

Destroy your waste,
recover energy
and reduce costs!



Revolutionary result.

PyroPure® can produce clean hot water and heat air as well as destroying waste. Most of this heat comes from the energy released from the waste itself whilst it is being destroyed.

The benefits of PyroPure® technology

- Save money by avoiding the need for waste collection
- Benefit the environment by recovering energy from waste and avoiding transport and large scale disposal
- Improve hygiene and reduce storage of waste by destroying it as it arises
- Heat water for use in your premises
- Save time by having a fully automated bin that destroys its own waste
- Reduce infection risks by sterilising and destroying healthcare waste quickly
- Free yourself from dependence on the performance of waste collection companies
- Increase recycling rates by eliminating residual waste and recovering more metal and glass
- Save space and improve appearance by eliminating bin storage
- Simplify waste handling and reduce associated paperwork and costs
- Destroy information securely, irrespective of media
- Remove fats and bulky fibrous material from solid residues passed into the sewer.

Old problem. **New solution.**

PyroPure® is a new, small-scale process for destroying waste at source, avoiding the need for transport and disposal and recovering energy.

Using innovative, patented technology, PyroPure® units can handle all types of organic, solid waste, leaving only metal and glass for recycling*.



Revolutionary result.

How PyroPure® cuts costs

Using small-scale thermal technology, engineers at PyroPure Ltd have invented a revolutionary waste disposal system.

Reductions in the proportion of waste allowed in landfill, escalating costs and the demand for acceptable alternatives are forcing change. But most landfill alternatives involve large facilities requiring years of public consultation and planning scrutiny as well as complex financing and long-term commitments. And the waste still needs to be stored, transported and centrally processed.

PyroPure® systems avoid these problems and offer key cost and environmental benefits for the residual fraction of waste that cannot be avoided or recycled. By destroying this residual waste at its source it cuts out storage, collection, transport and the use of expensive, centralised facilities.

Waste is expensive to collect and move. Transportation is estimated to be up to half the total cost of disposal and raises concerns over vehicle and fuel costs, wear and tear on roads, exhaust pollution, traffic congestion, operational hazards, traffic accidents and noise.

In contrast, PyroPure® offers an effective local solution for the waste that is currently sent to landfill sites or other large scale disposal facilities.

How PyroPure® works

The PyroPure® process has been developed from small-scale pyrolysis, which involves heating materials in the absence of oxygen. The illustration shows how the process destroys each batch of waste.

The PyroPure® process

- Push-button operation and automated cycle to convert a bin bag of waste into a handful of solid residue
- Compact gas cleaning system based on catalytic conversion and water scrubbing
- Plug and play installation involving water, electric, sewer and flue connections
- Controlled thermal batch process based on pyrolysis
- Any glass and metal inadvertently put into the system is not destroyed but can be taken for recycling after going through the process
- Heat exchanger recovers energy from hot gas flow and converts to hot water
- The inert solid residue is flushed into the sewage system.



* The PyroPure® system is not designed for battery or liquid wastes. For queries on specific waste types, please consult PyroPure Ltd.



Where to use PyroPure® technology

In many locations, PyroPure® systems offer the best solution for waste handling. They also enable energy to be recovered from the waste as hot water which can be plumbed into the hot water tank on site and supplement heating of radiators or water for laundry or washing.

Healthcare facilities

PyroPure® systems in medical centres and hospitals sterilise and destroy healthcare wastes that would otherwise require secure storage and expensive collection.

In care homes, PyroPure® can hygienically destroy waste incontinence pads. And issues of storage and odour are avoided.

Laboratories

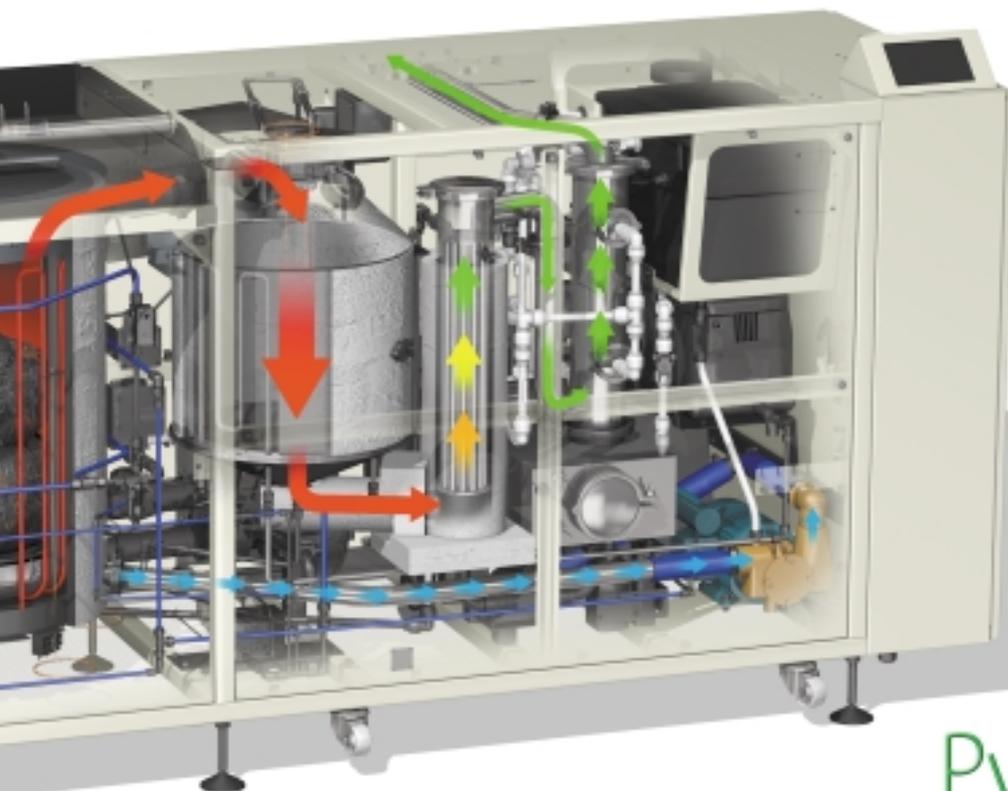
Organic solid wastes from biological and medical laboratories often require sterilising by autoclave and costly collection, whereas PyroPure® systems are able to sterilise and dispose of this waste on site.

Facilities with restricted access

With no need for collection and transport, PyroPure® is ideal for remote locations or places with restricted access, including busy urban areas, remote rural locations and secure military, prison or police facilities.

Zero waste

PyroPure® can be used as part of a zero waste programme, to recover energy from the residual fraction of waste once any material that can be recycled has been separated. This avoids the need for residual waste to go to a landfill site.



Operational considerations

PyroPure® units are designed to be easy to operate and to meet the most stringent Health and Safety requirements. They fully comply with The Supply of Machine (Safety) Regulations 2008: the Statutory Instrument 2008 No 1597.

Operators only need basic training to cover aspects such as the types of waste that can be handled and the time taken by the machine to complete a cycle. A display shows the machine status and minor troubleshooting can be undertaken by the operator, with specialist servicing needed occasionally.

Remote monitoring and data capture with full technical support provided by PyroPure®.

Solid residue and liquid are passed to the sewer system. The Water Industry Act 1991 allows discharge to sewers, with prohibition only for effluent that would injure or block them. The PyroPure® effluent is regarded as safe and will not contain prohibited materials.



The Environment Agency has categorised PyroPure® as a non-incineration system and has allowed its use for treatment of general non-recyclable and offensive/hygiene categories of waste, and subject to site approvals, for important hazardous categories of healthcare and laboratory waste. Planning permission is generally not required.

For further information on PyroPure®, please contact:

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