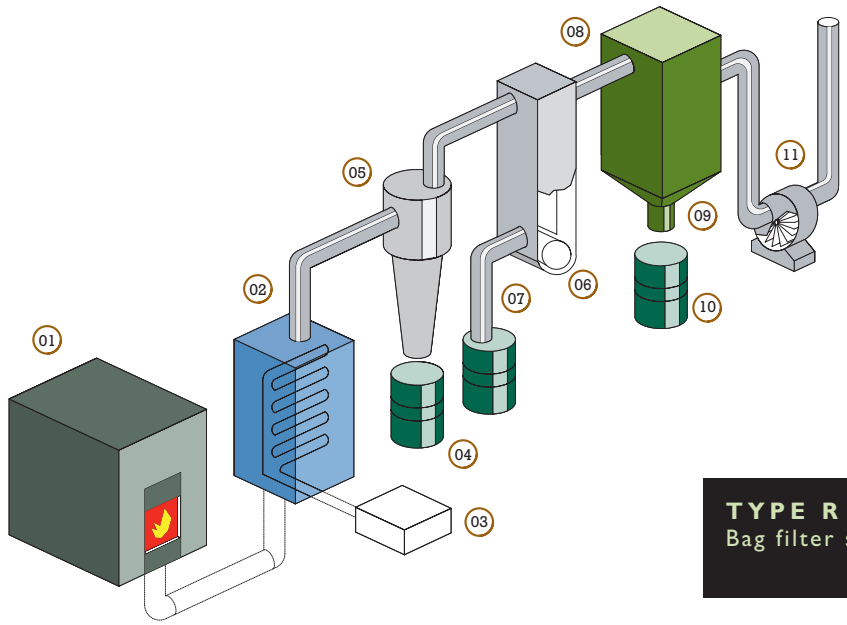


TYPE R
Bag filter system with recycling unit

The high-performance solution for unlimited operation.

- **Ideal for the larger crematorium performing over 750 cremations per year.**
- **Optimum use of reagent through use of the ball rotor recycling and conditioning unit – typically 300g of reagent per cremation.**
- **Automatic loading of reagent into system**
- **Waste heat used to pre-heat combustion air fed to the cremator improves cremator efficiency.**

The hot flue gasses pass from the cremator (01) to the gas cooler (02) via either an underground canal or overhead flue duct. The gas cooler (02) comprises two water cooling circuits, and one combustion air pre-heat section which improves the cremator efficiency. The water cooling circuits are connected to a back-cooler (03) which is mounted outdoors. Dust is automatically cleaned from the heat transfer surfaces.

The cooled gasses then pass through a cyclone separator (04) which removes all but the finest dust particles from the gas stream. Separated dust leaves via a cell-wheel sluice and falls into the collecting bin (05) .

The gasses then pass to the ball-rotor recycling and conditioning unit (06). At the start of each working day, a pre-determined quantity of fresh adsorbent is automatically loaded from its storage container via the vacuum pickup pipe (07) .

The gas stream passing through the ball-rotor unit will be treated by the adsorbent, some of which will be entrained in the gas stream leaving this section. It then passes into the bag filter (08), where fine dust particles plus the entrained adsorbent will be removed.

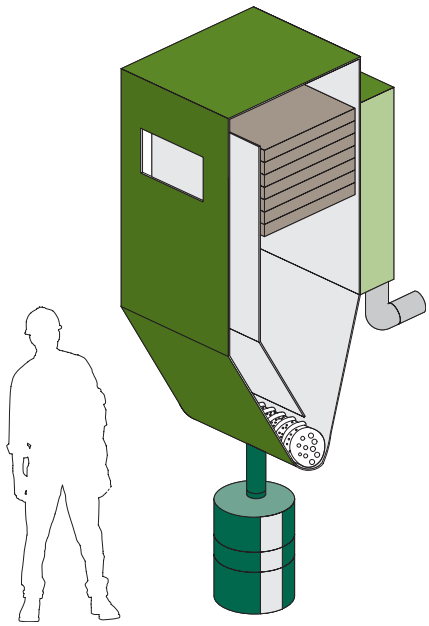
An automatic system cleans the bags by inflating them in order to dislodge the accumulated deposits. These deposits fall to the bottom of the unit (09), where the majority is returned to the ball-rotor unit. This ensures that the adsorbent is recycled until it is fully used. Any rejected deposits are removed through a cell-wheel wheel and fall into a collection bin (10).

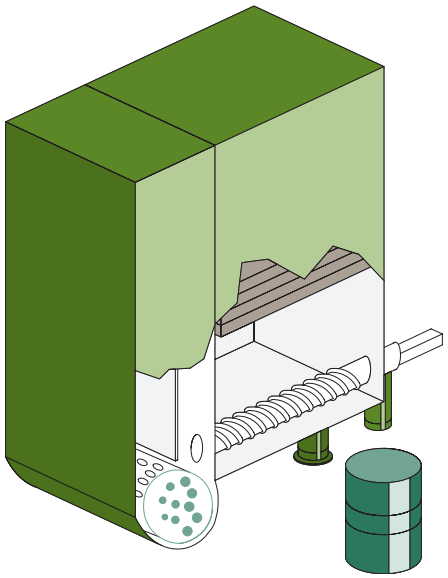
The completely clean gasses pass from the bag filter through the induced draught fan (11) to the chimney.

High Quality Cremation Systems.

IFZW MAINTENANCE LTD.

IFZW Maintenance Ltd., Suite C, Huffwood House, Huffwood Trading Estate, Partridge Green, West Sussex, RH13 8AU, Tel. 01403 713310, info@ifzw.co.uk





Where headroom so dictates, the waste materials may be discharged to a hopper, and then lifted by screw conveyor into the bins. This will reduce the overall height of the unit by approximately 1 m.

Not illustrated, for sake of clarity, is the bypass which will operate automatically in the event of excess temperature leaving the gas cooler. This allows the ongoing cremation to be completed.

The water cooling circuit may be intercepted by another heat exchanger to recover energy, for example to heat the crematorium buildings.

The ball rotor unit employs ceramic mill balls to gently pulverise the adsorbent or reagent into a fine powder. The active ingredient of the reagent is activated carbon, which adsorbs contaminants to its surface. It is therefore important that the reagent is maintained as a fine dust, thereby maximising the available surface area.
Granulate which is returned to the unit may have accumulated into clumps of material. This is effectively broken down once again into a fine powder by the ball rotor unit.
A predetermined quantity of the material recovered by the bag filter unit is recycled. It is transported back towards the ball rotor unit by a worm screw conveyor, and a mechanical damper is used to determine the return rate.

Because the flue gas cleaning system operates slightly below atmospheric pressure, a cell-wheel sluice mechanism is used to remove any rejected material which can then fall by gravity into a collection bin.

IFZW Maintenance Ltd., Suite C, Huffwood House, Huffwood Trading Estate, Partridge Green, West Sussex, RH13 8AU, Tel. 01403 713310, info@ifzw.co.uk