

**DIN 1988-200**

ICS 93.025

Supersedes: see below

**Codes of practice for drinking water installations –  
Part 200: Installation Type A (closed system) –  
Planning, components, apparatus, materials; DVGW Code of practice,  
English translation of DIN 1988-200:2012-05**

Technische Regeln für Trinkwasser-Installationen –  
Teil 200: Installation Typ A (geschlossenes System) –  
Planung, Bauteile, Apparate, Werkstoffe; Technische Regel des DVGW,  
Englische Übersetzung von DIN 1988-200:2012-05

Directives techniques pour installations d'eau potable –  
Partie 200: Installation Type A (système fermé) –  
Planification, éléments de construction, appareils, matériaux; Directive technique DVGW,  
Traduction anglaise de DIN 1988-200:2012-05

Together with DIN EN 806-2:2005-06, supersedes DIN 1988-2:1988-12 and DIN 1988-5:1988-12;  
supersedes DIN 1988-7:2004-12

Document comprises 51 pages

DIN-Normenausschuss Wasserwesen (NAW)  
DIN-Sprachendienst

## Contents

*A comma is used as the decimal marker.*

	Page
Foreword .....	4
1 Scope .....	6
2 Normative references .....	6
3 General requirements .....	13
3.1 Water supply .....	13
3.2 Basic concepts .....	14
3.3 Underground pipework .....	16
3.4 Materials, components and appliances .....	16
3.5 Design flow rates .....	17
3.6 Operating temperature .....	17
3.7 Drinking water hygiene .....	17
3.8 Documentation for design and installation .....	18
3.9 Sampling points .....	18
3.10 Building services control rooms, services shafts and ducts .....	18
4 Private water supply .....	19
5 Materials .....	19
5.1 Choice of material .....	19
5.2 Pipe joints .....	19
5.3 Materials used in pipe joint assemblies .....	19
5.4 Auxiliary materials .....	19
6 Components .....	20
6.1 Stop valves .....	20
6.2 Expansion joints .....	20
6.3 Hoses .....	20
6.4 Circulation valves .....	20
6.5 Taps .....	20
6.6 Protection units (backflow prevention units) .....	21
6.7 Pressure relief valves .....	21
6.8 Water leak detectors .....	21
6.9 Appliances .....	21
6.10 Expansion vessels .....	21
7 Pipework inside buildings .....	22
7.1 Isolation .....	22
7.2 Wall and floor penetrations .....	22
8 Cold drinking water supply .....	23
8.1 Drinking water taps .....	23
8.2 Differentiation and identification of pipes and components .....	23
8.3 Supply and distributing pipes .....	24
8.4 Electrical isolators .....	25
9 Hot water systems .....	25
9.1 General .....	25
9.2 Components .....	25
9.3 Taps and mixing valves .....	27
9.4 Surface temperatures .....	28
9.5 Connections between cold and hot water pipes .....	28
9.6 Additional requirements .....	28
9.7 Water heaters .....	28

<b>10</b>	<b>Prevention of bursting.....</b>	<b>30</b>
<b>10.1</b>	<b>General.....</b>	<b>30</b>
<b>10.2</b>	<b>Energy control.....</b>	<b>30</b>
<b>10.3</b>	<b>Pressure control.....</b>	<b>31</b>
<b>10.4</b>	<b>Expansion water.....</b>	<b>32</b>
<b>10.5</b>	<b>Pipework.....</b>	<b>33</b>
<b>11</b>	<b>Guidelines for water meter installations.....</b>	<b>34</b>
<b>11.1</b>	<b>General.....</b>	<b>34</b>
<b>11.2</b>	<b>Selection.....</b>	<b>34</b>
<b>11.3</b>	<b>Location — accessibility.....</b>	<b>34</b>
<b>11.4</b>	<b>Household water meters.....</b>	<b>35</b>
<b>12</b>	<b>Water conditioning.....</b>	<b>35</b>
<b>12.1</b>	<b>General.....</b>	<b>35</b>
<b>12.2</b>	<b>Basic requirements.....</b>	<b>35</b>
<b>12.3</b>	<b>Aspects of water conditioning.....</b>	<b>36</b>
<b>12.4</b>	<b>Mechanical filters.....</b>	<b>37</b>
<b>12.5</b>	<b>Chemical dosing.....</b>	<b>37</b>
<b>12.6</b>	<b>Softening by ion exchange.....</b>	<b>38</b>
<b>12.7</b>	<b>Descalers.....</b>	<b>38</b>
<b>12.8</b>	<b>Disinfection by ultraviolet radiation.....</b>	<b>39</b>
<b>13</b>	<b>Noise insulation, fire protection and damp proofing.....</b>	<b>39</b>
<b>13.1</b>	<b>Noise insulation.....</b>	<b>39</b>
<b>13.2</b>	<b>Fire protection.....</b>	<b>40</b>
<b>13.3</b>	<b>Damp proofing.....</b>	<b>40</b>
<b>14</b>	<b>Protection of drinking water installations against temperatures external to pipes, fittings and appliances.....</b>	<b>40</b>
<b>14.1</b>	<b>Freezing.....</b>	<b>40</b>
<b>14.2</b>	<b>Further requirements to be met by pipe insulation and other coverings.....</b>	<b>40</b>
<b>15</b>	<b>Pressure boosting.....</b>	<b>43</b>
<b>16</b>	<b>Pressure reducing valves.....</b>	<b>43</b>
<b>16.1</b>	<b>General.....</b>	<b>43</b>
<b>16.2</b>	<b>Installation.....</b>	<b>43</b>
<b>16.3</b>	<b>Sizing.....</b>	<b>44</b>
<b>17</b>	<b>Combined drinking water and firefighting services.....</b>	<b>45</b>
<b>18</b>	<b>Prevention of corrosion damage.....</b>	<b>45</b>
<b>18.1</b>	<b>Combination of dissimilar materials.....</b>	<b>45</b>
<b>18.2</b>	<b>Cathodic corrosion protection.....</b>	<b>45</b>
<b>18.3</b>	<b>Prevention of external corrosion.....</b>	<b>46</b>
<b>Annex A (normative)</b>	<b>List of suitable materials.....</b>	<b>48</b>
<b>Annex B (normative)</b>	<b>Terms and definitions.....</b>	<b>50</b>
<b>Bibliography</b>	<b>.....</b>	<b>51</b>

## Foreword

This standard has been prepared by Working Committee NA 119-04-07 AA *Häusliche Wasserversorgung* of the *Normenausschuss Wasserwesen* (Water Engineering Standards Committee).

In response to the publication of European Standards on drinking water installations developed by Technical Committee CEN/TC 164 “Water supply”, which have been adopted as national German Standards, the German working committee decided to review the content of the DIN 1988 series “Codes of practice for drinking water installations” with the intention of preparing a comprehensive and consistent set of standards.

To make up for the fact that the standards developed at European level do not reach the depth required by users in Germany, it was necessary to develop supplemental German specifications, which have been published again as the 1988 series for reasons of consistency.

In order to distinguish the “new” DIN 1988 series from the previous one, the individual parts of the series have been assigned three-digit numbers.

To ensure that the revised standards find wide acceptance among specialists, the revision of the series has been performed in stages. The Working Committee would like to bring attention to the fact that the importance of this part of the new series has already been firmly established among the users.

It should be noted that the structure of the present standard is based on that of DIN EN 806-2:2005-06. Although the headings of clauses have been adopted from the European Standard, their numbering differs slightly. The standard only includes additional requirements from DIN 1988-2, DIN 1988-5, and DIN 1988-7 that are not specified in the European Standard, as well as a number of requirements that have been added to reflect the current state of the art.

Currently, the DIN 1988 series of standards consists of the following parts, under the general title *Codes of practice for drinking water installations*:

- Part 100, *Protection of drinking water, drinking water quality control; DVGW Code of practice*
- Part 200, *Installation Type A (closed system) — Planning, components, apparatus, materials; DVGW Code of practice*
- Part 300, *Pipe sizing; DVGW Code of practice*
- Part 500, *Pressure boosting stations with RPM-regulated pumps; DVGW Code of practice*
- Part 600, *Drinking water installations in connection with fire fighting and fire protection installations; DVGW Code of practice*

### **Amendments**

This standard differs from DIN 1988-2:1988-12, DIN 1988-5:1988-12 and DIN 1988-7:2004-12 as follows:

- a) terms and definitions have been added;
- b) specifications from DIN 1988-2:1988-12, DIN 1988-5:1988-12 and DIN 1988-7:2004-12 that have not been included in DIN EN 806-2:2005-06 are included here and have been amended to reflect the current state of technology.

### **Previous editions**

DIN 1988: 1930-08, 1940-09, 1955-03, 1962-01

DIN 1988-2: 1988-12

DIN 1988-5: 1988-12

DIN 1988-7: 1988-12, 2004-12

## 1 Scope

This standard applies in conjunction with DIN EN 806-2 for the design of type A (closed system) drinking water installations in buildings and their premises. It describes design principles and suitable components, appliances and materials for the installation of such systems. It supplements the specifications of DIN EN 806-2 and specifies supplemental requirements, giving due consideration to German national technical rules and legislation.

DIN 2001-1 applies to small systems, while DIN 2001-2 applies for non-stationary systems.

For the purposes of this standard, the terms and definitions in Annex B apply.

NOTE Including the terms and definitions in Annex B makes it possible to directly compare the following clauses with those having the same numbering and titles in DIN EN 806-2.

## 2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

DIN 1053-1, *Masonry — Part 1: Design and construction*

DIN 1988-100, *Codes of practice for drinking water installations — Part 100: Protection of drinking water, drinking water quality control; DVGW Code of practice*

DIN 1988-300, *Codes of practice for drinking water installations — Part 300: Pipe sizing; DVGW Code of practice*

DIN 1988-500, *Codes of practice for drinking water installations — Part 500: Pressure boosting stations with RPM-regulated pumps; DVGW Code of practice*

DIN 1988-600, *Codes of practice for drinking water installations — Part 600: Drinking water installations in connection with fire fighting and fire protection installations; DVGW Code of practice*

DIN 2000, *Central drinking water supply — Guidelines regarding requirements for drinking water, planning, construction, operation and maintenance of plants; Technical rule of the DVGW*

DIN 2001-1, *Drinking water supply from small units and non stationary plants — Part 1: Small units — Guidelines for drinking water, planning, construction, operation and maintenance of plants; Technical rule of the DVGW*

DIN 2001-2, *Drinking water supply from small units and non stationary plants — Part 2: Non stationary units — Guidelines for drinking water, planning, construction, operation and maintenance of units; Technical rule of the DVGW*

DIN 2403, *Identification of pipelines according to the fluid conveyed*

DIN 3389, *Isolating joints ready for installation into service pipes in gas and water supply — Built-in-isolating joints — Requirements and tests*

DIN 4109 (all parts), *Sound insulation in buildings*