FIRE STATION LAUNDRY SOLUTIONS

An alternative approach to fire & rescue PPE reprocessing

A WHITE PAPER BY JLA LTD

PPE Laundry systems

To keep fire & rescue personnel safer

Fire and rescue services across the UK face unique challenges in maintaining personal protective equipment (PPE), with laundry representing a vital part of that day-to-day care. But reliable, effective cleaning isn't just about maintaining gear to lengthen its service life – it's about making sure crews can work safely and confidently in emergency situations.

In recent years, awareness has grown around the risks faced by fire and rescue personnel through prolonged exposure to contaminants and toxins left on PPE after a crew has responded to an incident. On top of this, shifting regulations, hygiene standards and concerns about longer-term protection suggest the need for a new approach.

This paper explores the benefits of ozone technology as a proven solution for infection control in a fire station setting.

Tackling fire brigades' unique laundry challenges

Whether it's soot, smoke, dust or other potentially hazardous materials, fire crews are exposed to contamination on almost every shift. Left uncleaned, these chemicals and substances can sometimes be inhaled or absorbed by the body, posing a risk to health. This is why careful reprocessing is a vital step in looking after safety garments and equipment.

JLA has spent five decades supporting the UK's blue light services by designing and installing bespoke on-premises laundries where crews can efficiently reprocess their PPE and save time by reducing the need for intensive manual processing like spot cleaning, or even expensive outsourcing.

- Ministry of Defence
- Energy and Nuclear
- Emergency Services
- Home Office & Immigration
- Transport & Highways
- Waste & Water Services
- Fire & Rescue Services

Our commercial laundry solutions enable fire stations to clean, decontaminate, proof and dry full sets of PPE with speed and ease, so crews have peace of mind that their equipment is safe and ready to go when the next call comes in. Meanwhile, our commercial-grade machines deliver more consistent results, cycle after cycle.

Our low-energy, high-capacity SMART washing machines calculate exactly how much water and detergent a load needs, while our industry-leading S.A.F.E dryers feature an in-built sprinkler system to help eliminate the possibility of a dryer fire.

Much of this equipment can be also be installed free-standing or stacked to save space, with some models handling loads up to 180kg – perfect for high volumes and near-constant use. Using our commercial equipment also delivers measurable cost savings thanks to energy-efficient features including pre-set wash programmes and auto-dosed chemicals to avoid waste.

However, regularly washing PPE at high temperatures could damage vital protective fibres, reducing PPE lifespan and protective capabilities in the long-run. This is why we believe it makes sense for fire stations to consider the benefits of OTEX, a cool-wash, ozone-based system.

67%
Reduction in water costs

33%
Decrease in electricity costs

77%
Deduction in detergent usage

Ozone disinfection

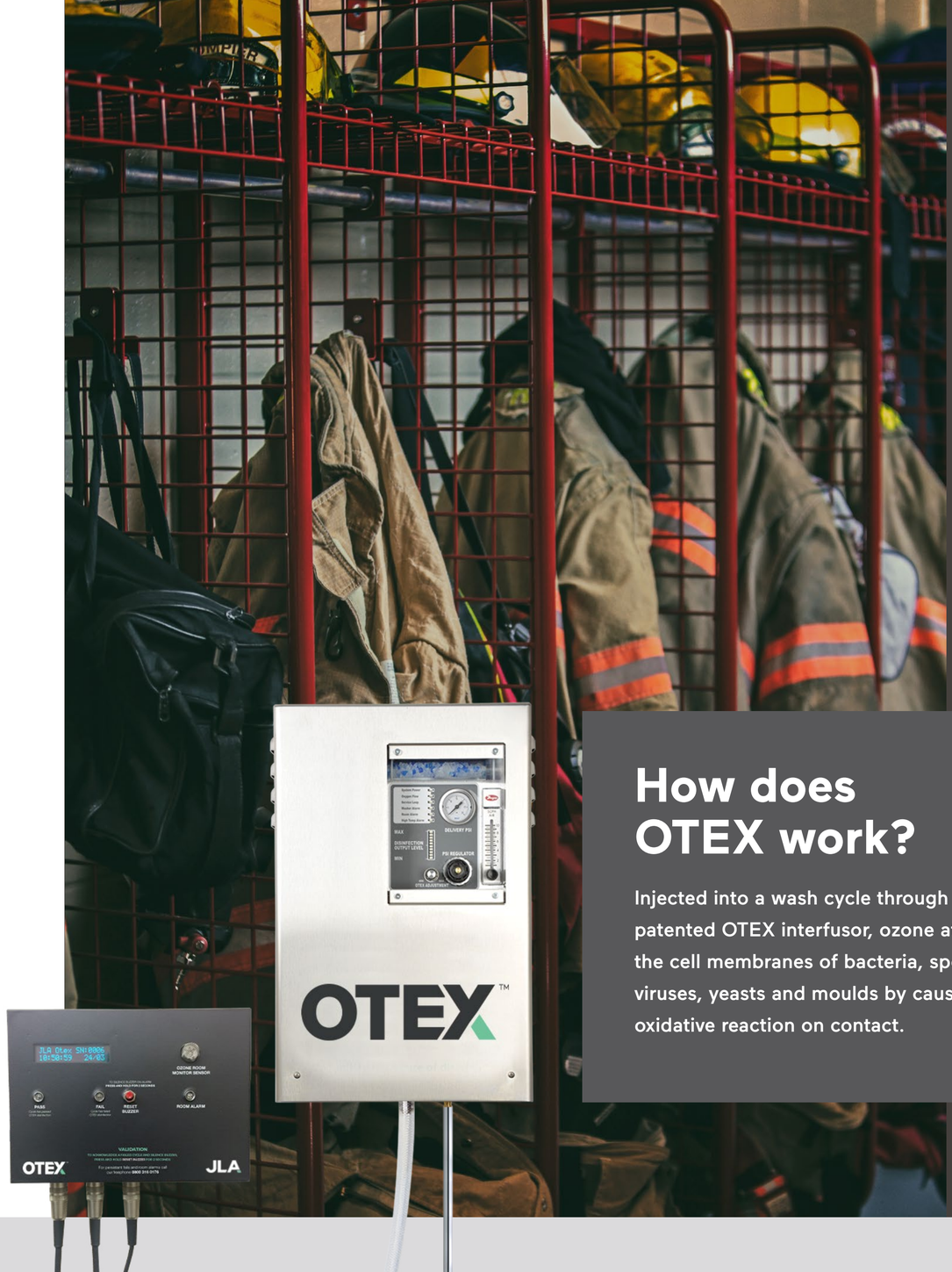
A naturally safer choice for PPE care?

Ozone is a naturally occurring gas with long-proven disinfecting capabilities. OTEX – JLA's ozone disinfection system, originally developed for healthcare settings to tackle hospital-acquired infections – is supported in line with the EU Biocidal Products and UK BPR regulation, and is the market's only patented laundry system to include verification of the disinfection process (Patent no. GB 2414743 B). OTEX uses ozone's powerful oxidation reaction to destroy 99.999% of harmful viruses, bacteria and, moulds while effectively removing malodours, even at energy-saving low wash temperatures.

OTEX also gently opens textile fibres to help remove contaminants, achieve deeper cleaning and disinfection without heat, leaving PPE garments feeling and smelling fresher, and preserving their protective characteristics. In turn, OTEX is likely to significantly extend the life of PPE.

What's more, each OTEX cycle can include real-time verification, providing evidence of complete disinfection and a paper trail for a fire station's compliance reporting.

FOR MORE ON EU BIOCIDAL PRODUCTS REGULATION, GO TO JLA.COM/KNOWLEDGE/HYGIENE



How does OTEX work?

Injected into a wash cycle through JLA's patented OTEX interfusor, ozone attacks the cell membranes of bacteria, spores, viruses, yeasts and moulds by causing an oxidative reaction on contact.

"By moving to OTEX as a laundry system, fire and rescue services could also benefit from improved disinfection assurance, lower operating costs, and a reduction in their station's carbon footprint"

Lucy Cripwell

IN-HOUSE CHEMIST AT JLA

80%
Savings on hot water

60%
Decrease in electricity costs

50%
Reduction in detergents

45%
Savings of total water

OTEX™

Validating OTEX

In PPE reprocessing

Rigorous testing by JLA has proven OTEX's performance in PPE disinfection. In one assessment, a fire service-standard protective suit (Texport salopettes and jacket) underwent multiple intensive wash cycles using OTEX, with JLA scientists looking to assess its impact on the longevity and protective capability of PPE versus higher wash temperatures of 60°C.

The test garments were washed in line with their care instructions. Six wash and air-dry cycles were completed, without detergent, in conditions viewed as harsh due to the level of available ozone. (Under normal conditions, detergent and soil/organic matter would be present, reducing the amount of available or free ozone considerably.)

The results demonstrate OTEX's suitability for fire and rescue PPE care, and suggest that improved fibre protection, cleanliness, and longevity can be achieved without harsh temperatures.

PROGRAM SELECTION	SECTION TIME (MINS)	DIP LEVEL (CMS)	TEMPERATURE (°C)
PRE SLUICE	4	24	COLD
MAIN WASH	8	16	30
RINSE 1	4	20	COLD
RINSE 2	8	20	COLD
RINSE 3	2	20	COLD
SPIN	4 MINS @ 1000 RPM		

Even in these harsh conditions, the test results clearly showed:

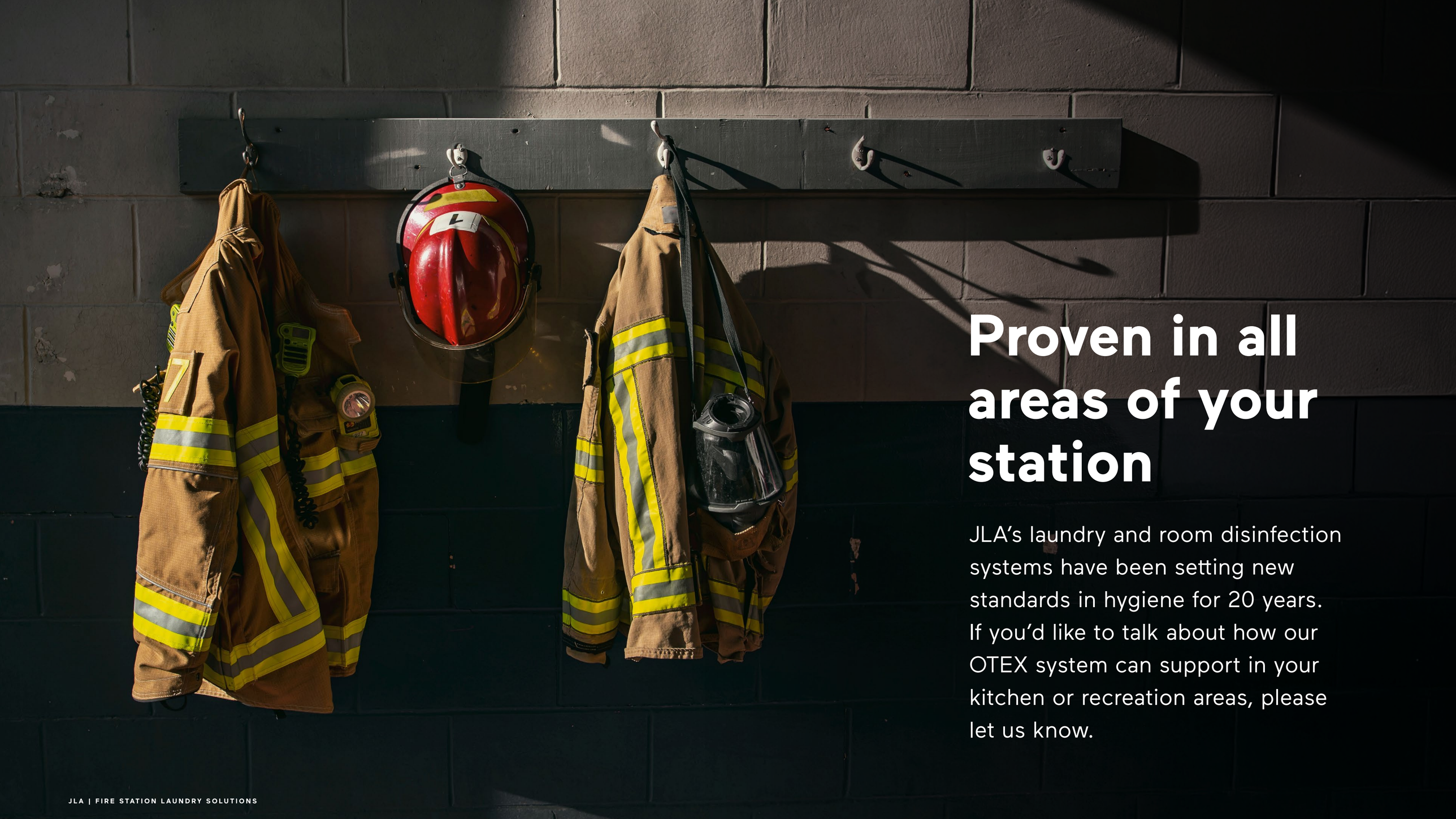
- No visual or structural damage to garments, even after repeated cycles
- Heavy contamination removed at significantly lower temperatures than conventional methods
- Gear emerging fresh and odour-free

BEFORE

Condition of jacket prior to tests – note the level of soiling on the arms.

AFTER

Condition of jacket after OTEX – note the improvement in wash quality.



Proven in all areas of your station

JLA’s laundry and room disinfection systems have been setting new standards in hygiene for 20 years. If you’d like to talk about how our OTEX system can support in your kitchen or recreation areas, please let us know.

Total Care

For fire and rescue services

When there are emergencies to respond to, there's simply no time for downtime. Equipment performance and reliability are crucial in a fire station environment – and it's vital a crew has confidence in their critical systems, laundry machines included.

Understanding this need, JLA has created Total Care – a unique, all-inclusive equipment and support package, backed by a national network of 450 in-house engineers. It's a solution that offers state-of-the-art equipment with no upfront costs, free installation, and inclusive maintenance, servicing and repairs.

Fire stations choosing Total Care can enjoy transparent monthly costs with no hidden charges or surprises, and access to a 24/7 helpline for live support.

Our remote monitoring technology, JLA Connect, also ensures PPE laundry systems are continually tracked for performance and reliability, with experts spotting issues before they can cause downtime. Access to the myJLA customer portal makes managing your laundry easy, providing transparent billing, documentation and essential usage energy use and cost estimates, allowing crews to make better decisions.

In short, JLA's Total Care delivers:

- Proactive, preventative maintenance
- 24/7 support and a guaranteed breakdown response within 8 working hours
- Fixed monthly cost, with no unexpected bills or hidden costs

Can we take care of it for you?

Together, JLA's OTEX ozone disinfection and its unique Total Care proposition deliver powerful disinfection with energy saving and complete peace of mind that support is always on hand when you need it.

Talk to our experts

Over 25,000 organisations trust JLA to supply and look after their laundry, catering, heating, fire safety and infection control equipment. Contact us today to see how we'll take care of it for you.

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JLA