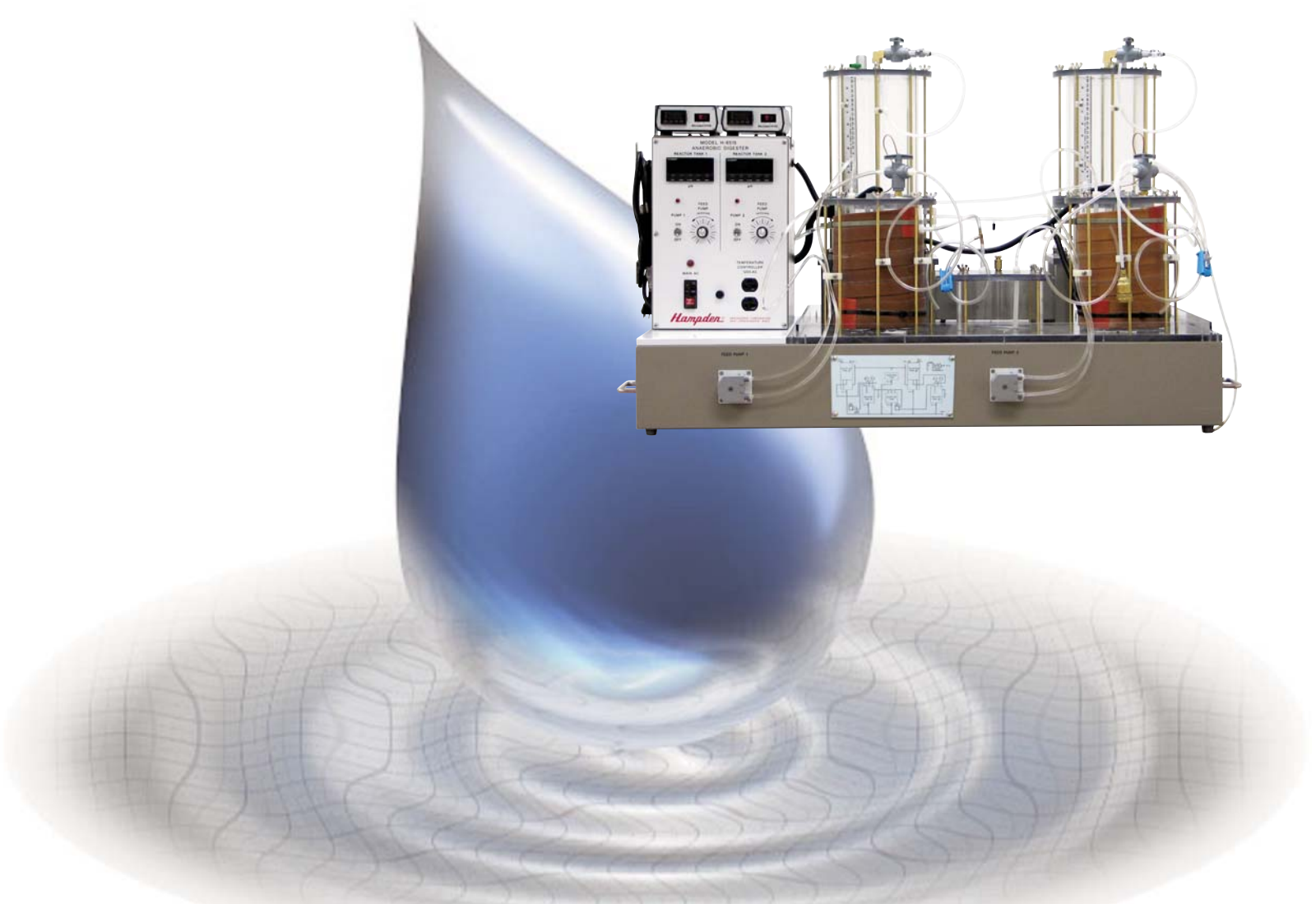


# WATER/WASTEWATER



**Hampden**<sup>®</sup>  
ENGINEERING CORPORATION



# WASTEWATER TESTING SYSTEMS

## Aerobic Digester

Hampden's **Model H-6518** provides a comprehensive study of the continuous activated sludge process used in public health engineering facilities. A synthetically prepared waste water is used to gain a working knowledge of the operational parameters and purification processes.

## Anaerobic Digester

Hampden's **Model H-6515** is a bench-top trainer designed to demonstrate the fundamentals of the anaerobic treatment processes. Anaerobic treatment processes are becoming more popular than aerobic processes in the water treatment industry due to the considerable advantages they offer.

## Aeration Demonstrator

Hampden's **Model H-6517** provides a means of understanding the biological treatment of waste waters. The Aeration Demonstrator is designed to permit the study of oxygen transfer characteristics of diffused air systems and the physical and chemical parameters which influence their oxygenation capacity.

## Flocculation Test Unit

Hampden's **Model H-6529** is used to determine optimal chemical dosages for flocculation by helping the student determine the exact amount of alum or polymer necessary to trigger flocculation.

## Permeability Fluidization Studies

Hampden's **Model H-6519** is designed to investigate the measurement and characteristics of flow through a bed of particles.

## Ion Exchange Demonstrator

Hampden's **Model H-6516** is a bench-mounted unit designed to emulate the industrial operation of ion-exchange resins for either continuous water softening or demineralization.

## Filterability Index Unit

Hampden's **Model H-6528** has been developed to investigate filters and how they relate to water treatment. The student will be able to evaluate the operation and principles of filter operation, filtration procedures and the measurement of filterability of suspended sedimentation.

## Infiltration Demonstrator

Hampden's **Model H-6520** is a table top unit designed to investigate the infiltration rates of different soil types and soil surface treatments.

## Solid Handling Investigation Bench

Hampden's **Model H-6809** has been designed to allow students to familiarize themselves with various methods of handling solids through blending, separating, sizing, discharge rates, angle of repose, grinding, and material transport.

## Mobile Bed and Flow Visualization

Hampden's **Model H-6524** is a self-contained unit used to investigate flow visualization and mobile bed situations in relation to Civil Engineering structures. This unit incorporates a sediment well with removable Lexan® cover for mobile bed investigations.

## Reverse Osmosis Demonstrator

Hampden's **Model H-6505** is a self-contained unit used to investigate ultra filtration techniques as they are applied to water purification and desalination, waste material treatment and many other chemical and biochemical laboratory and industrial processes. All parts in contact with the process fluid are constructed from hygienic materials.

# HAMPDEN OFFERS TRAINING for a VARIETY of WASTEWATER TREATMENT PROCESSES

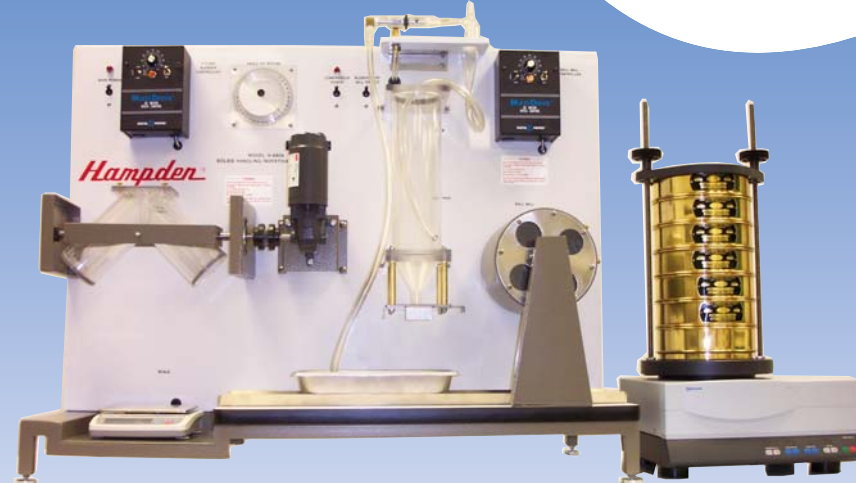
- Aerobic Treatment
- Anaerobic Treatment
- Reverse Osmosis

- Sedimentation Studies
- Ion Exchange
- Flocculation

- Filtration
- Solids Handling Investigations



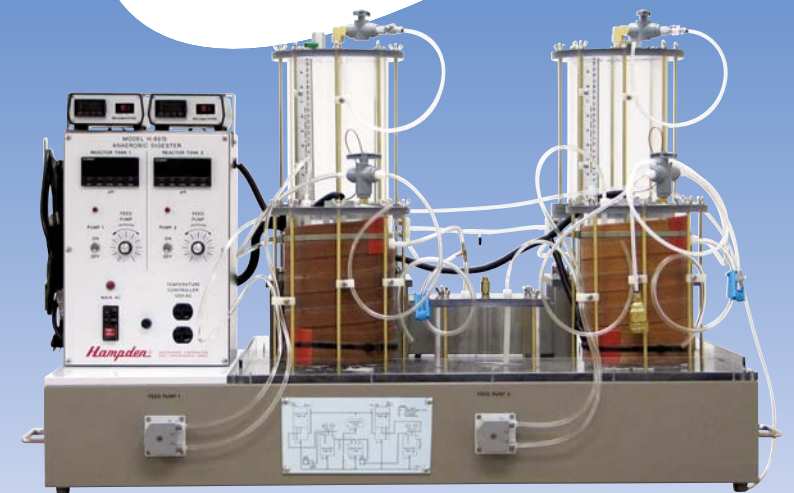
MODEL H-6518 AEROBIC DIGESTER



MODEL H-6809 SOLID HANDLING INVESTIGATION BENCH



MODEL H-6520 INFILTRATION DEMONSTRATOR



MODEL H-6515 ANAEROBIC DIGESTER

**Standard Products...Designed to Meet Your Growing Needs!**

# WASTEWATER SYSTEMS

## Digital Wastewater Treatment Simulator

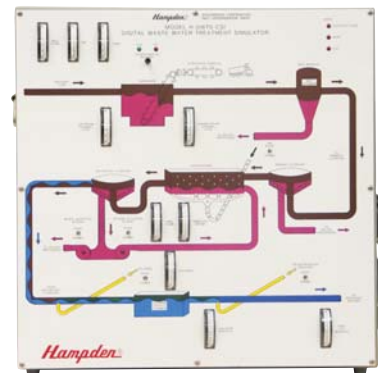
The modern sewer system is an engineering marvel, connecting businesses, homes and industries. Complex systems of underground pipes transport wastewater to sophisticated treatment plants. These plants must return cleansed, purified water to the environment after extracting as much waste material as possible.

Treatment of wastewater began in the 19th century as a specialized process with very slight margins for error. Over the years, the process has been refined and modified in many ways to accommodate specific needs—however, the basic plant does not vary greatly. The primary concepts and structures can be taught and explored using this basic model which is compatible with virtually all modern treatment plants.

The **Model H-DWTS-CSI Digital Wastewater Treatment Simulator** is a PC-compatible computer controlled platform. The operator monitors and controls every aspect of the treatment process including:

- Inlet pump control
- Grit removal
- Primary sludge removal
- Biological filtering
- Chlorine mixer
- Sludge management, etc.

The module's front panel displays both a complete schematic and pictorial of the system. All functions operate as on the actual equipment and present the student with realistic problem situations.



## Sedimentation Trainers

### Hampden's **Model H-6527 Sedimentation Studies Trainer**

has been developed to investigate the physical processes of sedimentation. The student will be able to evaluate and measure the particles as to height, size and settling rates for making up the sedimentation curve.



**MODEL H-6527  
SEDIMENTATION  
STUDY TRAINER**

### Hampden's **H-6521 Model Sedimentation Tank**

consists of a bench, sump tank, settling tank, pump and instrumentation. It can be used to investigate the hydraulic characteristics and settling efficiencies of a model settling basin. The student will be able to evaluate how non-uniform flows occur and their interaction with sediment settling characteristics.

Hampden's **Model H-6523A Sediment Transport Channel Demonstrator** is a self-contained teaching apparatus used to demonstrate the development of various bedforms that arise from the flow of water in a channel. It is used to investigate suspended sediment in a moving stream and bed load movement.

The moving stream can be controlled over a wide range to simulate fast flowing streams or slow moving rivers, demonstrating the various size and density of partial deposits. Slope is adjustable from 0-10%.



**HAMPDEN MODEL H-6523A  
SEDIMENT TRANSPORT DEMONSTRATOR**



Hampden is committed to providing industry-leading technology.

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