ISO 6182-2:2025-07 (E)

Fire protection - Automatic sprinkler systems - Part 2: Requirements and test methods for sprinkler system alarm valves, check valves, water motor alarms, retard devices and accelerators

Contents

Page

Foreword v

1 Scope 1

2 Normative references 1

3 Termsanddefinitions 1

4 Production testing and quality control 6
4.1 Responsibility 6
4.2 Production body strength test 6
4.3 Production operation test 6
4.4 Production leakage test 6

5 Requirements 6
5.1 Overview 6
5.2 Nominal size 6
5.3 Connections 6
5.4 Rated working pressure 7
5.5 Body and cover 7
5.6 Strength (see 6.2) 7
5.7 Access for maintenance 7
5.8 Components (see 6.3, 6.4 and 6.12) 7
5.9 Leakage (see 6.5) 8
5.10 Non-metallic components (excluding gaskets, seals and other elastomeric parts) (see 6.5, 6.6, 6.7 and 6.11) 9
5.11 Sealing assembly elements (see 6.8) 9
5.12 Clearances (see 6.9) 9
5.13 Hydraulic friction loss (see 6.10) 13
5.14 Endurance (see 6.11) 13
5.15 Operational performance (see 6.12) 13
5.16 Equilibrium time (see 6.15) 14
5.17 Drains (see 6.4) 15
5.18 Alarms (see 6.11) 15
5.19 Retard devices (6.16) 15
5.19.1 General 15
5.19.2 Strength 15
5.19.3 Strainer 15
5.19.4 Support 16
5.19.5 Retard chamber drain 16
5.19.6 Components (see 6.6, 6.7, 6.12) 16
5.20 Height limitations for wet pilot lines (see 6.12) 16
5.21 Water motor alarms (see 6.17) 17
5.22 Water motor alarm connections (see 6.17) 17
5.23 Water motor alarm nozzles and strainers 17
5.24 Water motor alarm operation (see 6.17) 17
5.25 Water motor alarm bodies and covers 17
5.26 Water motor alarm audibility (see 6.17) 18

6 Tests 19
6.1 Samples 19
6.2 Body strength (see 5.6) 20
6.3 Spring and diaphragm test (see 5.8.5) 20
6.4 Anti-reseating test of dry, preaction and deluge valves (see 5.8.6) 20
6.5 Leakage and deformation tests (see 5.9) 21
6.5.1 Body leakage test 21
6.5.2 Sealing assembly test 21
6.5.3 Wet and check valve leakage 21
6.6 Warm water ageing test for non-metallic components (excluding gaskets and seals and other elastomeric parts) (see 5.10, 5.19 and 5.21) 21
6.7 Air ageing test for non-metallic components (excluding gaskets and seals and other elastomeric parts) (see 5.9, 5.18 and 5.20) 22
6.8 Sealing element tests for valves (see 5.11) 22
6.9 Salt mist corrosion test (see 5.12.2 and 5.12.7) 23
6.9.1 Reagents 23
6.9.2 Apparatus 23
6.9.3 Procedure 23
6.10 Hydraulic friction loss test for valves (see 5.13) 23
6.11 Endurance test (see 5.14, 5.18) 23
6.12 Operational tests (see 5.15, 5.20) 24
6.12.1 General 24
6.12.2 Installation 25
6.12.3 Dry and preaction valve differential 25
6.12.4 Preaction valve operation 25
6.12.5 Preaction operational test in the dry mode (sprinkler operation with detection fault) 27
6.13 Wet valve alarm and sensitivity test (see 5.15) 27
6.14 Wet and check valve ratio test (see 5.15.5) 27
6.15 Equilibrium time test (see 5.16) 27
6.16 Retard chamber (see 5.19) 28
6.16.1 Strength 28
6.16.2 Drainage 28
6.17 Water motor alarm tests (see 5.21) 28
6.17.1 Durability 28
6.17.2 Audibility 28
6.17.3 Strength of inlet connection 28
6.17.4 Water resistance 28

7 Marking 28
7.1 Body 28
7.2 Cast markings 28
7.3 Information to be marked 29

8 Manufacturer's installation instructions 29
8.1 Instructions 29
8.2 Care and maintenance 29