DIN EN 613:2022-05 (E)

Independent closed-fronted gas-fired type B_{11}, type C_{11}, type C_{31} and type C_{91} heaters;

Contents

Page

European foreword 4

1 Scope 6

2 Normative references 6

3 Terms and definitions 8
3.1 Independent gas-fired heaters 8
3.2 Appliance construction 8
3.3 Appliance performance 12

4 Classification of appliances 13
4.1 Classification according to the nature of the gases used (categories) 13
4.2 Classification according to the method of evacuation of the products of combustion 14

5 Constructional requirements 15
5.1 General 15
5.2 Adjusting, control and safety devices 20
5.3 Ignition devices 23
5.4 Flame supervision systems 23
5.5 Burners 24
5.6 Gas pressure test points 24

6 Operational requirements 24
6.1 Soundness of the gas circuit and combustion products circuit, and evacuation of the combustion products 24
6.2 Heat inputs 25
6.3 Temperature of various parts of the appliance 25
6.4 Ignition, cross-lighting and flame stability 26
6.5 Pressure regulators 27
6.6 Combustion 27
6.7 Sooting (live fuel effect gas-fired heaters only) 28
6.8 Spillage monitoring system 28
6.9 Flame supervision device 29
6.10 Efficiency 30

7 Test methods 30
7.1 General 30
7.2 Soundness of the gas circuit and combustion products circuit and evacuation of the combustion products 33
7.3 Heat inputs 34
7.4 Temperature of various parts of the appliance 36
7.5 Ignition, cross-lighting and flame stability 38
7.6 Pressure regulators 42
7.7 Combustion 43
7.8 Sooting (live fuel effect gas-fired heaters only) 47
7.9 Spillage monitoring system 48
7.10 Flame supervision device 50
7.11 Efficiency 51

8 Marking and instructions 53

8.1 Marking 53
8.2 Instructions 56

Annex A (normative) Hood test method (type B appliances) 71

Annex B (informative) Gas designations in force in the various EU countries 75

Annex C (normative) Apparatus for the determination of the smoke number 77

Annex D (informative) Symbols and abbreviations 78

Annex E (normative) Calculation of conversions of NOx 79

Annex F (normative) Arrangement for measuring the leakage rate 80

Annex G (normative) Special national conditions 81

Bibliography 82