

Step-by-Step Guide to Meeting UK Purge Ventilation Requirements (Part F)

Understanding When and How to Provide Adequate Ventilation in Dwellings

1. Start With the Basics: Is Purge Ventilation Required?

All habitable rooms (living rooms, bedrooms, dining rooms, etc.) in UK dwellings **must** comply with Part F ventilation requirements. Begin by asking:

Q: Is the space a habitable room?

- **Yes:** Proceed to ventilation checks.
- **No** (e.g., bathroom, kitchen, utility room): Focus on *extract ventilation* instead (see Part F Section 1 for wet room requirements).

2. Natural Ventilation First: Window Requirements

A. Check for Openable Windows

All habitable rooms **must** have openable windows or another purge ventilation system. Ask:

Q: Does the room have openable windows?

- **Yes:** Evaluate window type/size.
- **No:** Mechanical purge ventilation is **required** (e.g., extract fan with ≥ 4 air changes/hour).

B. Window Type Dictates Minimum Opening Area

The required open area depends on window style:

Window Type	Minimum Open Area	Example (10m ² Room)
Hinged/pivot (opens $\geq 30^\circ$)	1/20 of floor area	0.5m ² opening (e.g., 71cm x 71cm)
Hinged/pivot (opens 15-30°)	1/10 of floor area	1.0m ² opening (e.g., 100cm x 100cm)
Sash windows	Must open fully to 1/10 floor area	1.0m ² opening
Other (e.g., tilt-and-turn)	Total open area \geq 1/20 floor area	0.5m ² opening

Example Calculation:

A 15m² living room with hinged windows (opens 35°) needs:

$15\text{m}^2 \times 1/20 = 0.75\text{m}^2$ of open window area.

3. When Natural Ventilation Isn't Enough

A. Upgrade or Install Mechanical Systems

If existing windows **can't meet the minimum open area**, you must:

1. Enlarge the window opening, **or**
2. Install mechanical purge ventilation (e.g., continuous extract fan rated for ≥ 4 air changes/hour).

B. Overheating Risks (Part O Compliance)

South-facing rooms or spaces with large glazing often require **enhanced purge ventilation** to prevent overheating. Ask:

Q: Is the room at risk of overheating?

- **Yes:** Follow Part O regulations (typically requires larger openings or night-time ventilation).
 - **No:** Proceed with Part F requirements only.
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4. Special Cases: High-Pollutant Activities

Rooms used for activities like painting, woodworking, or frequent cooking may need **additional ventilation**:

- **Temporary boost mode:** Use mechanical systems with ≥ 30 l/s extract rates.
 - **Larger openings:** Increase purge ventilation capacity by 20-50% above minimum requirements.
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5. Final Compliance Checklist

1. ☐ All habitable rooms have purge ventilation (natural or mechanical).
 2. ☐ Window openings meet size/type requirements (see table above).
 3. ☐ Mechanical systems (if used) are commissioned and tested (refer to Part F Appendix C).
 4. ☐ Overheating risks addressed via Part O where applicable.
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Need Help?

Consult a **competent ventilation specialist** if:

- The room has no external walls.
- You're unsure about airflow calculations.

- Retrofitting ventilation in listed/traditional buildings.
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By following this guide, you'll ensure compliance with Part F while maintaining healthy indoor air quality. Always cross-check with the full Approved Document F for edge cases or complex projects.