

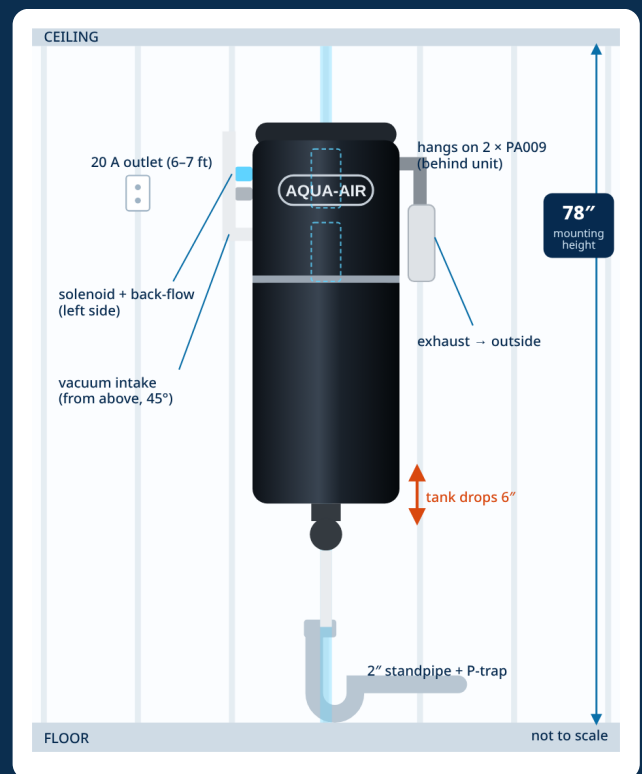
AQUA-AIR^{Wet/Dry}

BUILT-IN TOTAL CLEANING SYSTEM

Installation Manual

Models 130, 150, 158, 230 (single canister)
and 250, 258 (dual canister)

Rev. Oct 2026



Aqua-Air Wet/Dry · Steam Pro, LLC · Since 1990
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About this manual

This manual replaces earlier Aqua-Air installation manuals and installation guides. It covers the current power units, which hang on PA009 wall brackets. If you have an earlier manual, use this edition instead.

Step-by-step installation clips are available at aquaairwetdry.com/install-guide. Several drawings in this manual are taken from those clips.

1 Before you begin

The Aqua-Air Wet/Dry Built-in Total Cleaning System vacuums dry debris, picks up water, and cleans with hot water and cleaning solution through wall stations. Dirt and water are separated in the power unit by wet cyclonic separation with a disposable mesh debris screen. **There are no filters to replace.** Waste water drains to the sanitary sewer.

Codes and licensed trades

This manual is intended to assist in the installation of the Aqua-Air Wet/Dry system. Each jurisdiction may have specific codes and regulations for appliances that are installed in buildings and connected to their water and drain systems. It is the installer's responsibility to verify local codes and the qualifications required of the trades-persons used. Electrical and plumbing work must be done by qualified, licensed trades where the law requires it.

In many jurisdictions the Aqua-Air piping and water lines are considered part of the appliance. Check local codes for water lines, drains and back-flow protection.

Install sequence at a glance

Phase	Sections	Who usually does it
Plan and trade rough-in	3–4	Installer, plumber, electrician
Power unit	5–7	Installer
Vacuum piping rough-in	8–11	Installer
Stations, supply lines and wire	12–15	Installer and plumber
Trim-out after drywall and paint	16	Installer
Hook-ups at the power unit	17–19	Installer, plumber, electrician
Chemical / disinfectant	20	Installer and plumber
Start-up, testing and hand-over	21–22	Installer

Safety

- Unplug the power unit (both cords on two-motor units) before servicing it.
- Never run the system, wet or dry, without the cold-water rinse turned on.
- Do not vent the motor exhaust into a wall, ceiling or any concealed space of a building.
- Do not run the motor with no hose connected and every inlet closed. Blocked airflow can damage the motor.
- Use a grounded outlet that matches the plug. Do not use adapters or extension cords, and do not modify the plug.

2 Models and system components

Model	Item #	Motors	Style	Airflow	Coverage	Height needed	Dedicated 20 A circuits
130	AA001	1	Single canister	101 CFM	500–3,500 sq ft	78 in	1
150	AA003	1	Single canister	102 CFM	Up to 5,000 sq ft	78 in	1
158	AA003 W/ 8.4	1	Single canister	141 CFM	4,000–6,000 sq ft	78 in	1
230	AA002	2	Single canister	202 CFM	Up to 7,000 sq ft	78 in	2
250	AA004	2	Dual canister	204 CFM	Up to 10,000 sq ft	84 in	2 (+1 per motor booster)
258	AA004 W/ 8.4	2	Dual canister	283 CFM	8,000–12,000 sq ft	84 in	2 (+1 per motor booster)

Motor boosters (AA003-MB for the 250; AA003-MB 8.4 for the 258) are for **wet cleaning**: a booster adds capacity so more people can wet-clean at the same time. Each booster needs its own dedicated 20 A circuit and hangs on PA009 wall brackets.

Wall stations

AA135ZA	In-wall water and suction outlet kit: PA138R vacuum inlet valve, PA131 mounting plate and one AA242 water outlet.
AA545P	Pet/commercial outlet kit: PA138R inlet, PA131 plate and two AA242 outlets (one hot water, one chemical/disinfectant).
AA235Z	Water/chemical/suction commercial kit (same contents as AA545P).
AA242	Water/chemical outlet kit: AA170 brass outlet assembly with PAF04 1/8 in female quick connect and 3/8 in PEX crimp × 1/2 in FPT adapter, PA131C mounting plate, PA138CW white cover, BR291 brass elbow, screws.
AA131 · AA131C · AA131D	Surface-mount stations: wet/dry, wet/dry with chemical, and dry. Contact Aqua-Air for surface-mount installation instructions.

Supplied with the power unit

- PA009 wall holder brackets (wall hangers)
- 90° street ell with 2 in metal end for the motor exhaust (250/258: also a 45° street ell with metal end for the upper motor)
- Hose clamp for the vacuum intake
- 1/4 in I.D. water hose and fittings for the cold-water rinse connection; the Watts N388 anti-siphon vacuum breaker is built in
- 1-1/2 in ABS 45° street (spigot) elbow (PA102) for the drain
- Owner's Manual and warranty registration card

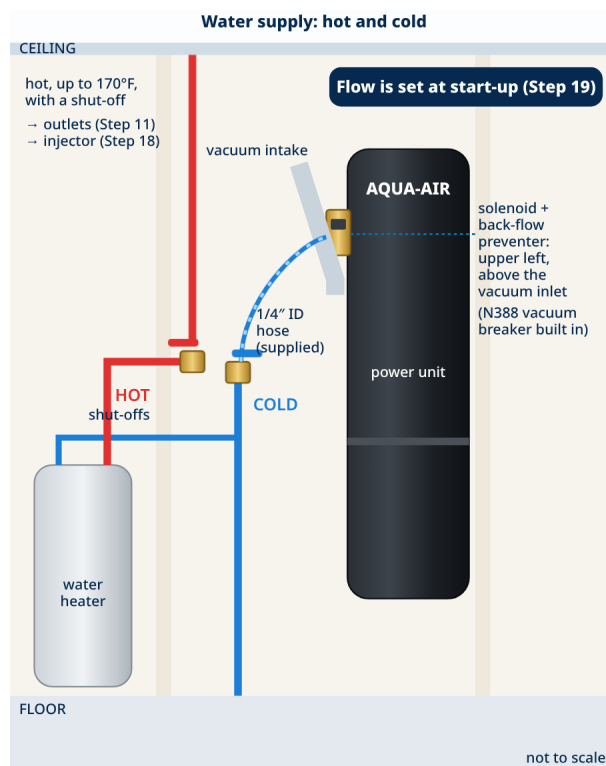
Not supplied (customer or trades supply)

Electrical circuits and outlets; water supply and drain; 2 in O.D. central-vacuum tubing and fittings; PEX tubing; 2 in DWV pipe to join the canisters of a dual unit; PVC primer and glue; installation labor.

3 Site requirements at the power unit

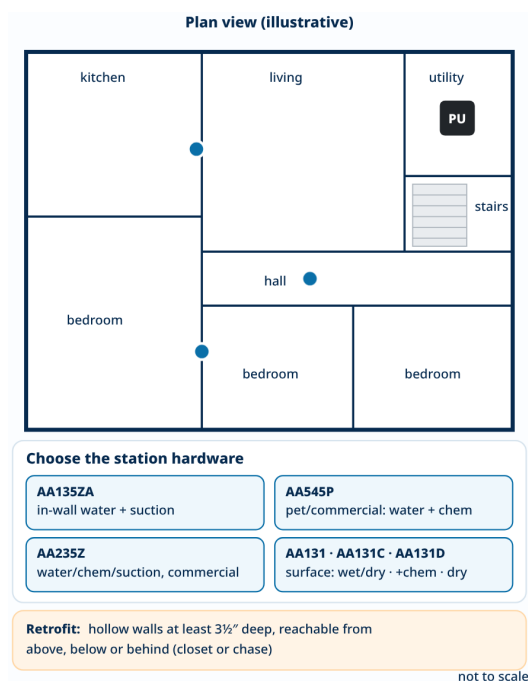
Before rough-in, have the trades provide the following at the power-unit location.

Item	Requirement
Location	Protected from freezing, with room to lower the waste tank 6 in (150 mm) and service the debris screen. Height needed: 78 in for single-canister units (130, 150, 158, 230) and 84 in for dual-canister units (250, 258).
Electrical	One 20 A, 120 V, 60 Hz dedicated circuit per motor , each with a grounded outlet, about 6–7 ft high and to the left of where the unit will hang. 130/150/158: 1 circuit. 230/250/258: 2 circuits. Each motor booster: 1 more. GFCI outlets are fine on these circuits.
Cold water	Cold-water supply with a shut-off for the unit's filtration rinse: a spigot with a garden-hose connection, or a ball valve with 1/4 in MIPT. Two units in the same room may share one shut-off.
Hot water	Hot-water supply with a shut-off (up to 170°F / 77°C) to feed every water outlet and the chemical injector, usually near the water heater. Both hot and cold water are required.
Drain	A 2 in drain directly below where the unit will hang, as close to the floor as possible, in or along the wall: 2 in DWV with a P-trap, vented to meet plumbing codes.
Exhaust	A route to the outdoors that is as direct as possible.



Hot water feeds the outlets and injector. Cold water feeds the power unit's filtration rinse.

4 Plan the layout



Illustrative plan view and station hardware.

- Allow about **one inlet port per 700 sq ft** (about 65 m²).
- Place inlets on inside walls, in hallways and at the bottom of stairs, so every corner, closet and stair can be reached around furniture and equipment.
- Design for shorter hoses. Hoses run 25–50 ft; 30 ft is standard.
- Choose the power-unit location first (Section 3), then lay out the trunk line from the unit to the stations.
- Decide where hot-water outlets and chemical/disinfectant outlets are needed. Each station's water outlet sits next to its vacuum inlet.
- Plan the piping to follow the four basic principles in Section 8 before any pipe is cut.
- Aqua-Air offers a free layout from your blueprints. Call 1-800-916-5777.

Retrofitting an existing building

Most buildings can be retrofitted. Confirm that there is:

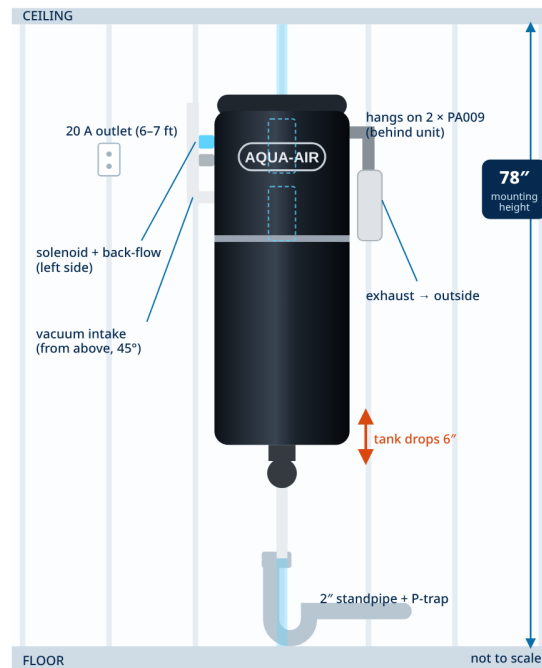
1. A location for the power unit with drain, water and electricity.
2. Areas in, on or behind walls where the piping can run to convenient inlet locations.
3. A route for the vacuum tubing from the inlets to the power unit through the attic, a crawl space, a basement or the surface of walls (in commercial and storage areas).

Vacuum inlets can be installed in a hollow wall at least **3-1/2 in** deep that can be reached from above, below or behind (for example a closet or chase).

Common planning mistakes

- Putting the unit where it can freeze, or where the waste tank can't be lowered for screen service.
- Providing cold water only. Current systems need both hot and cold.
- Putting the drain stub too high. Install the drain as close to the floor as possible.
- Sharing the unit's circuit with other loads. Each motor needs its own dedicated circuit.

5 Mount the power unit (130, 150, 158, 230)



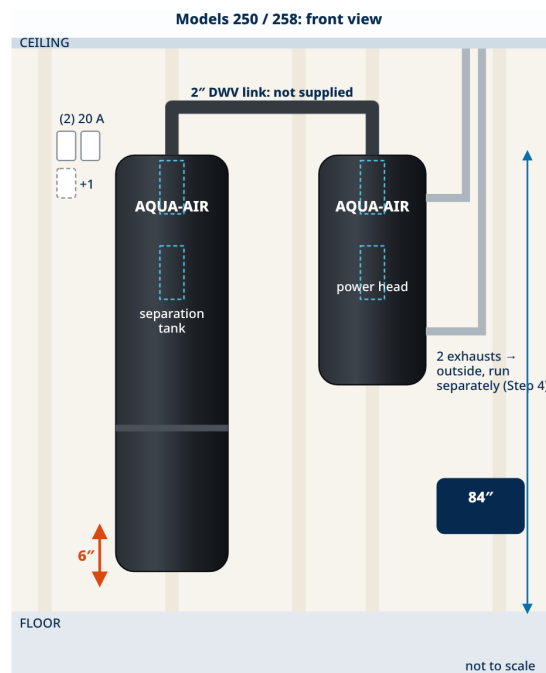
Current power units hang on **PA009 wall holder brackets**, which are supplied with the power unit. There is no mounting board.

1. Confirm the location: no freezing, room to lower the waste tank 6 in, the drain directly below, the 20 A outlet(s) to the left, and the cold and hot water shut-offs nearby.
2. Find the wall stud where the unit will hang. Mark the mounting height (78 in for single-canister units).
3. Hold a PA009 wall bracket **upright** on the stud, with its three screw holes in a vertical line, and screw it **into the stud**.
4. Screw the second PA009 wall bracket upright on the **same stud, directly below the first**. Contact Aqua-Air with your model number for the bracket spacing.
5. Check that both brackets are plumb and in line with each other.
6. With a helper, lift the power unit and hang it on both brackets. The solenoid and back-flow preventer are on the left, the vacuum intake is on the left, and the exhaust is on the right.
7. Check that the unit is secure and plumb and that the waste tank can drop 6 in without hitting anything below.

Avoid

- Mounting a PA009 bracket sideways. It goes upright on the stud.
- Fitting only one bracket. Two go on the stud, one above the other.
- Screwing the brackets into drywall only. Screw them into a stud.
- Re-using bent brackets when a unit is moved. Fit a new PA009 set.
- Blocking the motor's cooling-air intake or exhaust openings.

6 Mount a dual-canister unit (250, 258)

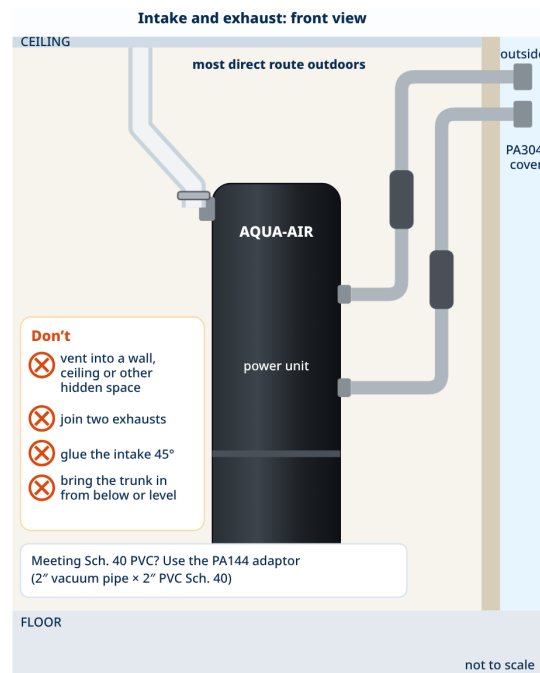


The 250 and 258 have two canisters: the **separation tank** and the **power head**. Both hang on PA009 wall brackets (supplied with the unit).

1. Find the studs for both canisters and mark the mounting height (84 in for dual-canister units).
2. Screw the PA009 wall brackets for each canister upright into its stud, as in Section 5. Contact Aqua-Air with your model number for the bracket arrangement and spacing.
3. Hang the separation tank and the power head. The power head may be mounted next to the separation tank or at another convenient location.
4. Join the power head to the separation tank with 2 in DWV pipe and fittings (not supplied). Do not use thin-wall vacuum tubing for this link.
5. The two exhausts, the two power cords and the tank-float wire are connected in Sections 7, 18 and 19.

A motor booster (AA003-MB or AA003-MB 8.4) adds wet-cleaning capacity. It also hangs on PA009 wall brackets and needs its own dedicated 20 A circuit.

7 Vacuum intake and exhaust



Intake

1. Bring the vacuum trunk into the unit **from above**, using 45° elbows (PA093 or PA094).
2. Secure the intake fitting with the **hose clamp provided**. **Do not glue the intake fitting into the power unit**; it must stay removable for service.

Exhaust

1. Insert the metal end of the 90° street ell (supplied) into the motor exhaust.
2. Add the muffler (PA044). It can be mounted up or down.
3. Vent the exhaust **outdoors by the most direct route**, and finish outside with an exhaust cover (PA304).
4. **250/258**: put the metal end of the 45° elbow, pointed toward the back, into the upper motor exhaust, then a 90° street ell and muffler. Put the metal end of the 90° elbow into the lower motor exhaust, then the muffler. **Run each motor exhaust separately** to the outside; never join two exhausts into one pipe.
5. Where the exhaust or another line meets Schedule 40 PVC, use the PA144 adaptor (2 in vacuum pipe x 2 in PVC Sch. 40).

Never

- Vent into a wall, ceiling or concealed space.
- Join two motor exhausts.
- Glue the intake fitting.
- Bring the trunk into the unit from below or level.

8 Vacuum piping: the four basic principles

These principles keep water moving forward to the power unit and prevent puddling or backward water flow. Follow them on every job.

1. **All inlets must start by going down.** Any inlet whose line lifts up must have a **P-trap** below the inlet. When the vacuum turns off, the trap catches moisture left in the vertical pipe so water can't come out of the inlet valve.
2. **After a vertical lift, there must be a high point** before starting a lateral run, so moisture left in the lateral run can't run back into the vertical pipe.
3. **All lines must drop into the main trunk line**, with a **2-1/2 in step-down** before any tee or group of tees.
4. **Prioritize the inlet order.** Inlet lines lifting to join the main line must tee in front of (closer to the vacuum than) lines joining from upper levels.

Principle 1: all inlets must start by going down

Inlets on levels above the main trunk can go straight down or at a downward angle (photos 1–2). Lines from upper levels should join together on the way down wherever possible; the line from above passes by and is joined from the side, as low as possible (photo 3).



Photos 1–3

Inlets below the main trunk line must have a P-trap below the inlet to contain any moisture remaining in the vertical pipe when the vacuum is turned off (photos 4–9). The trap should increase in size as the lift height increases; a larger trap than necessary does not reduce system efficiency.



Photos 4–9

Principle 2: reach a high point after every vertical lift

The top of every vertical lift above a P-trap must reach a high point before a lateral run. The size and shape of the high point is not critical as long as it is high enough to keep liquid left in the lateral line from flowing back into the P-trap (photos 10–12).



Photos 10–12

Principle 3: drop into the trunk from above

All lateral runs must drop into the main trunk from above, with a step-down behind the tee to minimize backflow in the trunk line. Sweep tees or 45° wyes may join laterals to the trunk; all must drop straight down or at a downward angle into the main line. **No tee or wye may ever lie flat or angle upward** into the main line (photos 13–14). Wherever possible, join lines together while going down. **Never join lines while going up.** No sweep tees on any vertical line; use only 45° wyes (photos 15–17).



Photos 13–17

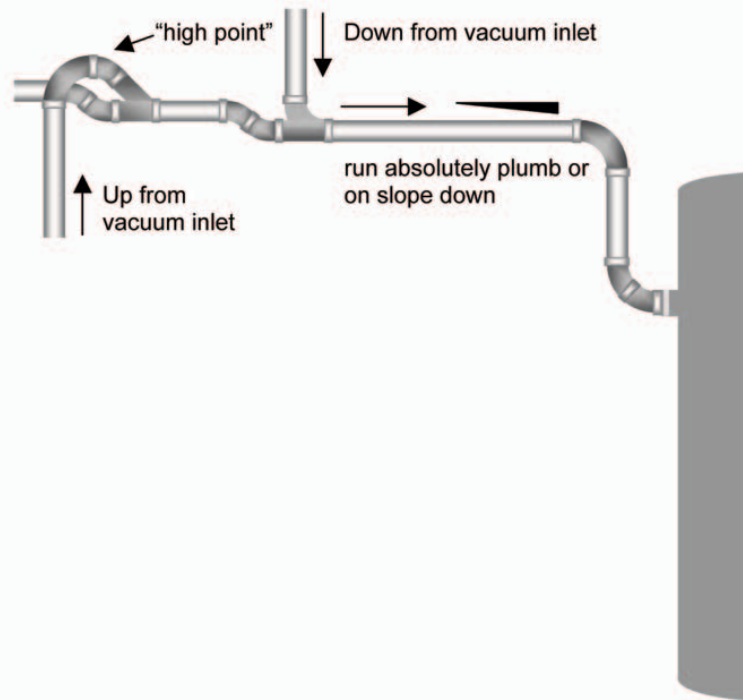
Principle 4: prioritize the inlet order

Inlets that receive more wet-cleaning use are higher priority than inlets with less wet use; dry-only inlets are lowest (a kitchen is always highest, a VacPan always lowest). Lower-priority inlets always join **in front of** (closer to the vacuum than) higher-priority inlets. Inlet lines coming from below tee in in front of lines from an upper level (photos 18–19). This doesn't mean dry lines must be piped separately all the way to the vacuum; it sets the order for joining lines (photos 20–22).



Photos 18-22

9 Hang, cut, prime and glue the trunk line



The trunk runs absolutely plumb or slopes down to the power unit. Branches reach a high point, then drop in from above.

Hang the trunk

1. Route the trunk up to the attic or pipe chase, or down to the lower level, basement or crawl space.
2. Support the trunk firmly. It must run **absolutely plumb or slope down toward the power unit** everywhere, with no sags.
3. Hang it with PA135 straps on pipe and PA136 straps on fittings and couplings. Space the straps **every 4 ft**, or closer if the installer recommends it, and wherever the run would otherwise sag.
4. When an inlet is on the same floor as the power unit or lower, run the tubing **up to a high point above the inlet and then down** to the unit. This is required.

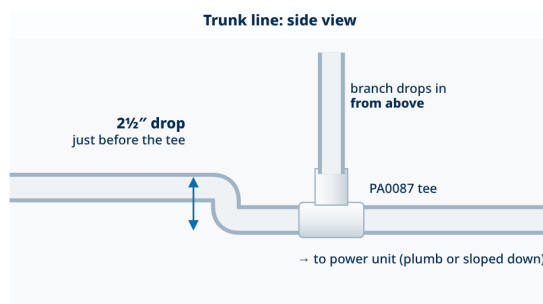
5. Use only Aqua-Air central-vacuum fittings on vacuum lines. Do not substitute Schedule 40 DWV fittings: their inside diameter and sharp turns cause clogs.

Cut, prime and glue

1. Cut square and deburr inside and out. Dry-fit runs before gluing and check that every tee and wye drops in from above.
2. **Primer is required** on vacuum-pipe joints. Prime the male (pipe) end, following the primer maker's directions.
3. **Apply PVC glue to the male end only. Never put glue in the female socket;** it pushes a ring of glue inside the joint that catches hair and debris.
4. Push in with a twist and seat fully against the stop.
5. Where a fitting must stay removable (the intake at the power unit), clamp it. Don't prime or glue it.

If lines must run plumb with no drop or speed bump, tell the owner to rinse the system regularly with hot water.

10 Tees, the 2-1/2 in drop, P-traps and high points



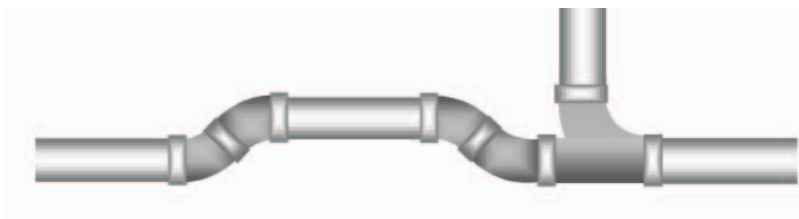
Lines have to run plumb, with no drop or speed bump?
Tell the owner to rinse the system regularly with hot water.

not to scale

Tees and wyes

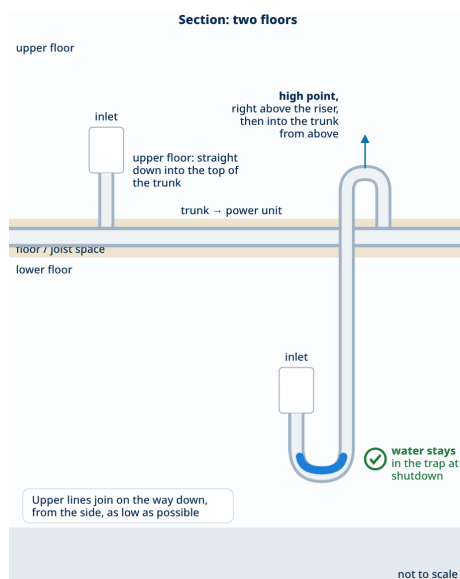
1. Every branch drops into the main trunk **from above**, straight down or at a downward angle.
2. Step the trunk **down 2-1/2 in just before each tee** or group of tees, so trunk water can't run back up into the branch.
3. Where there is no room to drop the trunk, build a **speed bump**: step up, then step down into the tee.
4. Use the PA0087 90° tee, PA133 short tee or PA096 45° wye. No tee or wye may lie flat or angle upward.
5. Join lines while going down, never while going up. No sweep tees on vertical lines; use 45° wyes.

6. Lines with the most wet use (the kitchen is always highest) join farthest from the vacuum. Lower-priority and dry lines join in front, closer to the vacuum.



Speed bump: step up, then step down into the tee.

P-traps and high points

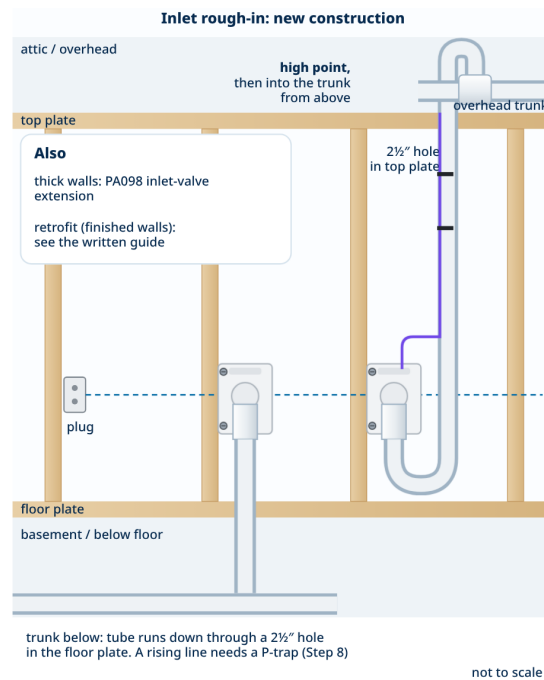


1. An inlet whose line has to rise must have a **P-trap below the inlet** (use PA089–PA094 elbows to build traps). Make the trap larger as the lift gets taller.
2. After a vertical lift, reach a **high point** immediately above, or as close as possible to, the vertical line before starting a lateral run; then enter the trunk from above.
3. Upper-floor inlets: run the pipe straight down into the top of the main line. Upper-level lines join on the way down, from the side, as low as possible.

Common mistakes

- A tee laid flat or rolled up to clear a joist.
- A rising inlet line with no P-trap: water dribbles out of the inlet at shutdown.
- A lateral that starts right off a vertical lift with no high point.
- High-use wet lines teed in closest to the unit.

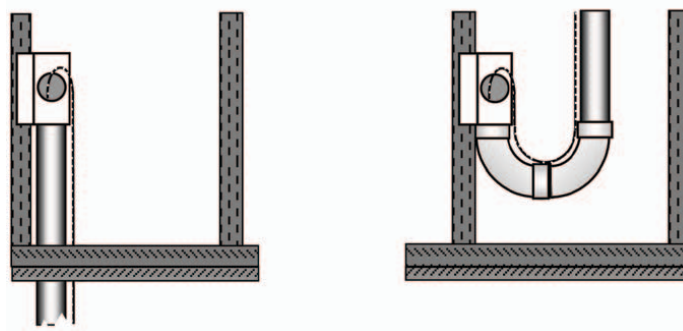
11 Rough-in vacuum inlets



Use 2 in O.D. PVC central-vacuum tubing and fittings.

New construction

1. Nail or screw the PA131 mounting plate to the stud, preferably at the same height as the electrical outlets.
2. Glue a PA089 short 90° elbow to the mounting plate, **pointing down**. Glue only the male end; never glue the female part.
3. **Trunk below:** glue the tubing into the elbow and run it through a 2-1/2 in hole in the floor plate to the trunk. A rising line needs a P-trap (Section 10).
4. **Trunk overhead:** glue two PA092 long-sweep spigot 90° elbows into each other, then into the PA089. This forms the trap. Run the tubing up through a 2-1/2 in hole in the top plate, through the high point, and into the trunk from above.
5. Run the control wire through the plate's upper opening (Section 14).
6. For thick walls, use the PA098 inlet-valve extension.



Rough-in to an under-floor trunk line (left) and to an overhead trunk line (right).

Existing walls (retrofit)

Check the wall is at least 3-1/2 in deep and clear of obstructions before cutting.

Tubing from below the floor

- Drill a 2-1/2 in hole directly under the inlet inside the wall cavity and check the space is clear.
- Using a mounting plate as a template, mark and cut the drywall at the same height as the electrical outlets.
- Remove the side flange of the mounting plate and glue on a short 90° elbow pointing down. Bring the control wire out of the top space of the plate.
- Connect the wire to the two screws on the inlet and install the inlet valve with the **electrical contacts on top**. Measure and install the tubing from below.

Tubing from above

- Drill a 2-1/2 in hole through the top plates at the center of the stud bay and drop the control wire.
- Using a mounting plate as a template, cut the drywall hole offset to the left of the top-plate hole, at outlet height.
- Remove the plate's side flange and glue on a short 90° facing down, then a spigot ell into a second medium ell, extending to the left.
- Secure the wire to the short 90° and pull it out through the top of the plate. Insert the plate and ells into the wall, connect the wire to the inlet and install the inlet (contacts on top). Glue the outside of the tubing and twist it into the ell while holding the wire from above.

Tubing behind the wall

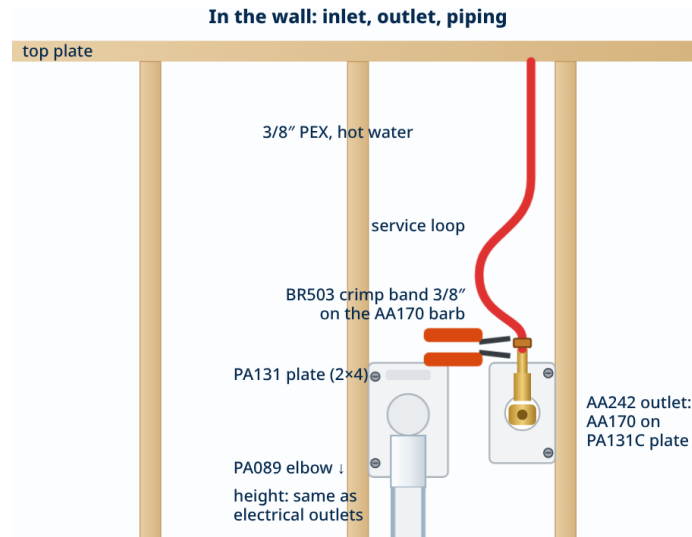
- Use a mounting plate as a template to cut the drywall, then drill a 2-1/4 in hole centered through the back wall.
- Remove the plate's side flange and glue a coupling to it. Connect the wire and install the inlet (contacts on top).
- Glue a length of pipe into the coupling and add a short 90° elbow pointing down.

12 Rough-in water and chemical outlets

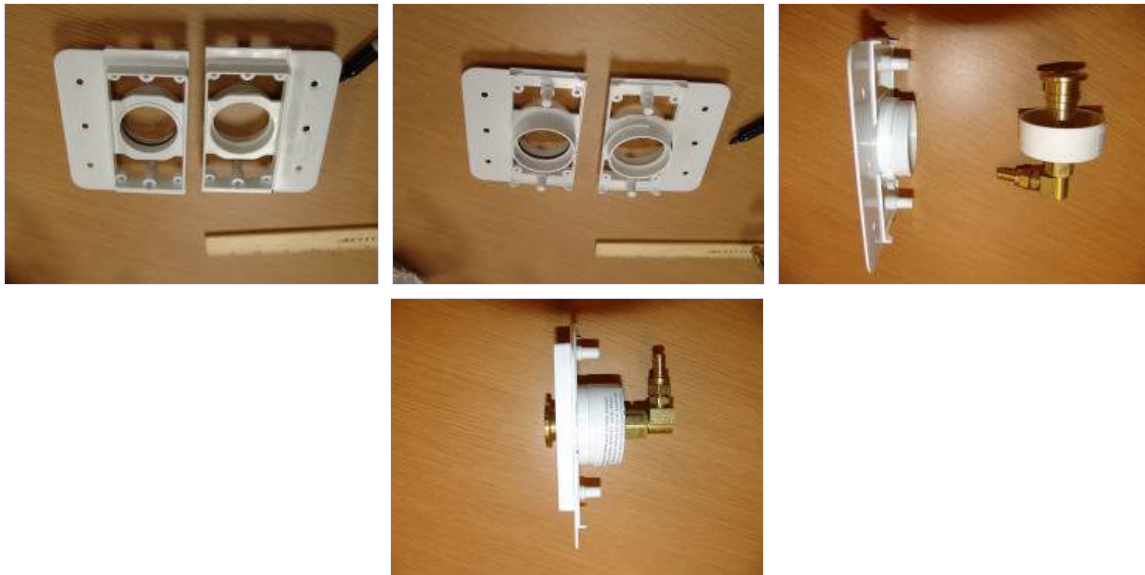
Mount each hot-water outlet, and each chemical/disinfectant outlet where used, next to its vacuum inlet. Use the **AA242 Water/Chemical Outlet Kit** (AA170 brass outlet assembly with PAF04 quick connect, PA131C mounting plate and PA138CW cover).

1. The water-outlet backing plate is like the vacuum-inlet plate, but modified: the black O-ring and its retaining ring have been removed (photo 1).
2. On the back of the water-outlet plate, the ring that held the O-ring has been split and moved to the back. This ring is the **spacer** (photo 2).
3. The outlet assembly and mounting plate come together in the AA242 kit and in the inlet/outlet kits (photo 3).
4. **1/2 in drywall:** glue the outlet up tight against the spacer. This places the outlet near the front of the cover plate. Glue it with the **barb pointing away from the side the PEX comes from**, so the tubing forms a small loop (photo 4).
5. **5/8 in drywall:** mark the backing plate where the spacer ends (photo 5) and remove the spacer ring (photo 6).

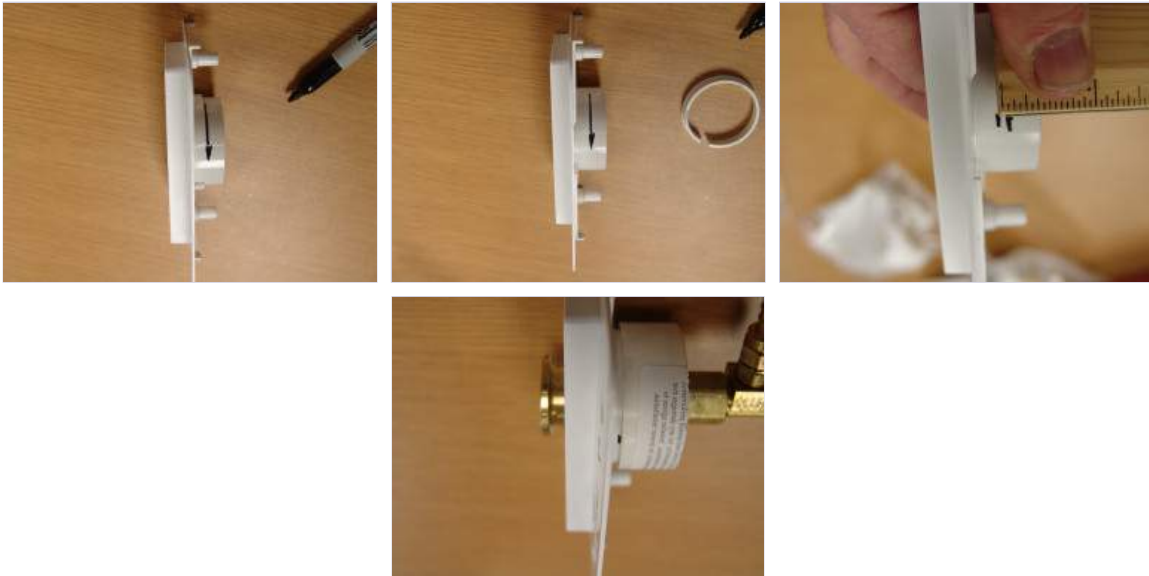
6. Make a mark 1/8 in closer to the backing plate than the spacer was (photo 7).
7. Glue the outlet to that mark (photo 8). The quick connect stays close to the front, where it's easy to use, but far enough in that the cover closes without striking it.
8. Screw the complete outlet to the stud. Place the vacuum inlet and water outlet in the **same stud bay, one on each side**; they can be stacked one above the other if needed. Keep the same arrangement throughout the job. Aqua-Air recommends the **vacuum inlet on the left and the water outlet on the right**, so the customer always knows which cover to open.
9. Connect the PEX (Section 13) and leave the loop free to move.



The AA242 outlet beside its vacuum inlet: 3/8 in hot-water PEX with a service loop, crimped with a BR503 band on the AA170 barb.



Photos 1-4



Photos 5-8

13 Hot-water and chemical supply lines (PEX)

Bring hot water, and chemical/disinfectant solution where used, from the mechanical room to each outlet.

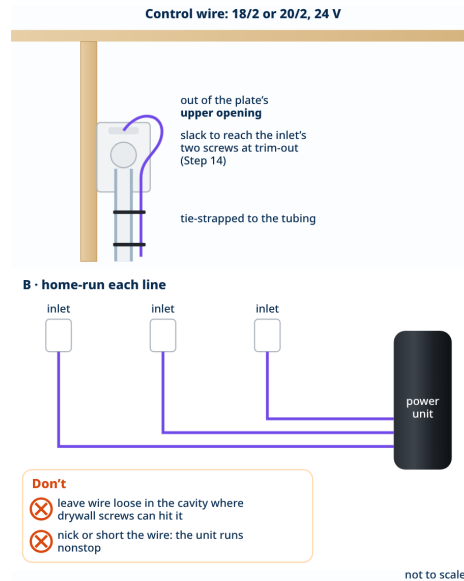
PEX	3/8 in or 1/2 in I.D. PEX (or other approved tubing). The AA170 outlet takes 3/8 in PEX crimp.
BR503	Crimp band, 3/8 in PEX
BR502	PEX coupler, 3/8 in barb
BR504	Talon nail (PEX clip), 3/8 in PEX

1. Run hot water from the shut-off near the water heater (or the hot-water shut-off at the unit) to every water outlet. **The outlet lines are not fed from the power unit;** the power unit takes cold water only, for its filtration rinse.
2. Where a chemical/disinfectant outlet is used (AA545P, AA235Z, or the AA131C surface mount), run a **separate** line from the AA035 injector's outlet side to the chemical/disinfectant outlet (Section 20).
3. Clip the PEX with BR504 clips every few feet so it can't rattle or chafe.
4. Leave a service loop at each outlet.
5. At each outlet, slide a **BR503 crimp band** over the PEX, push the PEX fully onto the 3/8 in barb and crimp the band with a 3/8 in PEX crimp tool. Where two runs join, use a BR502 coupler with a crimp band on each side. Check every crimp with the tool maker's go/no-go gauge.

Common mistakes

- Teeing the outlet lines off the power unit.
- No shut-off on the hot supply.
- Crimping with the wrong-size band, or without seating the PEX fully on the barb.

14 Low-voltage control wire

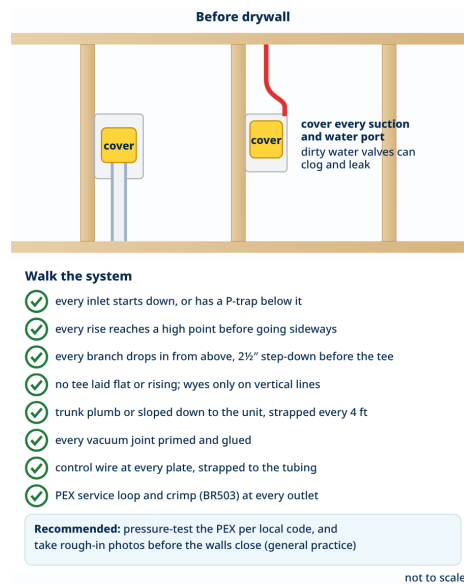


Every inlet is wired to the power unit so a hose cuff in any inlet starts the system. Use **18/2 or 20/2 low-voltage control wire**. The control circuit is 24 V.

1. Run the wire through the **upper opening** of each mounting plate and tie-strap it to the vacuum tubing.
2. Either splice at each vacuum tee (or at the inlet valves), or home-run each line to the power unit.
3. Leave enough wire at each plate to reach the inlet's two screws at trim-out.
4. Connect the wire to the low-voltage inlet connection on the power unit (Section 19).

- Don't leave wire loose in the cavity where drywall screws can hit it.
- Shorts or damage in the low-voltage wiring make the unit run nonstop.

15 Protect and inspect before drywall



1. Cover **every** suction port and water port with a plaster guard before drywall. Water valves that get drywall mud or paint in them can clog and leak.

2. Walk the system and check:

- ☐ Every inlet starts down or has a P-trap below it.
- ☐ Every rise reaches a high point before going sideways.
- ☐ Every branch drops in from above, with a 2-1/2 in step-down before the tee.
- ☐ No tee is laid flat or rising; wyes only on vertical lines.
- ☐ The trunk is plumb or sloped down to the unit, strapped every 4 ft.
- ☐ Every vacuum joint is primed and glued.
- ☐ Control wire is at every plate, strapped to the tubing.
- ☐ A PEX service loop and BR503 crimp are at every outlet.

Recommended: pressure-test the PEX per local code, and take rough-in photos before the walls close.

16 Trim-out: inlet valves and outlet covers

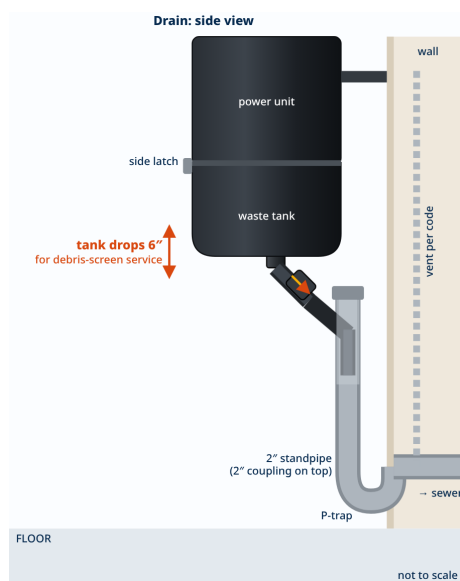
After drywall and paint:

1. Remove the plaster guards and clean the openings.
2. Connect the control wire to the **two screws** on the back of each inlet valve.
3. Install the **PA138R inlet valve and cover** with its **electrical contacts on top**. Add a PA098 extension if the wall is thick.

4. Install the PA138CW cover over each water/chemical outlet with PA187 screws. Check that the cover closes without striking the quick connect.

- An inlet valve installed upside down won't start the unit. The contacts go on top.
- Paint or mud in a valve or quick connect means the openings weren't protected.

17 Drain connection



The waste tank drains through a check (flapper) valve into a 2 in standpipe with a P-trap.

NM5042	1-1/2 in ABS male adapter (MPT × slip); threads into the bottom of the unit
PA106	Flapper (check) valve, 1-1/2 in ABS (replacement flapper: PA107)
PA102	1-1/2 in ABS 45° street (spigot) elbow (supplied)
—	A second 1-1/2 in 45° elbow and a 12 in (300 mm) piece of 1-1/2 in ABS pipe
—	2 in DWV standpipe with a 2 in coupling on top, P-trap and vent (by the plumber)

1. Wrap the NM5042 threads with Teflon tape or thread sealant and thread it into the bottom of the unit.
Do not over-tighten.
2. Mount the **flapper valve at 45°, toward the wall**, using the 1-1/2 in 45° spigot elbow, with the **flow arrow pointing down**.
3. Add the second 45° elbow, then the 12 in piece of 1-1/2 in pipe, which extends **down loose inside** the 2 in standpipe. This slip joint lets the waste tank drop 6 in for debris-screen service. Do not glue it.
4. The 2 in standpipe runs to a P-trap and the sanitary sewer, vented to meet plumbing codes.



Flapper valve at 45° toward the wall, and the 1-1/2 in leg hanging loose in the 2 in standpipe.

18 Cold-water connection at the power unit

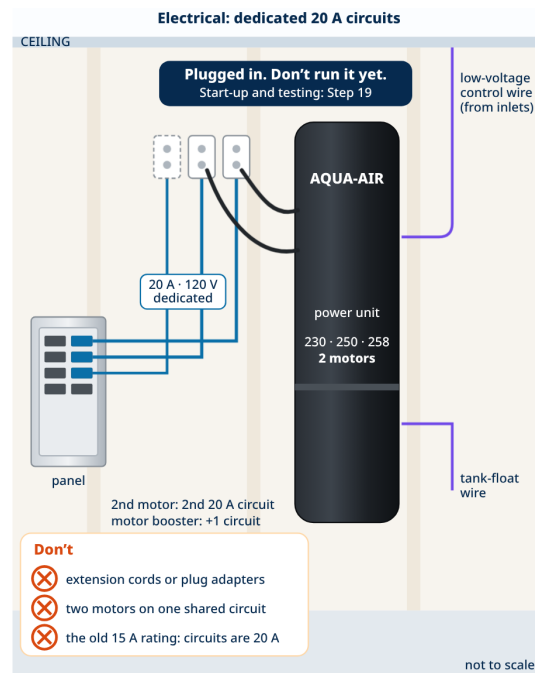
The power unit takes **cold water** for the separation-tank filtration rinse. Hot water goes to the outlets and injector only.

1. Provide a cold-water spigot with a garden-hose connection, or a ball valve with 1/4 in MIPT.
2. **Single-canister units:** the water solenoid and back-flow preventer are on the left side of the unit, above the vacuum inlet. Connect the cold-water valve to them with the 1/4 in I.D. hose supplied. The unit has a built-in Watts N388 anti-siphon vacuum breaker.
3. **250/258:** run from the cold-water valve to the **bottom** hose barb on the solenoid. Run a hose from the **top** of the solenoid to the inlet of the back-flow preventer, and connect the back-flow preventer outlet to the hose barb on the separation-tank inlet.
4. The rinse flow is set at start-up (Section 21).

Never connect the power unit to hot water. The filtration rinse is cold.

Replacement parts: PA048 solenoid valve; BR420 needle valve.

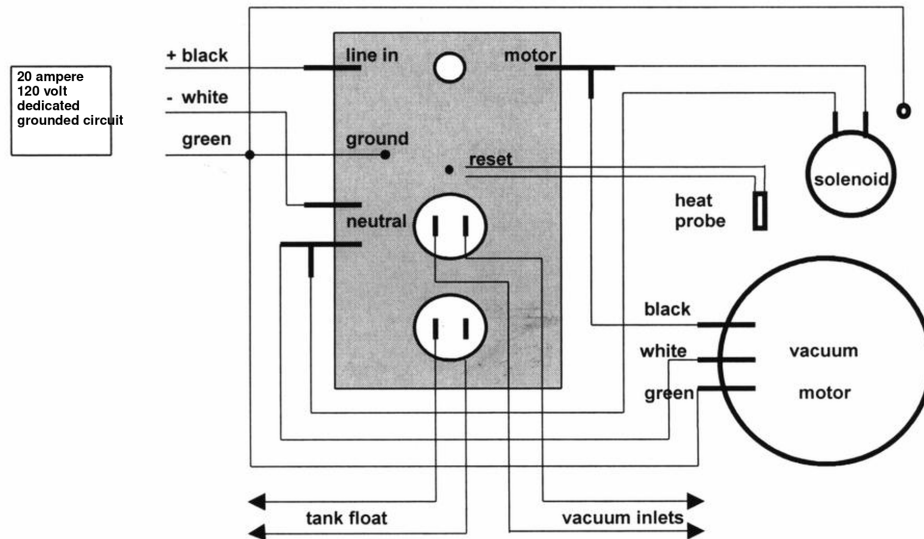
19 Electrical



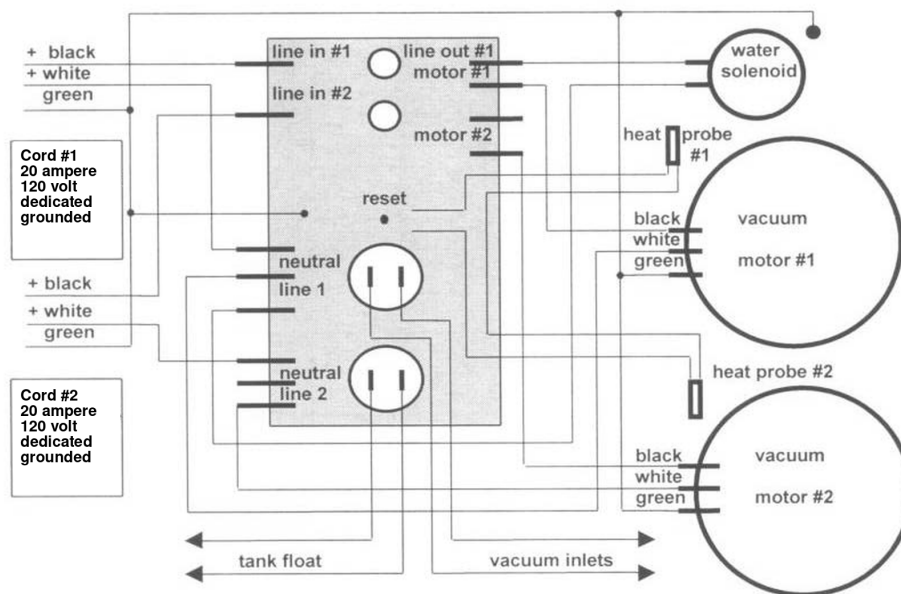
The electrician supplies the circuits and outlets.

- **One 20 A, 120 V, 60 Hz dedicated circuit per motor.** 130/150/158: 1 circuit. 230/250/258: 2 circuits. Each motor booster: 1 more.
 - Grounded outlets that match the plug, about 6–7 ft high and to the left of the unit.
 - **GFCI outlets are fine** for the power unit. Follow local code.
 - No extension cords, no adapters, and don't modify the plug.
1. Confirm each circuit is dedicated and grounded (use an outlet tester).
 2. Connect the low-voltage control wire from the inlets and the tank-float wire to the power unit's low-voltage connections.
 3. Plug in each motor cord. **Don't run the unit yet;** complete Section 21 first.
 4. Current power units have a **reset button** on the power unit.

Wiring diagrams



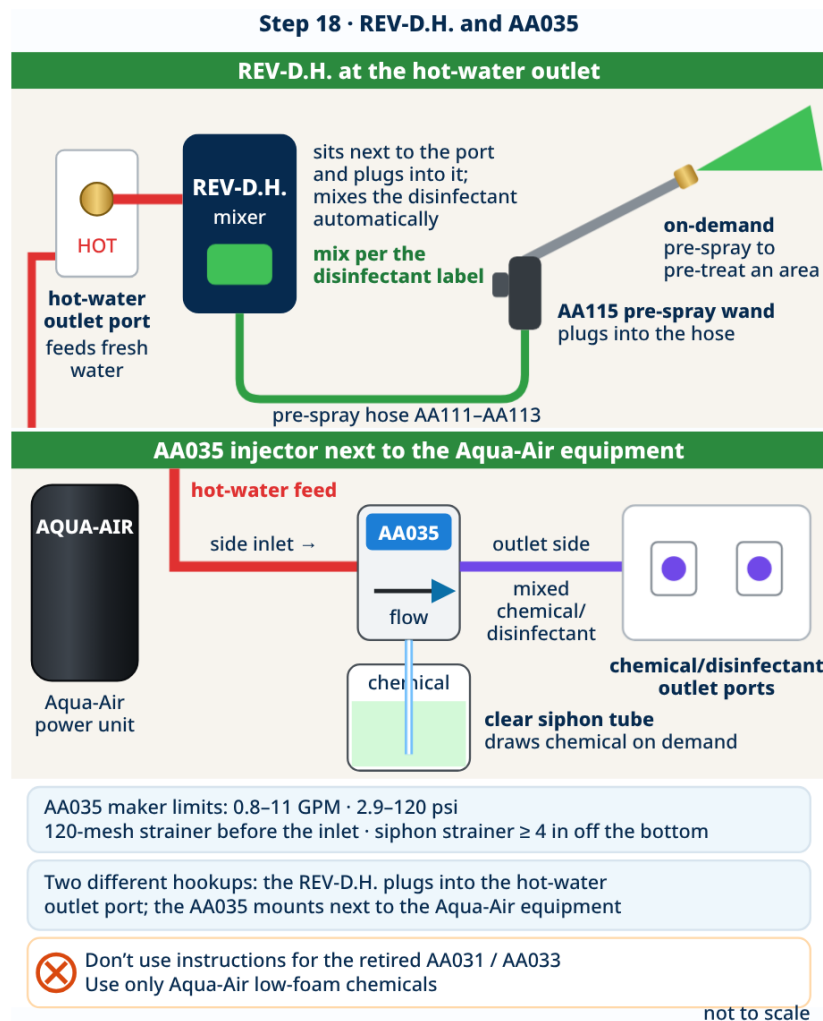
130 / 150 / 158 control module: one 20 A, 120 V dedicated grounded circuit.



230 / 250 / 258 control module: two 20 A, 120 V dedicated grounded circuits (one per cord). On the 258, a jumper is fitted in place of the heat probe.

20 Chemical and disinfectant: REV-D.H. and AA035

Aqua-Air offers two ways to add cleaning chemical or disinfectant. They install differently.



REV-D.H. disinfectant mixer (at the hot-water outlet)

The REV-D.H. is a chemical/disinfectant mixer. It sits next to the hot-water outlet port and plugs into it. The port feeds it fresh water and it mixes the disinfectant automatically, giving on-demand pre-spray to pre-treat an area. It is not plumbed into the water lines.

1. Set the REV-D.H. next to the hot-water outlet port and plug it into the port.
2. Plug the pre-spray hose, **AA111 (30 ft)**, **AA112 (40 ft)** or **AA113 (50 ft)**, into the REV-D.H.
3. Plug the **AA115 pre-spray wand** into the hose.
4. **Mix ratio:** set it per the disinfectant manufacturer's label. Aqua-Air doesn't recommend a mix ratio.
5. Spray on demand to pre-treat the area.

AA035 injector (Dema MixRite 572), next to the Aqua-Air equipment

The AA035 meters chemical/disinfectant into a **hot-water** feed and sends the mix to the chemical/disinfectant outlet ports. It draws chemical on demand through a clear siphon tube.

1. Mount the AA035 next to the Aqua-Air equipment, **above** the chemical container.
2. Connect the **hot-water feed** to the injector's **side inlet**, with the arrow on the injector body pointing in the direction of water flow. Follow local plumbing and back-flow regulations, and fit a 120-mesh (130 micron) line strainer ahead of the inlet.

3. Connect the **outlet side** to the line that feeds the **chemical/disinfectant outlet ports**.
4. Put the **clear siphon tube** from the bottom of the injector into the chemical container. Keep its strainer at least 4 in (10 cm) off the container bottom.
5. Run a **separate** plain hot-water line to the water outlets (this is also the port the REV-D.H. plugs into).
6. Use only Aqua-Air low-foaming cleaning chemicals. Carpet shampoo, all-purpose or automotive cleaners clog the injector, over-foam the extractor, and void the injector and extractor warranty.

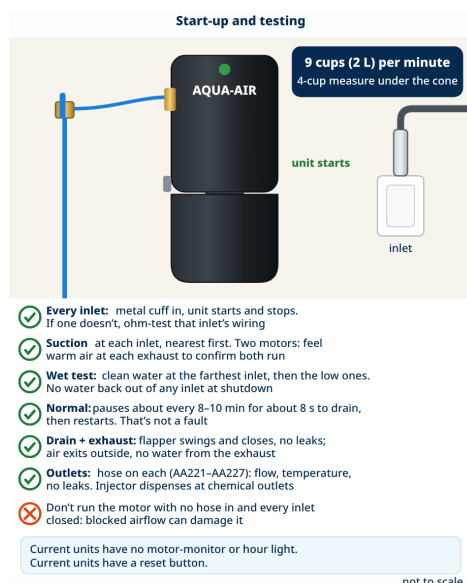
AA035 operating limits (injector maker)

Flow	0.8–11 GPM. Flow over 11 GPM will damage the injector.
Pressure	2.9–120 psi
Strainer	120-mesh (130 micron) before the inlet

Common mistakes

- Plumbing the REV-D.H. into the water lines. It plugs into the outlet port.
- Mixing up the AA035 sides: the feed goes to the side inlet; the outlet goes to the chemical/disinfectant ports.
- Installing the AA035 with the arrow against the flow, or below the chemical container.
- Siphon tube out of the chemical, or its strainer resting on the bottom.

21 Start-up and testing



1. **Debris screen:** open the latches on each side, lower the waste tank, and hang a new debris screen (AA021 20-pack or AA022 50-pack) on the PA145 hook, knotted at the bottom so it can't hang into and block the tank outlet.
2. **Turn on the cold water.** Never run the system, wet or dry, without the cold-water rinse on.

3. **Set the rinse:** with the waste tank lowered, start the unit (insert a hose cuff into an inlet). Hold a 4-cup (1 L) measure under the cone and turn the needle valve below the solenoid (clockwise decreases flow, counter-clockwise increases it) until you get **9 cups (2 L) per minute**. Close the tank.
4. **Every inlet:** insert a metal cuff into each inlet. The unit must start and stop at each one. If one doesn't, ohm-test that inlet's wiring.
5. **Suction:** check suction at each inlet, starting nearest the unit. On two-motor units, feel each exhaust for warm air to confirm both motors run.
6. **Wet test:** suck up clean water at the farthest inlet, then at each inlet on the same floor as the unit or lower. No water should come back out of any inlet at shutdown.
7. **Normal drain cycle:** the unit pauses about every 8–10 minutes for about 8 seconds to drain, then restarts. That isn't a fault.
8. **Drain and exhaust:** the flapper swings freely and closes, with no leaks at the adapter, elbows or standpipe. Air exits outside, and no water comes from the exhaust.
9. **Outlets:** connect a water hose (AA221–AA227) to each outlet and check flow, temperature and for leaks behind the cover. Check that chemical/disinfectant is dispensed at the chemical outlets. If a REV-D.H. is supplied, plug it in with the pre-spray hose and wand and check that it sprays on demand.
10. Don't run the motor with no hose in and every inlet closed.

Current units have no motor-monitor or hour light; check the debris screen on a schedule instead.

22 Hand-over and warranty

Hand-over

Owner's Manual
 AQUA-AIR

Warranty registration

leave with the unit or the customer
return the registration card within 30 days

Warranty (years only)

Residential

Commercial: 1 year

Hoses and tools: 90 days

Not covered: installation, tubing, fittings, inlets/outlets

Show the owner

☒ How to change the debris screen

☒ Where the cold-water shut-off is

☒ Commercial: daily rinse, leave the lower tank open overnight

☒ Rinse the hose after wet use

☒ Chemicals: Aqua-Air low-foam only

Lines run plumb? Rinse regularly with hot water

Support: 1-800-916-5777
 Aqua-Air Wet/Dry · Steam Pro, LLC
 PO Box 911031, St. George, UT 84790

not to scale

1. Leave the Owner's Manual and the warranty registration card with the unit or the customer. The registration must be returned within 30 days.
2. Explain the warranty (below).
3. Show the owner how to change the debris screen, where the cold-water shut-off is, the daily commercial rinse (open, rinse and leave the lower tank open overnight), how to rinse the hose after wet use, and that only Aqua-Air low-foaming chemicals may be used.

4. If any lines were run plumb without drops or speed bumps, tell the owner to rinse the system regularly with hot water.

Limited warranty summary

Coverage	Term
Power unit, residential use	5 years from the date of first consumer purchase
Power unit, commercial use	1 year from the date of first consumer purchase
Hoses, tools and attachments	90 days from the date of first purchase

The warranty does not apply to vacuum tubing, fittings, wall or surface-mounted inlets and outlets, or to the installation. Normal wear (including motor brushes and bearings), accidents, misuse, unauthorized alteration, fire, flood and repairs by third parties are not covered. The full warranty terms are in the Owner's Manual.

Support: 1-800-916-5777 · aa@aquaaair-wetdry.com

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23 Parts reference

Current part numbers used in this manual. For pricing and availability, call 1-800-916-5777 or visit aquaairwetdry.com.

Mounting and power unit	
PA009	Wall holder brackets (supplied with the unit)
AA003-MB	Motor booster, 7.2 in (250), for wet cleaning
AA003-MB 8.4	Motor booster, 8.4 in (258), for wet cleaning
PA044	Muffler
PA304	Exhaust cover
PA144	Adaptor, 2 in vacuum pipe × 2 in PVC Sch. 40
PA048	Solenoid valve
BR420	Needle valve
AA021 / AA022	Debris screens, 20-pack / 50-pack
PA145	Debris-screen hook
Drain	
NM5042	1-1/2 in ABS male adapter
PA106	Flapper (check) valve, 1-1/2 in ABS
PA107	Replacement flapper
PA102	1-1/2 in ABS 45° street elbow
PA104	1-1/2 in ABS female (cleanout) adapter
Chemical / disinfectant	
REV-D.H.	Revolution disinfectant mixer
AA111 / 112 / 113	Pre-spray hose, 30 / 40 / 50 ft
AA115	Pre-spray wand
AA035	Injector (Dema MixRite 572)

Vacuum piping (2 in O.D.)	
PA089	Short 90°, F/F
PA090	Medium 90°, F/M
PA091	Long-sweep 90°, F/F
PA092	Long-sweep 90°, F/M (spigot)
PA093	Short 45°, F/F
PA094	Short 45°, F/M
PA096	Wye, 45°
PA0087	Tee, 90°
PA133	Short tee
PA097	Coupling
PA135	Pipe strap, 2 in
PA136	Pipe strap, 2-1/4 in (fittings)
Inlets, outlets and supply	
PA131	Mounting plate, 2×4
PA138R	Inlet valve and cover, white
PA098	Inlet-valve extension
AA242	Water/chemical outlet kit
AA170	Brass outlet assembly
PAF04	1/8 in female quick connect
PA131C	Outlet mounting plate
PA138CW	Outlet cover, white
PA187	Cover screws
BR503	Crimp band, 3/8 in PEX
BR502	PEX coupler, 3/8 in barb
BR504	Talon nail (PEX clip), 3/8 in
AA221-AA227	Water hoses with quick connects

AQUA-AIR Wet/Dry

BUILT-IN TOTAL CLEANING SYSTEM · SINCE 1990

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Installation Manual · Rev. Oct 2026 · Supersedes all earlier Aqua-Air installation manuals and guides.