

# Specifications for installations inside buildings conveying water for human consumption —

## Part 3: Pipe sizing — Simplified method

The European Standard EN 806-3:2006 has the status of a  
British Standard

ICS 91.140.60

# National foreword

This British Standard is the official English language version of EN 806-3:2006. This part of BS EN 806 partially supersedes BS 6700:1997. On publication of parts 1 to 5 of BS EN 806, BS 6700:1997 will be withdrawn.

NOTE EN 806 parts 1 to 5 have been agreed by CEN to be a “package” with a common Date of Withdrawal for conflicting National Standards (Resolution CEN/BT/20/1993 and CEN/TC 164 Resolution 199 refer).

The UK participation in its preparation was entrusted by Technical Committee B/504, Water supply, to Subcommittee B/504/2, Domestic installation design — Internal, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

A list of organizations represented on this subcommittee can be obtained on request to its secretary.

## Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the *BSI Catalogue* under the section entitled “International Standards Correspondence Index”, or by using the “Search” facility of the *BSI Electronic Catalogue* or of British Standards Online.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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## Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 14, an inside back cover and a back cover.

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English Version

Specifications for installations inside buildings conveying water  
for human consumption - Part 3: Pipe sizing - Simplified method

Spécifications techniques relatives aux installations d'eau  
destinée à la consommation humaine à l'intérieur des  
bâtiments - Partie 3: Calculations des diamètres intérieurs -  
Méthode simplifiée

Technische Regeln für Trinkwasser-Installationen -  
Berechnung der Rohrrinnendurchmesser - Teil 3:  
Vereinfachtes Verfahren

This European Standard was approved by CEN on 3 February 2006.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



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## Foreword

This European Standard (EN 806-3:2006) has been prepared by Technical Committee CEN/TC 164 "Water supply", the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by October 2006, and conflicting national standards shall be withdrawn at the latest by October 2006.

NOTE This is the third part of the European Standard (EN 806) consisting of five parts as follows:

Part 1: General

Part 2: Design

Part 3: Pipe sizing

Part 4: Installation

Part 5: Operation and maintenance

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

## 1 Scope

This European Standard is in conjunction with EN 806-1 and EN 806-2 for drinking water systems within premises.

This European Standard describes a calculation method for the dimensioning of pipes for the type of drinking water standard-installations as defined in 4.2.

It contains no pipe sizing for fire fighting systems.

## 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.

EN 806-1, *Specifications for installations inside buildings conveying water for human consumption — Part 1: General*

EN 806-2, *Specifications for installations inside buildings conveying water for human consumption — Part 2: Design*

## 3 Terms, symbols and units

This Clause is enlarged in completion to EN 806-1, to have in the field of pipe sizing the same definitions in European standards.

**Table 1 — Terms and definitions**

| Term                                | Symbol        | Unit                     | Explanation (definition)                                                                                                            |
|-------------------------------------|---------------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Flow-velocity                       | $v$           | m/s                      |                                                                                                                                     |
| Flow-rate, volume flow              | $Q$           | l/s<br>m <sup>3</sup> /h | Ratio of the volume of water passing through a specified flow cross-section and the time required for this                          |
| Minimum flow-rate at draw-off point | $Q_{\min}$    | l/s                      | Flow-rate at draw-off point which is just sufficient for the appliance to function                                                  |
| Draw-off flow-rate                  | $Q_A$         | l/s                      | Assumed draw-off flow-rate at appliance for calculation purposes                                                                    |
| Total flow-rate                     | $Q_T$         | l/s                      | $\Sigma Q_A$ , sum of all draw-off flow-rates of the water appliances supplied                                                      |
| Design flow-rate                    | $Q_D$         | l/s                      | Flow-rate for hydraulic calculations, taking into consideration the probable simultaneous demand                                    |
| Static pressure                     | $p_R$         | Pa                       | Gauge pressure at a measuring point in the water supply system when no water flowing                                                |
| Flow pressure                       | $p_{FI}$      | Pa                       | Gauge pressure at a measuring point in the water supply system when water flowing                                                   |
| Minimum flow pressure               | $p_{\min FI}$ | Pa                       | Gauge pressure required at the connection to a draw-off point at its draw-off flow-rate                                             |
| Pressure difference, head loss      | $\Delta p$    | Pa                       | Difference in pressure between two points in the drinking water installation, resulting from wall friction and individual head loss |

(To be continued)