Installation Guide

MWI Series Small Waste Incinerator

Delivery checklist, on-site assembly, first firing and routine maintenance.
Written around the MWI-200 fuel-oil configuration; other sizes in the series assemble the same way.



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1. Before You Start

1.1 Site and foundation

1. The incinerator is heavy. The foundation must be reinforced to carry the load.
2. Reserve a safety passage, a material storage area and working space around the unit.
3. Level the foundation with a spirit level, correcting it with inclined shim irons and steel plates.

1.2 Lifting precautions

1. Prepare a lifting plan and follow it strictly.
2. Perform a trial lift first; start the formal lift only after everything checks out.
3. Pad every point where the lifting rope touches the machine so sharp edges cannot cut the rope.
4. No personnel may work beneath the unit during hoisting.
5. Before lifting, check that the lifting eyes are correctly installed and the lifting points meet requirements.
6. Check that the lifting ropes are not tangled, and keep the equipment level during hoisting.

2. What's in the Delivery

The MWI series ships as separate modules that bolt together on site. Check every item against this list on arrival.

2.1 Main modules and accessories

Item	Qty	Notes
Primary combustion chamber (with control cabinet mounted)	1	Heaviest module — set it first
Secondary combustion chamber	1	With sealing rope and fastening bolts
Mixing combustion chamber	1	Connects to the secondary chamber
Flue gas purification chamber	1	Observation port faces the main furnace door
Fuel tank	1	Mounts on the mixing chamber plate
Chimney sections	2	Height can be customized on request
Air duct	1	With 4 wafer-type butterfly valves
Burners	2	One per chamber; the secondary-chamber burner has the higher heat value
Air-supply blower	1	Quick-connect plug to the control cabinet

2.2 Fasteners, spares and documents

Item	Qty
Hexagon-head bolt M18×60	18 sets
Hexagon-head bolt M16×60	52 sets
Hexagon-head bolt M16×100	16 sets
Hexagon-head bolt M10×45	4 sets (4 more inside each burner box)
Hexagon-head bolt M8×25	4 sets
Sealing rope (asbestos standard; ceramic fibre on request)	1 pack
Fixing wrench and screwdriver	1 set
Fuse box (spare)	2
Fuel nozzle (spare)	2
Photoelectric cell (spare)	1
Certificate of conformity and user manual	1 set

Standard configuration for the MWI-200; details vary slightly between furnace models.







3. Installation Steps

Step 1 — Set the primary combustion chamber

Hoist the primary combustion chamber onto the prepared, leveled foundation at its designated position.



Step 2 — Join the secondary and mixing chambers

1. Hoist the secondary combustion chamber with lifting gear and connect it to the mixing combustion chamber. The lifting holes are at the top of the secondary chamber.
2. Pre-tighten the two diagonal bolts to bring the two chambers into preliminary alignment.
3. Adjust the lifting gear height and fit the remaining bolts.
4. Tighten the bolts diagonally with the supplied wrench. Skipping or repeating a bolt is strictly prohibited.





Step 3 — Mount the chamber assembly on the primary chamber

1. Lay the sealing rope flat on the flange between the primary and secondary chambers. Wet the rope before use.
2. Hoist the secondary/mixing chamber assembly onto the primary chamber at the positions shown.
3. Fine-adjust the assembly with a pry bar and lever, then hand-tighten the four corner bolts.
4. Fit all bolts, pre-tighten, then finish with the supplied wrench in diagonal order. Skipping or repeating a bolt is strictly prohibited.





Step 4 — Air duct and butterfly valves

1. Hoist the air duct to the side of the control cabinet, keeping it vertical.
2. Seat each wafer-type butterfly valve between its two flanges and insert the bolts diagonally — do not tighten yet. Tighten only after all four valves are in place.
3. Check the disc opening direction of each valve so it cannot jam part-open.
4. Tighten all bolts once the four valves are installed.





Step 5 — Fuel tank

1. Hoist the fuel tank onto the mixing chamber. The tank plate and the mixing-chamber fixing plate are interchangeable top-to-bottom; fix the tank once all four bolt sets are in their holes.

2. Connect the fuel tank to the oil pot with the transparent steel-wire hose and tighten the hose clamps.





Step 6 — Flue gas purification chamber

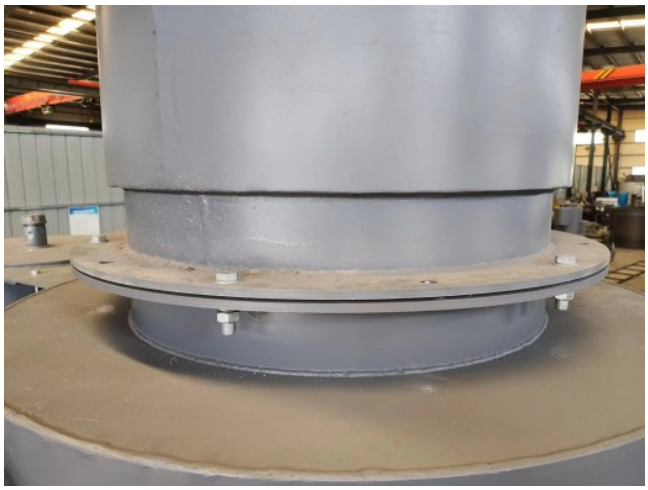
1. Lay the sealing rope flat on the flange between the mixing chamber and the purification chamber. Wet the rope before use.
2. Hoist in the direction shown: the observation port of the purification chamber must face the same way as the main furnace door.
3. Fine-adjust with a pry bar and lever, insert the fastening bolts and hand-tighten.
4. Fit every bolt, then tighten diagonally with a wrench. Skipping or repeating a bolt is strictly prohibited.

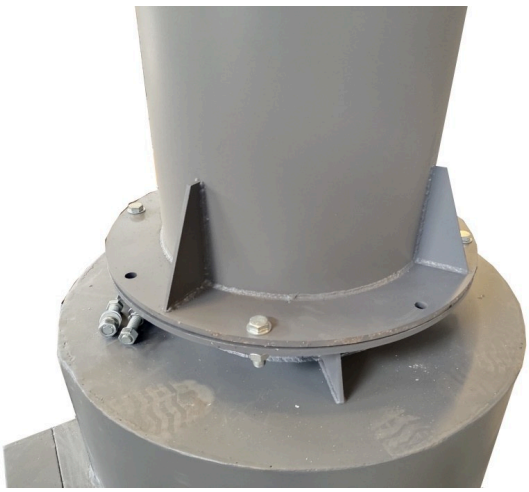




Step 7 — Chimney

1. Lay the sealing rope flat on the flange between the purification chamber and the chimney. Wet the rope before use.
2. Set the chimney height according to the site conditions.





Step 8 — Air-supply blower

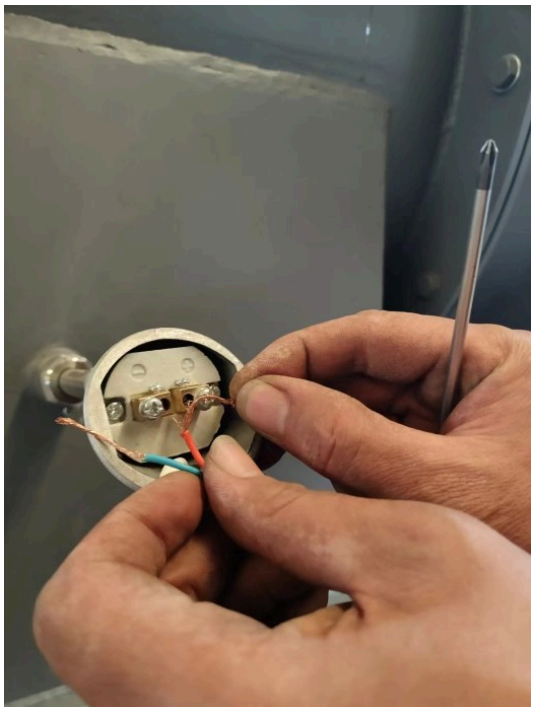
1. Pass the fixing bolts through the blower flange and rubber gasket, then connect to the air-duct flange.
2. Tighten with a wrench — a loose blower vibrates and damages itself.
3. Connect the blower plug to the quick-connect socket on the control cabinet, aligning the grooves.
4. After mating the plugs, screw the protective sleeve tight.





Step 9 — Temperature controller wiring

1. Distinguish the primary-chamber controller from the secondary-chamber one. Wire red to the positive (+) terminal and green (or blue) to the negative (–) terminal.
2. Screw the protective cover tight after wiring.





Step 10 — Burners

1. Insert each burner into its firing port and bolt it down. The insulating gasket ships with the burner.
2. Mate the quick-connect plugs by matching colors and seat them fully.
3. Connect the oil line *with* the filter to the “▲” port of the burner; the line *without* a filter is the return line and goes to the “▼” port. Hand-tighten the knob.
4. Fixing varies slightly by burner model — small burners simply tighten with the Allen key.





Step 11 — Fuel and power

1. Fill the tank with diesel — 0# diesel in normal conditions, or the diesel grade matched to the lowest ambient temperature on site.
2. Connect the mains supply. Standard configuration is single-phase; three-phase at the required voltage and frequency can be supplied on request.
3. Confirm every cable connection is firm — no looseness, oxidation or poor contact — then close the main switch.





Step 12 — Final checks

1. Check every bolt: all connections tight, nothing loose.
2. Check every valve is fully open.
3. Installation is complete — proceed to commissioning.

First firing: before loading any waste, run a low-temperature preheating cycle so the moisture inside the furnace fully evaporates. Skipping this cures nothing — rapid heating of a damp furnace deforms the furnace body and the door.



4. Maintenance — Replacing Wear Parts

4.1 Photoelectric cell (flame sensor)

1. Cut off the power first.
2. Pull the photocell out from the side of the burner and disconnect its wires from terminals 11 and 12.
3. Reconnect the new cell in the original positions, insert it, and switch the power back on.





4.2 Fuse box

1. The fuse box sits at the end of the burner, snap-fitted to the body.
2. Press at the arrow-marked point with a flat-head screwdriver, pry up both sides and remove.
3. Fit the spare fuse box. **Press it firmly home** — a fuse box that is not fully seated is the classic reason a burner will not ignite after servicing.



4.3 Fuel nozzle

1. Remove the burner from the furnace.
2. Detach the burner head from the body.
3. Remove the swirler and the ignition electrode to expose the nozzle.
4. Unscrew the nozzle and fit the spare.
5. Refit the ignition electrode, swirler and burner head in order, then mount the burner back on the furnace.





Questions during installation? Send photos of the connection point to our service team — we reply with the fix. Spare nozzles, fuse boxes and photocells are stocked and ship with the next order or by courier.