DIN 1988-500:2021-05 (E)

Codes of practice for drinking water installations - Part 500: Pressure boosting stations with RPM-regulated pumps

Contents

Page

Foreword ... 4

1 Scope ... 6

2 Normative references ... 6

3 Terms and definitions ... 7

4 Design principles ... 8
4.1 General ... 8
4.2 Materials ... 9
4.3 Supply pressure ... 9
4.4 Pressure boosting ... 10
4.5 Supply security and hygiene ... 11
4.6 Flow rate ... 11
4.7 Pump differential pressure ... 11
4.8 Pressure zones ... 12
4.9 Type of connection ... 17
4.9.1 General ... 17
4.9.2 Direct connection ... 17
4.9.3 Indirect connection ... 17
4.10 System components ... 18
4.10.1 Pressure measurement ... 18
4.10.2 Pressure reducing valve upstream of the pressure booster ... 18
4.10.3 Control pressure vessel ... 18
4.10.4 Break tanks ... 18
4.10.5 Pressure boosters ... 19
4.10.6 Valves ... 20
4.10.7 Safety valve ... 20
4.10.8 Pipe connections ... 21
4.10.9 Pressure booster location ... 21

5 Installation and commissioning ... 21
5.1 General ... 21
5.2 Operational readiness ... 21

6 Inspection and maintenance ... 21

Bibliography ... 23

Figures

Figure 1 — Drinking water installations with and without pressure boosters ... 9

Figure 2 — Use of a pressure reducing valve upstream of a pressure booster ... 10

Figure 3 — Drinking water installation without pressure booster and pressure boosting using a pressure booster ... 11

Figure 4 — Configuration A ... 13

Figure 5 — Configuration B **14**
Figure 6 — Configuration C **15**
Figure 7 — Configuration D **17**

Tables

Table 1 — Average pressure gradient **12**
Table 2 — Inspection and maintenance **22**