



BUILDING LEAKAGE TEST

Date of Test: 21.02.2025 Test File: Кирилловское

Technician:

Project Number:

Customer: , СК "Сканди ЭкоДом"

Building Address: загородный дом
Кирилловское

Phone:

Fax:

Test Results at 50 Pascals:

	Depressurization	Pressurization	Average
q ₅₀ : m ³ /h (Airflow)	456 (+/- 2.6 %)	430 (+/- 4.4 %)	443
n ₅₀ : 1/h (Air Change Rate)	0.92	0.86	0.89
qF ₅₀ : m ³ /(h·m ² Floor Area)	2.66	2.50	2.58
qE ₅₀ :			

Leakage Areas:

ELA ₅₀ : m ²	0.0139 (+/- 4.4 %)	0.0131 (+/- 4.4 %)	0.0135
ELA _{F50} : m ² /m ²	0.0000811	0.0000763	0.0000787
ELA _{E50} :			

Building Leakage Curve:

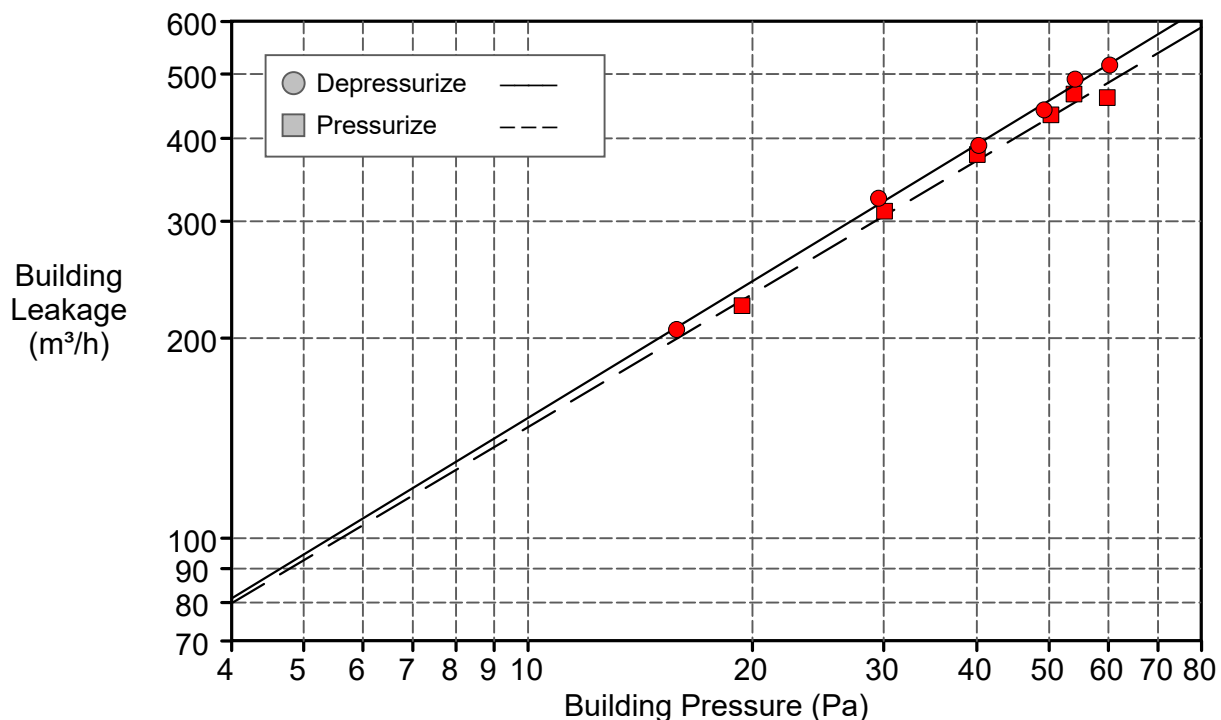
Air Flow Coefficient (C _{env}) m ³ /(h·Pa ⁿ)	30.7 (+/- 17.6 %)	31.3 (+/- 35.9 %)
Air Leakage Coefficient (C _L) m ³ /(h·Pa ⁿ)	31.5 (+/- 17.6 %)	31.7 (+/- 35.9 %)
Exponent (n)	0.683 (+/- 0.048)	0.666 (+/- 0.097)
Coefficient of Determination (r ²)	0.99744	0.98907

Test Standard: ISO 9972

Test Mode: Depressurization and Pressurization

Type of Test Method: Method 2 - Test of Building Envelope

Purpose of Test: n₅₀ ≤ 4 1/h



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Building Information

Internal Volume, V (m³) (according to ISO)	498
Net Floor Area, A_F (m²) (according to ISO)	171.5
Envelope Area, A_E (m²) (according to ISO)	
Height (m)	
Uncertainty of Dimensions (%)	
Year of Construction	2025
Type of Heating	
Type of Air Conditioning	
Type of Ventilation	None
Building Wind Exposure	Partly Exposed Building
Wind Class	Light Air

Equipment Information

Type	Manufacturer	Model	Serial Number	Custom Calibration Date
Fan	Energy Conservatory	Model 4 (230V)		-
Micromanometer	Energy Conservatory	DG700	61949	03.06.2014

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Depressurization Test 1:**Environmental Data**

Indoor Temperature (°C)	Outdoor Temperature (°C)	Barometric Pressure (Pa)
8.5	-2.0	101325.0

Pre-Test**Baseline Pressure Data****Post-Test**

$\Delta p_{0,1-}$	$\Delta p_{0,1+}$	$\Delta p_{0,1}$	$\Delta p_{0,2-}$	$\Delta p_{0,2+}$	$\Delta p_{0,2}$
-0.3	0.1	-0.2	-1.4	0.0	-1.4

Data Points - Semi-Automated Test (TTE 5.0.8.4)

Nominal Building Pressure (Pa)	Baseline adjusted Building Pressure (Pa)	Fan Pressure (Pa)	Nominal Flow q_r (m³/h)	Adjusted Flow q_{env} (m³/h)	Adjusted Flow q_L (m³/h)	% Error	Fan Configuration
-0.2	n/a	n/a					
-61.1	-60.3	43.7	533	503	516	-0.5	Ring B
-55.0	-54.1	39.6	508	479	491	2.0	Ring B
-50.0	-49.2	32.0	456	430	441	-2.2	Ring B
-41.0	-40.2	24.9	403	381	390	-0.7	Ring B
-30.3	-29.5	254.6	336	317	325	2.2	Ring C
-16.6	-15.8	105.5	213	201	206	-0.8	Ring C
-1.4	n/a	n/a					

Deviations from Standard ISO 9972 - Test Parameters

- An interval between building pressures exceeds 10 Pa.
- The minimum pressure is not within +/- 3Pa of the greater of 10 Pa or (5 * zero-flow pressure Δp_{01}).

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Pressurization Test 1:**Environmental Data**

Indoor Temperature (°C)	Outdoor Temperature (°C)	Barometric Pressure (Pa)
8.0	-2.0	101325.0

Pre-Test**Baseline Pressure Data****Post-Test**

$\Delta p_{0,1-}$	$\Delta p_{0,1+}$	$\Delta p_{0,1}$	$\Delta p_{0,2-}$	$\Delta p_{0,2+}$	$\Delta p_{0,2}$
-0.2	0.0	-0.1	-0.1	1.2	0.8

Data Points - Semi-Automated Test (TTE 5.0.8.4)

Nominal Building Pressure (Pa)	Baseline adjusted Building Pressure (Pa)	Fan Pressure (Pa)	Nominal Flow q_r (m³/h)	Adjusted Flow q_{env} (m³/h)	Adjusted Flow q_L (m³/h)	% Error	Fan Configuration
-0.1	n/a	n/a					
60.2	59.9	31.9	455	454	461	-4.9	Ring B
54.4	54.0	32.6	461	460	466	3.1	Ring B
50.7	50.3	28.2	429	428	434	0.5	Ring B
40.4	40.1	21.3	374	373	378	2.0	Ring B
30.4	30.1	214.1	307	306	311	1.5	Ring C
19.7	19.4	113.5	221	221	224	-1.9	Ring C
0.8	n/a	n/a					

Deviations from Standard ISO 9972 - Test Parameters

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- The minimum pressure is not within +/- 3Pa of the greater of 10 Pa or (5 * zero-flow pressure Δp_{01}).

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Comments

Проверка на герметичность ограждающих конструкций.

Согласно российскому ГОСТ 31167-2009 (Приложение Д, таблица Д.1) кратность воздухообмена n_{50} считается "нормальной", если находится в диапазоне 2-4ед.

По результатам теста данная величина $n_{50}=0,89$ ед (при перепаде 50Па) и относится к "очень низкому" классу воздухопроницаемости, что соответствует действующим нормативам.
