

DIN EN 13141-4:2022-12 (E)

Ventilation for buildings - Performance testing of components/products for residential ventilation - Part 4: Aerodynamic, electrical power and acoustic performance of unidirectional ventilation units

Contents		Page
European foreword		4
Introduction		6
1	Scope	8
2	Normative references	8
3	Terms and definitions	9
4	Symbols and abbreviations	11
5	Performance testing of aerodynamic characteristics	13
5.1	External leakages	13
5.1.1	Test installation	13
5.1.2	Test procedure	13
5.2	Air flow/pressure performance	15
5.2.1	General	15
5.2.2	Test Installation	16
5.2.3	Test procedure	17
5.3	Air flow sensitivity	21
5.4	Indoor/outdoor airtightness	22
6	Energy	22
6.1	Performance testing of electrical power	22
6.1.1	Testing method	22
6.1.2	Electrical power input at reference and maximum air volume flow	22
6.1.3	Assessment of part load energy efficiency (optional)	22
6.2	Operable mode	22
6.3	Standby mode	22
7	Performance testing of acoustic characteristics	23
7.1	General	23
7.2	Noise radiated through the casing of the unit LWc	25
7.2.1	General	25
7.2.2	Test Installation	25
7.2.3	Measurements	26
7.3	Radiated sound power level in the indoor or outdoor space - LWi and LWo	27
7.3.1	General	27
7.3.2	Test Installation	27
7.3.3	Measurements	29
7.4	In-duct sound power level of the unit	29
7.4.1	General	29
7.4.2	Test Installation	29
7.4.3	Measurements	31
7.5	Airborne sound insulation	31
7.5.1	General	31
7.5.2	Test Installation	31
7.5.3	Measurements	32

8	Test results	32
8.1	Test report	32
8.2	Product specifications	32
8.3	Leakages	33
8.4	Air flow/pressure curve	33
8.5	Air flow sensitivity for non-ducted ventilation units	33
8.6	Indoor/outdoor airtightness for non-ducted ventilation units	33
8.7	Energy	33
8.8	Acoustic characteristics	33
Annex A (normative)	Connection box(es)	36
Annex B (normative)	Evaluation of maximum air volume flow and pressure	38
Annex C (normative)	Examples for the evaluation of reference pressure	39
Annex D (informative)	Assessment of part load energy efficiency	40
Bibliography		44