

ISO/TR 5863:2025-01 (E)

Integrative design of the building envelope - General principles

| Contents | | Page |
|--------------------|--|-------------|
| Foreword | | iv |
| Introduction | | v |
| 1 | Scope | 1 |
| 2 | Normative references | 1 |
| 3 | Terms and definitions | 1 |
| 4 | Design philosophy and principles for the building envelope | 3 |
| 4.1 | General | 3 |
| 4.2 | One thing increases, another decreases | 4 |
| 4.3 | One structure variable relates to several function and behaviour variables | 5 |
| 4.4 | Appropriate balance among the behaviours of environmental elements | 5 |
| 5 | Functions of the building envelope | 5 |
| 5.1 | General | 5 |
| 5.2 | Flexibility | 5 |
| 5.3 | Adaptability | 6 |
| 5.4 | Reusability | 6 |
| 6 | Structure of the building envelope | 6 |
| 6.1 | General | 6 |
| 6.2 | Roof system | 7 |
| 6.3 | Wall system above the ground | 8 |
| 6.4 | Wall system underground | 9 |
| 6.5 | Base floor system | 10 |
| 7 | Behaviour of the building envelope | 10 |
| 7.1 | General | 10 |
| 7.2 | Thermal performance | 10 |
| 7.3 | Daylight and visual information | 11 |
| 7.4 | Ventilation | 12 |
| 7.5 | Sound proofing | 13 |
| 7.6 | Airtightness | 13 |
| 7.7 | Moisture protection | 13 |
| 7.8 | Sustainability and integration with technical building systems | 14 |
| 8 | Relationship, synergies and trade-offs | 14 |
| 9 | Adaptive building envelope | 15 |
| 10 | Integrative design process for the building envelope | 16 |
| 11 | Building envelope commissioning (BECx) | 16 |
| Bibliography | | 18 |