Air Permeability Test Report

PULSE

Fron Uchaf Farm Fron Isaf Chirk Wrexham LL14 5AL	**Whole Building**	Air Permeability @ 4Pa **1.92** m³/h.m²
Report Date **24 July 2026**	Unique Reference **3713A942-B6DF-4142-856C-4D1C523A8C6E**	

Test Date	23 Jul 2026 - 12:31	**Test Method**	Low Pressure Pulse
Test Reference	Fron Uchaf Farm Fron Isaf Chirk Wrexham LL14 5AL		
Test Type	Air Pressure Test – CIBSE TM23 (LPP)		
Test Purpose	Existing Dwelling		

Building Info	-		
Openings Preparation	Closed or Temporarily Sealed	**Floor Area**	-
Ventilation Preparation	Closed or Temporarily Sealed	**Envelope Area**	500.0 m²
Geometry Source	Measured On Site	**Volume**	500.0 m³

Result

		Measured @ 4Pa			Extrapolated @ 50Pa	
Air Leakage Rate	Q_4	958	m³/h	Q_{50}	4,792	m³/h
Air Permeability	AP_4	1.92	m³/h.m²	AP_{50}	9.58	m³/h.m²
Air Changes per Hour	N_4	1.92	1/h	N_{50}	9.58	1/h
Equivalent Leakage Area		0.1328	m²		0.1328	m²
Calculation Uncertainty		0.79	±%		2.61	±%

Test Status	Valid				
Equipment	Pulse V2	**Number of ARs**	4	**Intitial Pressure**	9.1 - 9.4 bar
Pulse Duration	1.5 secs	**Number of Steps**	2	**Steps Used**	1, 2

Calculation Details

Achieved Pressure Range	2.0 - 7.8 Pa
Coefficient of Determination (R^2) *	0.9872
Air Flow Exponent (n) *	0.79 ±0.02
Air Flow Coefficient (C_{ENV})	319.965
Air Leakage Coefficient (C_L)	318.163

* For a test to be valid, coefficient of determination must be at least 0.96 and air flow exponent must be between 0.5 and 1.

Test Conditions

Barometric Pressure	1,001.5 mbar
Internal Temperature	22.1 °C
External Temperature *	20.0 °C
Wind Speed *	4.8 m/s
Weather *	Scattered clouds

* Weather observations provided for reference only and based on closest weather station and nearest hourly record.

Deviations from the Airtightness Standard or Procedure
None

Additional Preparations Undertaken
None

Test Notes
None

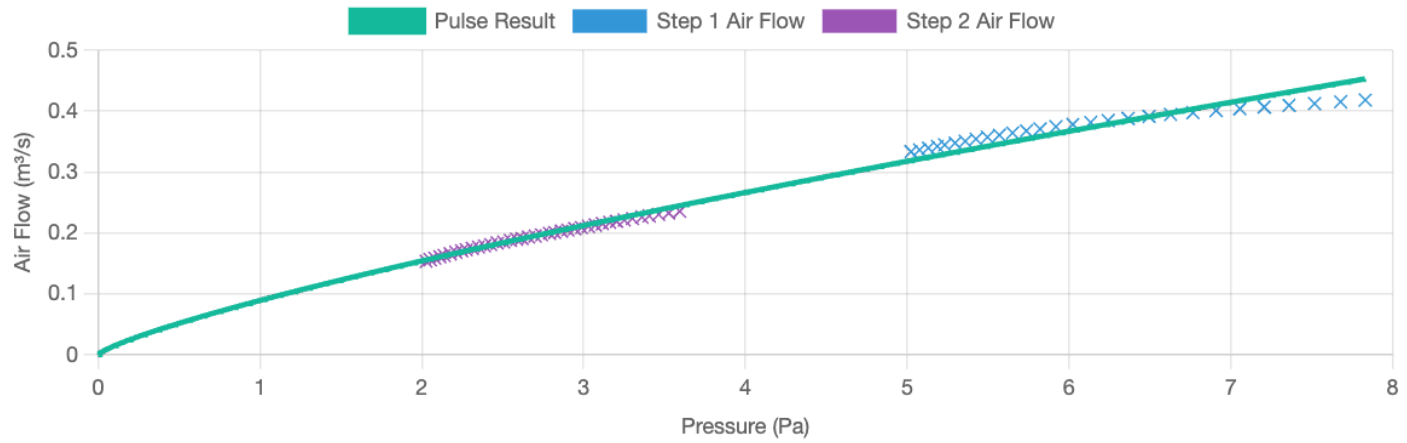
Tags
None

Building Name	Main		
Building Type	-	**Number of Bedrooms**	-
Attachment	-	**Age Band**	-
Main Wall Construction	-	**Floor Area**	-
Main Floor Type	-	**Envelope Area**	500.0 m²
Main Heating Type	-	**Volume**	500.0 m³
Main Ventilation Type	-		
Ventilation Devices	-		
Site Notes	None		

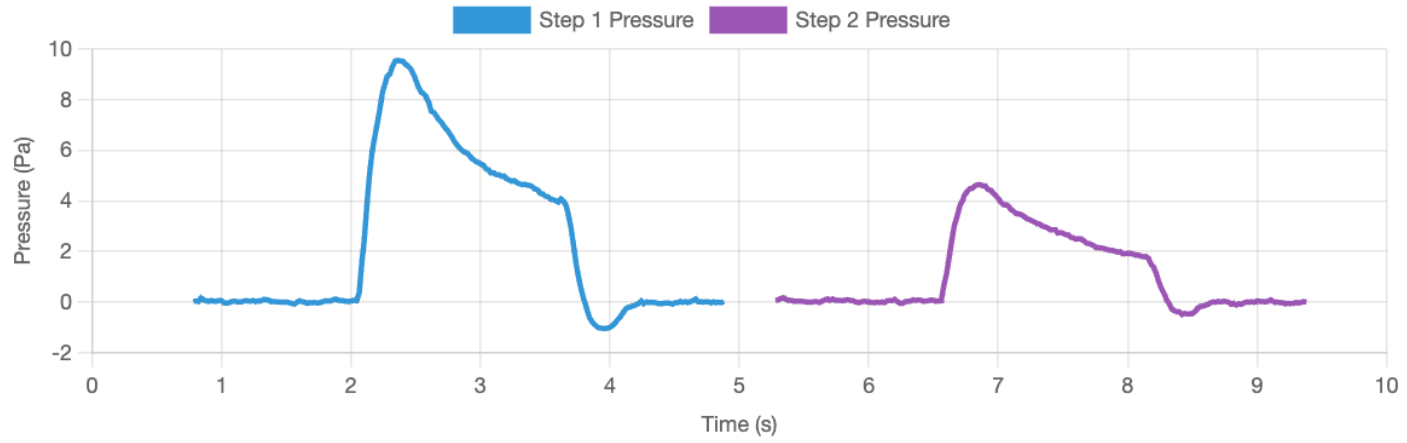
Equipment List

Name	Model	Serial No.	Software Version	Initial Pressure
Controller	PUL-V2-CON	4002293	5.0.9	-
Air Receiver 1	PUL-V2-AR (39.8L)	2001406	12.0.0	9.4 bar
Air Receiver 2	PUL-V2-AR (39.8L)	2001490	12.0.0	9.1 bar
Air Receiver 3	PUL-V2-AR (39.8L)	2001405	12.0.0	9.3 bar
Air Receiver 4	PUL-V2-AR (39.8L)	2001373	12.0.0	9.2 bar

Air Flow Chart



Air Pressure Chart



Test Performed By

Name	Stephen Coyle	**Registration No.**	0959
Job Title	Director		
Company	**ONE HEAT LOSS LTD**		
	Ironmaster House, 37 Wyle Cop, Shrewsbury, SY1 1XF		
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All times are displayed in:	GMT Daylight Time (UTC+01:00)
Pulse calculator version:	6.0.3
4-50 Pa conversion formula:	$AP_{50} = 5.2540 \times AP_4^{0.9241}$

This airtightness test was performed using Pulse air pressure measurement equipment from Build Test Solutions Ltd. All queries should be directed at the company that performed the test using their contact details displayed above.

For all other enquiries regarding Pulse, please visit www.buildtestsolutions.com.