

DIN EN 14989-1:2007-05 (E)

Chimneys - Requirements and test methods for metal chimneys and material independent air supply ducts for roomsealed heating applications - Part 1: Vertical air/flue terminals for C6-type appliances

| Contents | | Page |
|--------------------|--|-------------|
| Foreword | | 4 |
| Introduction | | 5 |
| 1 | Scope | 6 |
| 2 | Normative references | 6 |
| 3 | Terms and definitions | 6 |
| 4 | Symbols | 8 |
| 5 | Manufacturer's declaration for type test | 10 |
| 6 | Dimensions and tolerances | 11 |
| 7 | Performance requirements | 11 |
| 7.1 | Mechanical resistance and stability | 11 |
| 7.1.1 | Vertical load on the air/flue terminal | 11 |
| 7.1.2 | Wind load | 11 |
| 7.2 | Hygiene, health and environment | 11 |
| 7.2.1 | Gas tightness of the flue | 11 |
| 7.2.2 | Gas tightness of the air supply duct | 11 |
| 7.3 | Safety in use | 11 |
| 7.3.1 | Thermal performance | 11 |
| 7.3.2 | Thermal resistance | 12 |
| 7.3.3 | Rainwater ingress | 12 |
| 7.3.4 | Aerodynamic properties of the terminal | 13 |
| 7.3.5 | Resistance to ice formation | 15 |
| 7.3.6 | Resistance to penetration by foreign objects | 15 |
| 7.3.7 | Materials | 15 |
| 8 | Product information | 16 |
| 8.1 | Manufacturer's instructions | 16 |
| 8.2 | Minimum information to be included in the manufacturer's instructions | 16 |
| 8.3 | Sampling points | 17 |
| 9 | Marking | 17 |
| 9.1 | Air/flue terminal | 17 |
| 9.2 | Packaging | 18 |
| 10 | Designation | 18 |
| 10.1 | General | 18 |
| 10.2 | Temperature classes and test temperature | 19 |
| 10.3 | Pressure class | 19 |
| 10.4 | Condensate resistance class | 20 |
| 10.5 | Corrosion resistance | 20 |
| 10.5.1 | Corrosion resistance | 20 |
| 10.5.2 | Flue duct material specification for terminals | 20 |

| | | |
|--------|--|----|
| 10.6 | Resistance to fire (internal to external): Soot fire resistance and distance to combustible material | 21 |
| 10.7 | Additional characteristics | 21 |
| 10.7.1 | Wind class | 21 |
| 10.7.2 | Ice/rain class | 21 |
| 10.7.3 | Pilot flame class | 22 |
| 11 | Evaluation of conformity | 22 |
| 11.1 | General | 22 |
| 11.2 | Type testing | 22 |
| 11.2.1 | General | 22 |
| 11.2.2 | Further type testing | 23 |
| 11.2.3 | Sampling for type testing | 23 |
| 11.3 | Factory production control (FPC) | 23 |
| 11.3.1 | General | 23 |
| 11.3.2 | Equipment | 24 |
| 11.3.3 | Raw materials and components | 24 |
| 11.3.4 | Product testing and evaluation | 24 |
| 11.3.5 | Non conforming products | 24 |
| 12 | Test methods | 25 |
| 12.1 | Mechanical resistance and stability | 25 |
| 12.1.1 | Vertical load on the air/flue terminal | 25 |
| 12.1.2 | Wind load | 25 |
| 12.1.3 | Gas tightness of the flue | 25 |
| 12.1.4 | Gas tightness of the air supply duct | 26 |
| 12.2 | Safety in use | 26 |
| 12.2.1 | Test environment | 26 |
| 12.2.2 | Test assembly | 27 |
| 12.2.3 | Hot gas generator | 28 |
| 12.2.4 | Procedure | 29 |
| 12.3 | Rainwater ingress | 37 |
| 12.3.1 | Test assembly | 37 |
| 12.3.2 | Procedure | 38 |
| 12.4 | Aerodynamic behaviour of air/flue terminal | 38 |
| 12.4.1 | Test assembly | 38 |
| 12.4.2 | Test procedure | 42 |
| 12.4.3 | Results | 44 |
| 12.5 | Icing test | 44 |
| 12.5.1 | Test assembly | 44 |
| 12.6 | Resistance to penetration by foreign objects | 45 |
| 12.6.1 | Test assembly | 45 |
| 12.6.2 | Procedure | 45 |
| 12.6.3 | Results | 45 |
| 12.7 | Low temperature test | 46 |
| | Annex A (informative) Typical dimensions | 47 |
| | Annex B (informative) Sampling for factory production control | 51 |
| | Annex C (normative) Choice of size for type test and sampling | 53 |
| | Annex D (normative) Factory production control | 55 |
| | Annex E (normative) Method of measuring the hot gas temperature | 57 |
| | Annex ZA (informative) Clauses of this European Standard addressing the provisions of the EU Construction Products Directive | 58 |
| | Bibliography | 64 |