

BUILDING LEAKAGE TEST

Date of Test: 03.12.2024 Test File: КП Майнила

Technician:

Project Number:

Customer: , СК "Сканди ЭкоДом"

Building Address: загородный дом
КП "Майнила"

Phone:

Fax:

Test Results at 50 Pascals:

	Depressurization	Pressurization	Average
q_{50} : m^3/h (Airflow)	560 (+/- 0.7 %)	418 (+/- 2.0 %)	489
n_{50} : 1/h (Air Change Rate)	1.31	0.98	1.15
q_{F50} : $\text{m}^3/(\text{h} \cdot \text{m}^2 \text{ Floor Area})$	4.11	3.07	3.59
q_{E50} :			

Leakage Areas:

ELA $_{50}$: m^2	0.0171 (+/- 2.0 %)	0.0127 (+/- 2.0 %)	0.0149
ELA $_{F50}$: m^2/m^2	0.0001252	0.0000934	0.0001093
ELA $_{E50}$:			

Building Leakage Curve:

Air Flow Coefficient (C_{env}) $\text{m}^3/(\text{h} \cdot \text{Pa}^n)$	35.4 (+/- 6.0 %)	34.3 (+/- 15.7 %)
Air Leakage Coefficient (C_L) $\text{m}^3/(\text{h} \cdot \text{Pa}^n)$	36.1 (+/- 6.0 %)	35.1 (+/- 15.7 %)
Exponent (n)	0.701 (+/- 0.016)	0.634 (+/- 0.043)
Coefficient of Determination (r^2)	0.99972	0.99766

Test Standard:

ISO 9972

Test Mode:

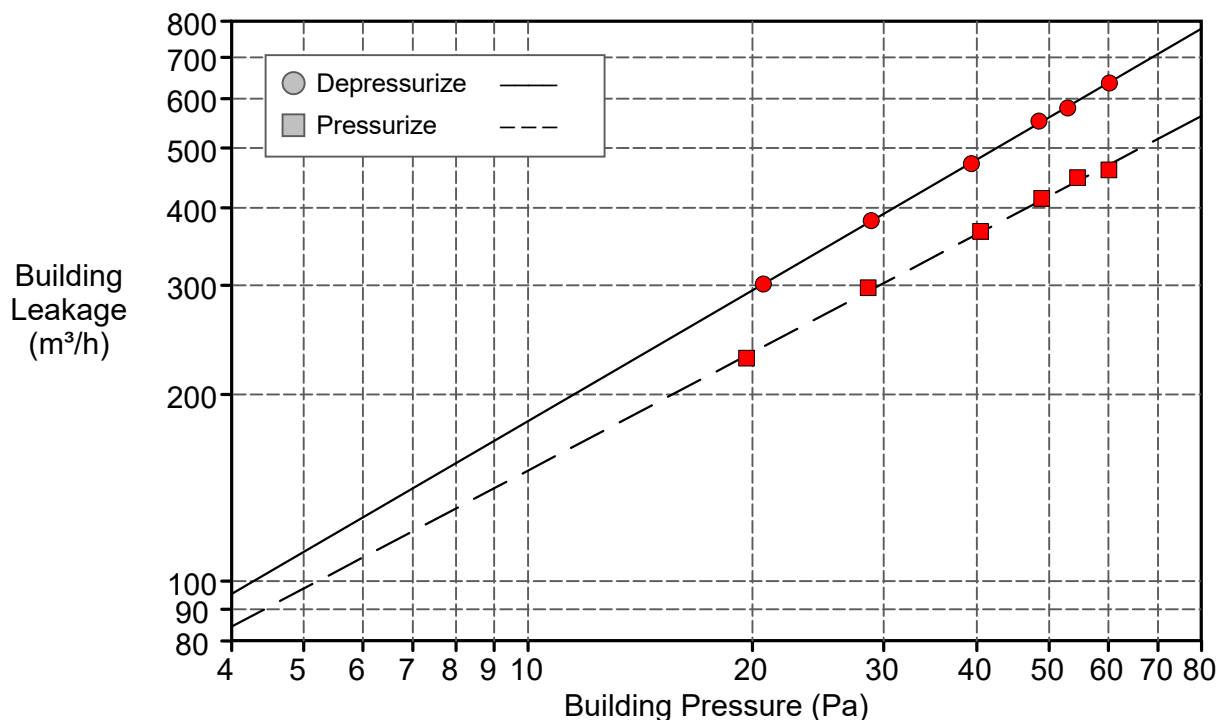
Depressurization and Pressurization

Type of Test Method:

Method 2 - Test of Building Envelope

Purpose of Test:

$n_{50} \leq 4$ 1/h



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Building Information

Internal Volume, V (m³) (according to ISO)	426.6
Net Floor Area, A_F (m²) (according to ISO)	136.4
Envelope Area, A_E (m²) (according to ISO)	
Height (m)	
Uncertainty of Dimensions (%)	
Year of Construction	2024
Type of Heating	
Type of Air Conditioning	
Type of Ventilation	None
Building Wind Exposure	Partly Exposed Building
Wind Class	Light Breeze

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)
3.0	2.0	101325.0

Pre-Test Baseline Pressure Data Post-Test

$\Delta p_{0,1-}$	$\Delta p_{0,1+}$	$\Delta p_{0,1}$	$\Delta p_{0,2-}$	$\Delta p_{0,2+}$	$\Delta p_{0,2}$
-0.1	0.1	-0.0	-1.7	0.0	-1.7

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
-0.0	n/a	n/a					
-61.1	-60.2	64.3	646	625	637	-0.2	Ring B
-53.8	-52.9	53.3	589	569	580	-0.4	Ring B
-49.3	-48.4	48.3	561	542	553	0.9	Ring B
-40.2	-39.3	35.1	479	463	472	-0.3	Ring B
-29.7	-28.8	22.9	387	374	381	0.1	Ring B
-21.6	-20.7	212.3	306	296	301	-0.1	Ring C
-1.7	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)
3.0	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	1.2	-0.1	-0.0	0.7	0.5

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					
60.3	60.1	32.9	463	451	460	-2.0	Ring B
54.8	54.6	31.0	450	438	447	1.2	Ring B
49.0	48.9	26.6	417	405	414	0.6	Ring B
40.7	40.5	304.8	369	358	366	0.2	Ring C
28.8	28.6	203.2	299	291	297	1.3	Ring C
19.8	19.6	122.4	230	224	229	-1.1	Ring C
0.5	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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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 $n_{50}=1,15$ ед (при перепаде 50Па) и относится к "низкому" классу воздухопроницаемости, что соответствует действующим нормативам.
