

DIN EN 1751:2024-10 (E)

Ventilation for buildings - Air terminal devices - Aerodynamic testing of damper and valves

Contents		Page
European foreword		3
1	Scope	4
2	Normative references	4
3	Terms, definitions, symbols and suffixes	5
3.1	Terms and definitions	5
3.2	Symbols	5
3.3	Suffixes	6
4	Instrumentation	6
4.1	Air flow rate measurement	6
4.2	Pressure measurement	7
4.3	Temperature measurement	7
5	Leakage tests	8
5.1	General	8
5.2	Damper and valve leakage	8
5.3	Casing leakage	8
6	Flow rate and pressure tests	9
6.1	Ducted method	9
6.2	Chamber method	10
6.2.1	General	10
6.2.2	Size relationship	10
6.2.3	Tests	10
6.3	Calculations and report	11
Annex A (informative) Mechanical testing of dampers and valves		18
A.1	General	18
A.2	Instrumentation: Torque measurement	18
A.3	Pressure test to determine limiting value for structural stability	18
A.4	Torque tests to determine the torque required to operate the damper or valve and the limiting value to avoid structural damage	19
Annex B (informative) Thermal transmittance through dampers and valves		21
B.1	General	21
B.2	Thermal loss test using a substitution method	21
Annex C (normative) Classification of a damper or valve leakage		24
C.1	General	24
C.2	Leakage through closed blade(s)	24
C.3	Casing leakage	26
Annex D (informative) Effect of duct configuration on pressure loss coefficient		28
D.1	General	28

D.2	Application of correction factor	29
Bibliography		30