CASE STUDY · DELHI NCR · OCT–NOV 2026

Seal the gaps you can see.

Three aqi0 homes, one lesson. Where the visible gaps were closed, night-time PM2.5 indoors fell to near zero, even with Severe air outside. Where a gap stayed open, the inside followed the outside, until it was closed.

4 Nov, 3–5 am
Gurugram, two sealed homes

OUTSIDE
400–494 µg/m³
PM2.5, nearest public outdoor sensor

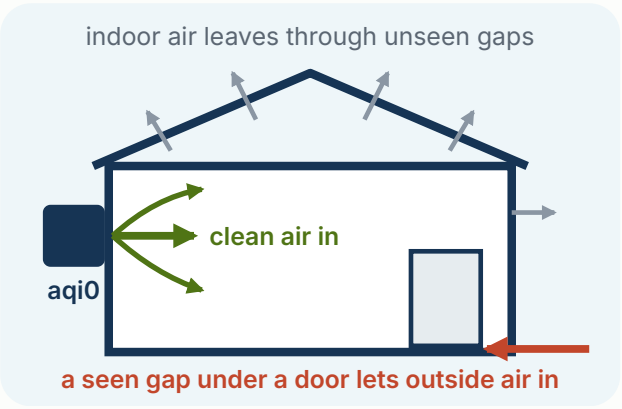
INSIDE
0 µg/m³
PM2.5, median of three aqi0 monitors

Water has one pipe. Air has every gap.

Water reaches your home through one pipe. Filter it there and every tap runs clean. Air doesn't wait for a pipe: it is everywhere, and every gap in a home is a way in.

aqi0 is a whole-home air purifier — technically, a positive-pressure fresh air system. It pushes filtered outdoor air in, so the home sits at a slight positive pressure and indoor air flows **out** through the gaps, instead of outside air flowing in.

That works when the outflow is spread over many small gaps you can't see. One big gap — a door bottom, a cracked pane, a bathroom door left ajar — becomes the easy way. The pressure escapes there, and wind and exhausts pull outside air back in.



Seen gaps — close these

- Under doors to the outside: main, balcony, back, utility
- Old windows that don't shut tight
- Cracked glass, or a small hole in a pane
- AC pipe holes and old fixing holes in walls
- Bathroom doors left ajar; gaps around exhaust fans
- The gap under the kitchen door

Unseen gaps — leave these to us

Every home has hairline gaps in frames, joints and fittings. You can't see them and you don't need to chase them.

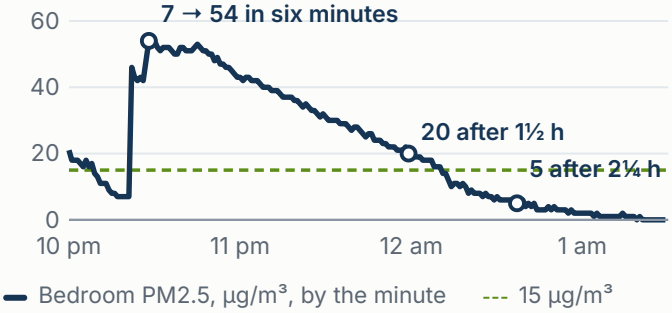
This is where the indoor air leaves. With the outflow spread across many of them, the pressure holds instead of escaping through one big opening.

When outside air is 400+, a few minutes with a door open is enough.

Air mixes fast. Home A, night of 3 Nov, Gurugram's CPCB AQI at 307: at 10:22 pm a single event, most likely a door opening, took the bedroom from **7 to 54 µg/m³ in six minutes**.

The system brought it back, but it took about 1½ hours to reach 20 and 2¼ hours to reach 5. Later that night, with outdoor PM2.5 above 400, the same bedroom read 0.

> Rough arithmetic: five minutes with a door open can swap 40–100 m³ of outside air, up to a fifth of a 2,000 sq ft home. At 400 µg/m³ outside, that lifts the whole home by about 30–80 µg/m³, and far more near the door.



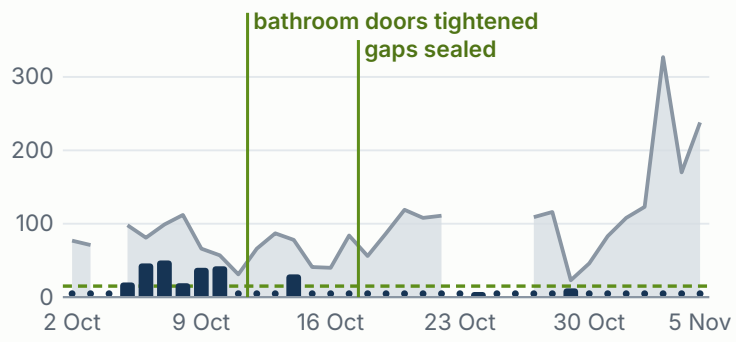
Indoor: aqi0 monitors, one reading a minute. Outdoor: government stations (CPCB network); where offline, the nearest public sensor. Homes are not named.

THREE HOMES, NIGHT BY NIGHT

aqi0 AQI ZERO

The same system in each home. What changed the nights was sealing.

Inside: PM2.5 median, 11 pm–6 am Outside, same nights --- 15 µg/m³ All values µg/m³

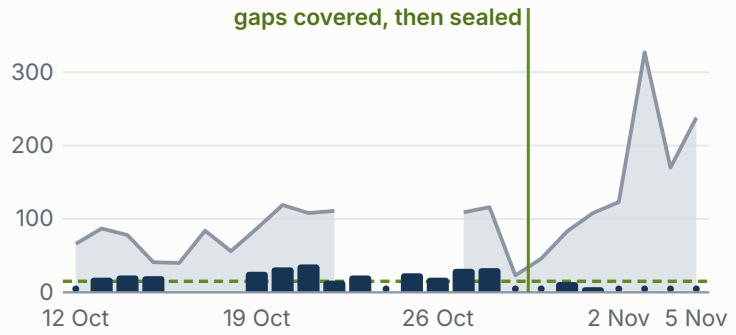


Home A SEALED

Gurugram apartment · two monitors

- First nights 0–2. From 5 Oct, **20–50**: up to three-quarters of outside. Diffuser air read 0, so the leak was in the house.
- Fan turned up: helped for a while. Door-bottom seals alone: no change.
- Bathroom doors left slightly ajar were tightened (12 Oct); door gaps and AC holes sealed (by 18 Oct).
- 15 Oct–5 Nov: every night under 15; **20 of 22 at 0–3**. Same machine.

"The first night we've seen it be 0 through and through." 13 Oct

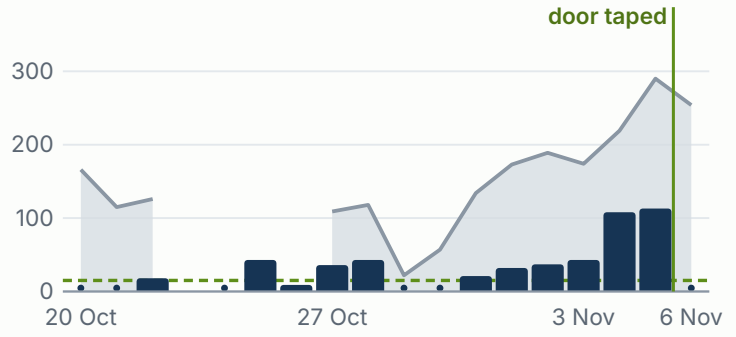


Home B SEALED

Gurugram floor · one monitor in the lounge

- 13–28 Oct: most nights **16–38**.
- Pre-filter cleaned, doors and windows shut: no lasting change.
- 30 Oct: visible gaps, including under the kitchen door, covered at once, then sealed that weekend.
- 2–5 Nov: **0–4** inside, with 123–327 outside.

"Sealing. Really helped." 5 Nov



Home C TAPED

Central Delhi house, older building · one monitor

- Flagged at installation: doors to the outside needed sealing.
- Until 5 Nov: good nights **0–9**, others **21–43**; on 4–5 Nov, **108–113** inside with 219–290 outside.
- 6 Nov evening: an unused door to the outside balcony was taped shut. Inside fell from about 120 to under 15 in 40 minutes, and to 0 in 75, with about 255 outside.
- That night: **0–1** (to 2:40 am).

Your 10-minute sealing check

1. **Doors to the outside:** brush or rubber strip at the bottom.
2. **Windows:** shut and latched; foam tape on old frames.
3. **Glass:** seal cracks and small holes.
4. **Walls:** fill AC pipe holes and old fixing holes.
5. **Bathrooms:** doors shut; gaps around exhaust fans closed.
6. **Kitchen:** strip under the door; chimney on while cooking.
7. **Pre-filter:** wash every 7–10 days. Clogged means less air in.

Read your monitor at night

Under 15	Sealed. This is what we aim for.
20+ all night	A seen gap is still open somewhere.
Sudden jump	A door or window opened. It clears, but slowly.

With the home sealed as designed and filters current, PM2.5 stays under 10 µg/m³ with fresh filters and under 15 µg/m³ across the filter cycle.

Inside: night median of one-minute aqi0 readings. Outside: median of 4 Gurugram / 8 central Delhi government stations; gaps = stations offline.