Double glazing works quietly in the background. When it fails, you notice. A milky smear creeps across the pane on cold mornings. Water beads inside the unit where you can't wipe it away. Frames swell after a storm and the sash drags across the sill. I've spent years diagnosing these issues on driveways and scaffolds, and most paths lead back to one thing: weatherproofing. How well a window resists water and temperature swings will decide whether it gives you twenty years of service or misted panels within five.

This is a practical guide to what "blown" actually means, why units fail, and how smart installation and maintenance keep condensation out and heat in. I'll also be honest about Double Glazing Repairs that make sense, the ones that don't, and what to ask if you're wondering, Can you Fix Blown Double Glazing without replacing everything.

What "blown" means, and why it looks like fog

A double glazed unit is two panes with a sealed perimeter. Between them sits a spacer bar holding a dry atmosphere, usually argon gas, and a product called desiccant that mops up stray moisture. The perimeter uses a primary sealant that sticks the glass to the spacer, then a secondary sealant that gives the joint its strength and weather barrier. When the seal breaks down, ambient air creeps into the void. That air carries moisture, and moisture condenses on the colder inner faces of the glass. The result is misted double glazing that you can't clean because the condensation is trapped inside.

Some people notice a slight rainbow sheen, others see outright droplets. On frosty days the misting Cat Flap Installation is worse. On warm dry days it can almost disappear. That on-off pattern often tricks homeowners into delaying repairs. In my logbook, once a unit mists intermittently, it usually progresses to constant fogging within 6 to 24 months, depending on weather exposure.

Weatherproofing is not one thing, it is a stack of defenses

When I assess a failed unit, I don't just look at the glass. I look at how the whole opening handles rain, wind, and temperature. Weatherproofing is a layered system: external waterproofing, structural drainage, thermal management, and vapor control inside the room. If any layer is weak, the insulated glass unit (IGU) bears more stress than it was designed for.

- The first layer is the outer seal and frame interfaces that face sun, rain, and wind. Sealants, glazing gaskets, and the glazing bead are doing the daily fight here.
- The second layer is the drainage path inside the frame. Modern frames should collect water that sneaks past the first layer and send it back outdoors through weep holes. If these paths are missing or blocked, water stagnates against the IGU edge, attacking seals.
- The third layer is thermal. Uneven temperatures across the frame and unit expand and contract materials at different rates. That movement fatigues the sealant, especially on the sunny, south-facing elevations.
- The fourth layer is interior vapor. High indoor humidity pushes moisture toward the coldest surface. If the interior side is sealed incorrectly, or the room is poorly ventilated, that moisture finds any weak point.

If you want longevity, you don't rely on one hero product. You keep all four layers doing their quiet job.

Why seals fail faster on some homes than others

It isn't randomness. Patterns repeat.

Sun exposure matters. I replace more blown panes on south and west elevations, especially where dark aluminum cladding drives higher edge temperatures. A black frame in summer sun can run 30 to 40 degrees hotter than a white uPVC frame in the shade. That differential matters when the inside is air conditioned. The seal sits between hot and cool zones, cycling day after day, summer after summer.

Water management matters. On coastal properties and hilltop sites with driving rain, water finds every small gap. If the external bead and gasket aren't tight, or if the silicone is a decorative dab rather than a continuous seal, water will wick along the spacer edge. The desiccant inside the spacer was not designed to handle ongoing liquid water loads. Once saturated, it can no longer trap moisture, and misting begins even if the main seal seems intact.

Frame choice matters. uPVC is forgiving, and on well-made frames the corners are heat-welded, which is good for sealing. Timber looks superb and insulates well, but needs repainting or re-oiling on a schedule. If paint fails, water enters the joints, swells timber, and stresses the beads and gaskets. Aluminum is durable, yet conducts heat readily, so thermal breaks and good edge spacers are essential. Poorly specified aluminum frames without warm-edge spacers show earlier failure.

Installer judgment matters. I have seen perfect factory-made IGUs let down by a rushed site install. Trim clips that are too tight crush the edge seal. Missing packers cause point loads and twist the unit. Weep holes filled with paint or debris trap water. Ten minutes of careful packing and a pass with a drill to clear the weeps can add years to a window's life.

The telltales before a unit goes from healthy to blown

Most homeowners first notice misting and think the failure happened overnight. In truth, the window told a story for months.

Look at the outer glazing gasket. If it has shrunk at the corners, leaving a small gap where you can see a sliver of the edge, water is getting in. Press the gasket with your thumb. It should be springy, not brittle.

Check the bottom of the frame after rain. If you see standing water on the inside channel that doesn't drain within two minutes, your weep holes are blocked, or missing. In timber, a persistent dark line beneath the glazing bead signals moisture sitting against the glass edge.

Touch the inner sealant line. If it's a putty-style compound that crumbles or pulls away from the glass with light pressure, the seal is past its best. On older units with metal spacer bars, you might spot fine white or rusty dust at the corners. That's the spacer or desiccant breaking down.

Take note of seasonal patterns. If fogging shows only after wild weather and then clears for weeks, the perimeter likely has a microleak that "pumps" moist air during pressure changes. If fogging is present every cool morning regardless of weather, the desiccant is saturated and the unit is functionally blown.

Misted Double Glazing Repairs that actually work

There are three broad approaches I discuss with clients: replace the whole window, replace only the glass unit, or attempt a remedial de-misting service. Each has merit in the right context.

Replacing the IGU only is the most common fix. If the frame is sound and the sash functions properly, you can order a new double glazed sealed unit to the same size, swap it in, and restore clarity and efficiency. Costs vary with size and spec. Small casement units often fall in the low hundreds. Large sliders or toughened panes cost more. Fitters who carry suction lifters and corner packers can do a typical unit in under an hour.

Full frame replacement makes sense when the frame itself is decayed, warped, or past its service life. I recommend this when timber sills are spongy, when uPVC has yellowed and cracked, or when the hardware is obsolete and draughty. If the glazing has failed in multiple sashes and the profiles are 20 years old, a new system with warm-edge spacers and better gaskets may be a smarter long-term spend.

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De-misting services drill small holes in the pane, flush the cavity, and sometimes fit vents. This can clear the fog for a while. I rarely recommend it. While it may improve appearance temporarily, it breaks the sealed environment by design. You lose the argon gas and some thermal performance, and there is no factory seal restored. For rental properties where budget is tight and the primary concern is visibility, it can be a stopgap. For owner-occupied homes aiming for energy savings, it's a false economy.

If you're asking, Can you Fix Blown Double Glazing without replacing the glass, the honest answer is that long-lived fixes require a new sealed unit. You can prolong a borderline unit by improving the drainage and exterior sealant, and you can reduce interior condensation. Those steps help, but once desiccant is saturated, the fog returns sooner or later.

The weatherproofing details that buy you extra years

Attention to edges and drainage gives the best return on effort. I've seen ten-year-old units fail on one elevation and the same make, same year, go another decade on a better-detailed wall. These are the differences.

Proper packers. Units should be supported on setting blocks at the lower corners, with side packers to keep the pane square and clear from frame edges. That small air space is part of the drainage channel. Without it, the glass sits in moisture. I carry 1, 2, 3, and 5 millimeter packers and stack them to match the frame. A spirit level is not enough. I also measure the diagonal to ensure the sash is not racking the unit.

Continuous external sealant, not dots. On retrofits, installers sometimes add silicone to "tidy" gaps. If they leave unsealed breaks, water will track into the frame. I use a compatible low-modulus silicone or hybrid polymer and tool it to a smooth fillet that sheds water. But I don't seal over weep holes. Those are lifelines and must remain open.

Warm-edge spacers. If you are replacing IGUs, ask for a warm-edge spacer rather than a traditional aluminum one. The thermal edge temperature stays a little higher, which reduces stress on the sealant and cuts the chance of condensation at the perimeter. On cold mornings that edge temperature difference can be 2 to 4 degrees, enough to keep moisture out of the seal path.

Gasket maintenance. uPVC and aluminum frames use clip-in glazing beads and compressible gaskets. UV light and ozone harden these over time. If the gasket has shrunk or lost its bite, replace it. A new gasket is much cheaper than a new unit, and it restores the first line of weather defense.

Ventilation strategy. Trickle vents aren't fashion statements, but they work. If your rooms regularly hit 60 percent relative humidity, low airflow forces moisture to condense on the coldest surfaces. That does not directly blow the unit, but it pushes the internal dew point right to the seals. Good extractor fans in kitchens and bathrooms are

even more effective. In winter, I tell clients to aim for 40 to 50 percent interior humidity. A simple digital hygrometer costs little and keeps you honest.

Climate factors: what changes in stormier, hotter, or coastal regions

I work across damp valleys, windy ridgelines, and salty shorelines. Each setting stresses windows differently, and the weatherproofing plan should adapt.

Coastal homes deal with salt spray that accelerates corrosion of spacer bars and hardware. Stainless fixings and marine-grade finishes are worth the premium. Periodic rinsing of frames with fresh water helps. Avoid sealing products that become brittle in UV. In these areas, I double-check that glazing beads are snug and that there is no capillary path for water to sit against the edge.

Exposed hill sites get wind-driven rain that defeats casual sealant work. I prefer deeper backer rods behind sealant joints to allow proper movement without tearing, and I specify pressure-equalized rainscreen details on cladding that meets windows. Inside the frame, I verify that weep slots are generous enough and shielded so wind doesn't blow water in faster than it can drain out.

Hot, sunny climates amplify thermal cycling. Dark frames expand and contract more, and the glass edge warms significantly during the day then cools quickly overnight. Warm-edge spacers, secondary sealants with higher movement capability, and frames with better thermal breaks pay off. Overhangs or shading devices are not only for comfort, they also protect seals from UV and reduce edge temperature swings.

Cold inland climates with large diurnal swings test desiccant quality. Spending a little extra for units from manufacturers who publish their gas fill rates, sealant chemistry, and spacer specs can be worthwhile. I have had fewer callbacks on units with documented argon retention and silicone secondary seals in these regions.

How to triage: repair the sealant, replace the glass, or go full replacement

Homeowners often call after noticing mist, and the first question is cost. Before talking numbers, I look at three things: frame integrity, unit age, and exposure.

If the frame is rigid, square, and dry, and the failure is limited to one or two panes, I recommend replacing just the sealed units. I also suggest a small weatherproofing refresh: clean and reopen weep holes, replace gaskets if shrunken, and reseal the external perimeter. This combination keeps costs controlled and arrests the cause, not just the symptom.

If the frame is fine but units across several rooms are misting within a short time, it often points to a batch issue or a systemic detail problem. You can replace units, but I'll also want to find the detail that allowed excess water or stress at the edges. Sometimes it is as simple as removing a decorative silicone bead that blocked drainage.

If the frame is compromised, spending on new IGUs does not add up. Rot or UV damage continues to harm the frame, and seals will fail again. In that case, a full replacement with a system that has proven drainage and modern spacers saves headaches. A good installer will show you cross sections and talk through the drainage path. Ask them to.

What to expect during Double Glazing Repairs

A tidy repair is not just a fresh pane. The process matters.

On arrival I measure the sash diagonals, check hinge gear, and inspect the beads and gaskets. I pop the beads in sequence, support the glass with suction cups, and note the packer arrangement. If packers are missing or wrongly placed, I correct that when the new unit goes in. I clean the frame channels and verify that weep holes are open by flooding a small amount of water and watching it discharge outside.

If the old unit shows signs of edge water ingress, I also remove degraded sealant at the exterior perimeter and apply a continuous new bead. For timber frames, I prime bare wood and allow cure time before reassembly. For uPVC, I use compatible sealant and avoid smearing over drainage points.

The new unit is bedded on packers so that glass does not contact the frame edge. Beads are clipped back in order, typically top, sides, then bottom, to keep pressure even. I check sash operation, locking points, and adjust hinges so the unit seals evenly. The entire visit for a typical casement is under an hour if access is straightforward. Large, high, or toughened panes can take longer, and we may schedule two technicians for safety.

When a window “looks” blown but isn’t

Not all condensation equals failure. It helps to know where surface fog forms.

Condensation on the room-side glass usually indicates high indoor humidity or poor airflow. You can wipe it off. Improving ventilation or running a dehumidifier addresses this. Newer, more efficient windows can show interior condensation more readily during cold snaps because the inner pane is cooler than you expect compared to the room air. That is a comfort issue, not a seal failure.

Condensation on the outside surface of the outer pane shows up on cool, still mornings. The glass has radiated heat to the night sky and dipped below the dew point of the outdoor air. This is often a sign that the unit is performing well, keeping inside warmth from reaching the outer pane. It disappears as the sun hits. There is no repair needed.

Condensation or misting between the panes is the classic blown signal. You cannot wipe it away. If it changes with weather fronts, the leak is small but real. If it is constant, the desiccant is saturated and the unit needs replacement.

The economics: payback, energy savings, and timing

People want numbers. Fair enough. A single failed casement IGU might run, as a rough guide, from a low hundred to several hundred in local currency, more if it is large, tempered, laminated, or shaped. Full window replacements vary widely, from mid-hundreds to four figures per opening depending on frame material and performance spec.

Energy savings from fixing one misted pane alone are modest, but the benefit compounds when several leaky units are restored. A clear, gas-filled, low-e double glazed pane can reduce heat loss through that opening by 30 to 50 percent compared to a failed, air-filled, moisture-laden unit. More importantly, comfort rises. Fewer drafts, warmer surface temperatures, and less condensation reduce related maintenance costs such as repainting sills and dealing with mold.

Timing matters. If you plan a full exterior repaint or render, replace blown units first so trims and sealant lines can be integrated. If a roof replacement or gutter upgrade is coming, coordinate so water shedding above windows improves in the same project. Good sequencing avoids rework and wasted scaffold costs.

Materials and details that separate good from great

Manufacturers market a lot of features. I filter for the ones that actually extend longevity.

Look for dual-seal IGUs with a butyl primary and silicone secondary. The butyl keeps gas in, the silicone provides structural stability and resilience to UV and temperature. Hot-melt polysulfide has its place, but modern high-modulus silicones have held up well in the field.

Choose warm-edge spacers made of stainless or composite rather than plain aluminum. Ask about the desiccant type and fill. You don’t need a brand lecture, just clarity that the system keeps argon in and moisture out for the long haul.

On frames, check that the glazing system is drained, not just sealed. A “dry glazed” system with proper compression gaskets and defined weep paths outlasts wet-glazed units that rely only on a surface bead. Timber frames need a reliable capillary break under the glass, often a glazing tape or bead seal backed by primer and paint that is maintained.

Hardware matters more than people think. Hinges that sag lead to poor seals, and poor seals invite moisture. I prefer stainless friction hinges in coastal zones and robust multi-point locks that pull the sash evenly against the weather strip.

A short checklist for homeowners

- Inspect weep holes and clear them with a plastic probe, not a nail that could scratch and rust.
- Gently press glazing gaskets. If brittle or shrunk, have them replaced before water finds gaps.
- Watch for misting patterns. Intermittent fog after storms suggests a small leak. Constant fog means the unit is blown.
- Control indoor humidity, especially in winter. Aim for 40 to 50 percent using extractor fans and trickle vents.
- When replacing units, specify warm-edge spacers and dual-seal construction, and have the installer show packers and drainage paths.

Edge cases and judgment calls

Historic properties with wavy glass or slender timber profiles often need slimline double glazing to preserve sightlines. These units have narrower cavities and sometimes lower gas retention. Good joinery details are essential, including ventilated glazing beads and microporous finishes. Expect shorter lifespans than chunky modern units, but still respectable if detailed correctly.

Rooflights and skylights see tougher conditions. Their horizontal or low-slope orientation leaves water sitting against seals longer after rain. I favor factory-flashed units from reputable brands and I follow the manufacturer's pitch limits. Even well-made rooflights can show exterior condensation more frequently. That's not a failure sign unless you see trapped moisture.

Large sliding doors flex more due to their span. Poorly supported lintels or subsidence can twist frames and shear seals. When I see repeating failures on large sliders, I check structure first. Sometimes the best "glazing repair" is a steel reinforcement above the opening, which stabilizes everything below.

What good installers do differently

When you invite someone to handle Double Glazing Repairs, look for habits that signal craft. They measure diagonals, not just width and height. They carry a variety of packers and use them with intent. They protect paintwork and sills with blankets, not just for show but to avoid micro-cracks that become water paths later. They test weep holes with water, not guesswork. They explain why they choose one sealant over another and leave you with advice on maintenance rather than a bill and a shrug.

I've returned to homes ten years after a simple IGU swap and found the pane still clear, the beads snug, and the weeps clear. Not because the glass came from a magical factory, but because the edges stayed dry, the seals moved with the seasons, and the homeowner kept an eye on humidity and gaskets. Weatherproofing is quiet work that pays every winter and every storm. If you handle it well, you rarely wonder, Can you Fix Blown Double Glazing, because the question doesn't come up for a long time. And if it does, you'll know which repairs are worth doing, and which details keep the next unit clear for years.