

Building and ductwork airtightness in the Netherlands: national trends and requirements

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FOREWORD

The AIVC is preparing a series of VIP on national regulations and trends in airtightness for various countries (numbered VIP 45.XX), detailing for both building and ductwork airtightness:

- the national requirements and drivers (regulations, incentives, justifications and sanctions)
- whether it is taken into account in the energy performance calculations and how;
- the test protocol (testers qualifications, national guidelines, requirements on measuring devices);
- the tests already performed and whether there is a results database;
- key documents.

This presentation focuses on the airtightness trends in the Netherlands.

KEYWORDS

Building airtightness, ductwork airtightness, regulation, trends, Netherlands

1 BUILDING AIRTIGHTNESS

In the last few years there has been an increased level of awareness on the topic of climate change, and the required energy transition in the Netherlands. Laws and regulations such as the quality law (wet kwaliteitsborging) have been delayed but are slowly being implemented.

The Dutch Construction Law (Bouwbesluit 2012 article 5.4) provides an overall maximum air permeability of 0.2 m³/s (200 l/s for a maximum of 500m³ of building volume, after which the rate pro rata considered for larger volumes). This value should be measured as per the NEN 2686 standard. This leakage rate is not considered stringent, but is considered as a minimum baseline.

Generally speaking, contractors are more aware of the requirements of airtightness, but a knowledge gap still exists for some. Certain contractors are very active in improving their quality, others act as if they have never even heard of airtightness.

2 DUCTWORK AIRTIGHTNESS

In the Netherlands, there is currently no legal requirement to test the airtightness of ventilation systems. For residential building testing is close to zero. The testing of non-residential

construction is fully controlled by LuKa, the Dutch association of air duct manufacturers. They are actively involved in promoting the quality and performance of air duct systems in the Netherlands.

LUKA has developed its own quality assurance program, which includes testing and certification of air duct systems. This program aims to ensure that the manufactured air ducts meet the required standards and specifications, including aspects related to airtightness. While LUKA's certification is not a legal requirement, it is widely recognized in the industry and can provide assurance of the quality and performance of air duct systems. Builders and contractors often prefer to use LUKA-certified air ducts to ensure compliance with industry standards and best practices. Therefore, although not legally mandated, the involvement of LUKA and their certification program can play a significant role in promoting and ensuring the airtightness and quality of ventilation systems in the Netherlands. LUKA closely cooperates with the independent institute TÜV Rheinland Nederland B.V.. The quality officers of TÜV Rheinland Nederland B.V do regular checks on compliance with the standards.

Airtightness testing is now part of the overall energy performance calculation of a building according to the NTA 8800:2022. This NTA is aimed at improving the energy efficiency of buildings and reducing energy consumption.