathan Chance, National C&I Technical & Sales Manager at [Riello Burners](#) explains that in modern office environments, particularly premium multi-tenant or mixed-use developments, noise matters just as much as efficiency.

At Riello, we've seen a marked shift in how mechanical plant is specified. Developers, consultants, and facilities managers are demanding more than just low emissions and design they are looking for quietness too.

A Quiet Revolution in Heating Plant

The design priorities for office buildings are evolving. Open-plan working, hybrid collaboration spaces, high-density occupancy and wellness-focused amenities have transformed how mechanical systems are assessed. Background noise from plantrooms – once tolerated – is now a measurable barrier to occupant comfort and productivity.

Independent studies have shown that excessive ambient noise can reduce employee concentration, increase cognitive fatigue, and lower workplace satisfaction [1]. This has clear implications for developers targeting WELL certification [3], BREEAM excellence [4], or high-value tenants in central business districts.

For Riello, this means developing burners that don't just perform technically, they must do so quietly.

Proven Acoustic Solutions for Demanding Spaces

We've responded to these market drivers with a range of bespoke acoustic shrouds engineered to reduce burner noise by up to 10 dB(A) to 20dBA [6], tested to EN 15036-1 standards [2]. These shrouds are designed specifically for our high-performance gas and dual-fuel burners, particularly the RS/M remove add ULX [7], RS/E [8], RX [9], and RLS [10] series.

Each shroud is:

- Custom matched to the burner model and duty
- Eco-compliant, using environmentally considerate acoustic insulation
- Compact enough for retrofit into constrained plantrooms
- Performance tested, with consistent reduction in airborne noise

This solution is particularly valuable in projects where burner rooms are adjacent to or directly above office floors, meeting rooms, or collaborative zones, environments where noise transmission must be tightly controlled.

Specified for Integration, Built for Performance

Acoustic shrouds are not simply afterthoughts, they're designed from the outset to work in harmony with modulating combustion systems, which already optimise flame control and temperature for ultra-low-NOx performance. They also integrate cleanly into modern BMS platforms, allowing for real-time control, diagnostics, and emissions monitoring.

This makes them ideal for inclusion in:

- Grade A office developments
- Multi-storey commercial towers
- Heritage refurbishments with plantroom constraints

Understanding that it's not just the boiler or the burner that matters, but how it fits within the fabric of the building and its operation.

Trusted by Industry Leaders

Across the UK, we've supported consultants and contractors on complex M&E schemes where acoustic performance was a defining factor. In retrofit projects especially, our compact acoustic burner assemblies provide a non-disruptive upgrade path to meet both compliance and comfort goals.

With sustainability frameworks and tenant expectations evolving rapidly, acoustic performance is now a core consideration in HVAC specification. Our solution ensures engineers don't have to choose between efficiency, compliance, and comfort, they can achieve all three.

We also offer complete bespoke shrouds for burners where space is a constraint or where a traditional matched shroud may not comply. These shrouds are completely bespoke to that environment, appliance and burner.

Leading Through Innovation

It is important to invest in R&D that anticipates the challenges our customers face. Whether it's developing hydrogen-compatible burner designs, or integrating IoT-based combustion control, innovations should be rooted in real-world engineering insight and always focused on long-term value for specifiers and building owners.

Acoustics is no different. Mechanical systems should enhance a building's usability, not interfere with it. That's why our low-noise burner solutions have already been deployed in flagship London commercial offices and refurbished urban workspaces, and why they're becoming a standard request on specifications where noise mitigation is a priority.

Commercial buildings are changing fast. Today's tenants expect more from their workspace and that includes peace and quiet. Heating systems, while essential, must now operate in the background without disruption.

At Riello, we've engineered our burners to meet this expectation. With proven acoustic solutions, smart integration, and deep sector expertise, we're proud to support the UK's most forward-thinking commercial office developments in delivering silent, compliance focused, high-performance heating.