DIN EN 14451:2020-10 (E)

Devices to prevent pollution by backflow of potable water - In-line anti-vacuum valves DN 10 to DN 50 inclusive - Family D, type A

Contents

Page

European foreword 4

Introduction 5

1 Scope 6

2 Normative references 6

3 Terms and definitions 7

4 Nominal size 7

5 Designation 7

6 Marking and technical documents 8
6.1 General 8
6.2 Marking 8
6.3 Technical documents 8

7 Symbolization 9

8 General design characteristics 9
8.1 Design principle 9
8.2 Connections 10
8.3 Air inlets 10

9 Materials and surface finishes 10
9.1 General 10
9.2 Materials 10
9.3 Corrosion resistance 10

10 Characteristics and tests 10
10.1 General 10
10.2 Test sequence 11
10.3 Visual verification (Stage 1) 11
10.4 Tightness test (Stage 2) 11
10.4.1 Test equipment 11
10.4.2 Test 12
10.4.3 Requirement 12
10.5 Flow rate/pressure loss (Stage 3) 13
10.5.1 Test equipment 13
10.5.2 Test 14
10.5.3 Requirement 14
10.6 Bending moment, mechanical strength of body and leak tightness (Stage 4) 14
10.6.1 General 14
10.6.2 Test equipment 15
10.6.3 Test 15
10.6.4 Requirements 16
10.7 Endurance test (Stage 6) 16
10.7.1 Test procedure 1 16
10.7.2 Test procedure 2 17

10.7.3 Test procedure 3 19
10.8 Vacuum test (Stage 7) 20
10.8.1 Vacuum test equipment 20
10.8.2 Procedure 21
10.8.3 Requirement 21

11 Acoustic characteristics 21
11.1 General 21
11.2 Procedure 21
11.2.1 Mounting and operating conditions 21
11.2.2 Test methods 21
11.3 Test criteria 21
11.3.1 Expression of the results 21
11.3.2 Noise classification 21

Annex A (informative) Sampling and test sequence 22