

DIN 1946-6:2019-12 (E)

Ventilation and air conditioning - Part 6: Ventilation for residential buildings - General requirements, requirements for design, construction, commissioning and handover as well as maintenance

Contents

Page

Foreword	4
1 Scope	5
2 Normative references	5
3 Terms, abbreviations and symbols	7
3.1 Terms and definitions.....	7
3.2 Abbreviations	12
3.3 Graphical symbols.....	13
4 Ventilation concept — Necessity of ventilating measures	14
4.1 General	14
4.2 Ventilation measures	15
5 Ventilation concept — Selecting a ventilation system	18
5.1 Overview of ventilation system types.....	18
5.2 Requirements on the selection of a ventilation system.....	20
6 Determining the outdoor air flow rates.....	25
6.1 Effective and required outdoor air flow rates	25
6.2 Outdoor air flow rate due to infiltration (influence of building envelope).....	27
7 Natural ventilation — Determining the outdoor air flow rates	32
7.1 Required outdoor air flow rates.....	32
7.2 Outdoor air flow rate achieved by ventilation measures.....	34
7.3 Design of ventilation components — Assignment to ventilation systems.....	36
7.4 Requirements on air quality.....	39
7.5 Guidelines for design	40
7.6 Commissioning and handover.....	41
7.7 Guidelines for maintenance.....	42
8 Fan-assisted ventilation — Determining the outdoor air flow rates.....	43
8.1 Total outdoor air flow rates.....	43
8.2 Outdoor air flow rate achieved by ventilation measures.....	45
8.3 Design of ventilation components — Assignment to ventilation systems.....	48
8.4 Operation of a ventilation system/unit.....	54
8.5 Requirements on indoor air quality.....	54
8.6 Operation of combustion heating appliances and ventilation systems or units.....	56
8.7 Guidelines for design	57
8.8 Commissioning and handover.....	64
8.9 Servicing.....	66
8.10 Documentation.....	67
9 Combined ventilation systems.....	67
9.1 General	67
9.2 Separate ventilation spaces (zones) in a dwelling unit	68
9.3 A ventilation space of a dwelling unit with overlapping ventilation measures.....	68
9.4 Hybrid ventilation.....	70

Annex A (normative) Flow chart ventilation concept.....	71
Annex B (normative) Servicing	75
B.1 General.....	75
B.2 Function.....	75
Annex C (informative) Optional functionality tests, servicing	78
C.1 General.....	78
C.2 Functionality.....	78
C.3 Initial adjustment of air flow rates	81
Annex D (normative) Wind data for Germany.....	83
Annex E (informative) Sample ventilation specifications form	89
Annex F (informative) Ventilation of basements.....	93
F.1 Factors influencing the indoor air quality in basement rooms.....	93
F.2 Ventilation measures	96
F.3 Room-specific ventilation concept	100
Bibliography	106