



# Pharmaceutical Water: System Design, Operation, and Validation, Second Edition

By William V. Colletto

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Drawing on the author's extensive field experience with more than 400 pharmaceutical and related water purification systems, the text's numerous case studies illuminate the best and worst of water system design and operation.

The expanded *Second Edition* also includes new chapters that discuss:

- passivation and electropolishing
- rouging
- ozone systems and accessories
- USP purified water and water for injection
- individual component process and instrumentation diagram (P&IDs) with control interface
- documentation and specification requirements
- systems installation, start-up, and commissioning

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Review

**"This second edition has been significantly revised and updated from the first edition. The author's extensive work experience in this field is reflected throughout the book, which will serve as an excellent reference for anyone involved in manufacturing pharmaceutical waters." - Doody's Review Service**

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