

DIN EN 16798-3:2017-11 (E)

Energy performance of buildings - Ventilation for buildings - Part 3: For non-residential buildings - Performance requirements for ventilation and room-conditioning systems (Modules M5-1, M5-4)

| Contents | | Page |
|-------------------------|--|-------------|
| European foreword | | 4 |
| Introduction | | 7 |
| 1 | Scope | 9 |
| 2 | Normative references | 11 |
| 3 | Terms and definitions | 12 |
| 4 | Symbols and subscripts | 13 |
| 4.1 | Symbols | 13 |
| 4.2 | Subscripts | 15 |
| 5 | Brief description of the method and routing | 15 |
| 5.1 | Output of the method | 15 |
| 5.2 | General description of the method | 15 |
| 6 | Output data for energy calculation | 16 |
| 7 | Indoor environment | 17 |
| 7.1 | General | 17 |
| 7.2 | Occupied zone | 18 |
| 8 | Agreement of design criteria | 20 |
| 8.1 | General | 20 |
| 8.2 | Principles | 20 |
| 8.3 | General building characteristics | 20 |
| 8.4 | Construction data | 21 |
| 8.5 | Geometrical description | 21 |
| 8.6 | Use of the rooms | 21 |
| 8.7 | Requirements in the rooms | 22 |
| 8.8 | System requirements | 22 |
| 8.9 | Heat transmission of surfaces of ventilation systems | 23 |
| 8.10 | General requirements for control, adjustment and monitoring | 23 |
| 8.11 | General requirements for maintenance and safety of operation | 23 |
| 8.12 | Process from project initiation to operation | 24 |
| 8.13 | Supply air humidity | 24 |
| 9 | Classification | 25 |
| 9.1 | Specification of types of air | 25 |
| 9.2 | Classification of air | 27 |
| 9.3 | System functions and basic system types | 29 |
| 9.4 | Design air flow balance | 32 |
| 9.5 | Specific fan power | 33 |
| 9.6 | Heat recovery section | 37 |
| 9.7 | Filtration | 39 |
| 9.8 | Leakages in ventilation systems | 40 |

| | | |
|---|--|-----------|
| 10 | Calculation and energy rating | 43 |
| 10.1 | Ventilation effectiveness and air diffusion | 43 |
| 10.2 | Calculation of air volume flows | 44 |
| 10.3 | Energy rating of ventilation systems | 45 |
| Annex A (normative) Input and method selection data sheet -- Template | | 47 |
| A.1 | General | 47 |
| A.2 | References | 47 |
| A.3 | Design data for energy calculation Typical range for SFP categories | 48 |
| A.4 | Design data | 48 |
| Annex B (informative) Input and method selection data sheet -- Default choices | | 50 |
| B.1 | General | 50 |
| B.2 | References | 50 |
| B.3 | Default design data for energy calculation | 52 |
| B.4 | Default design data | 52 |
| Bibliography | | 55 |