

# DISTILLATION SYSTEM CONTINUOUS/FRACTIONAL



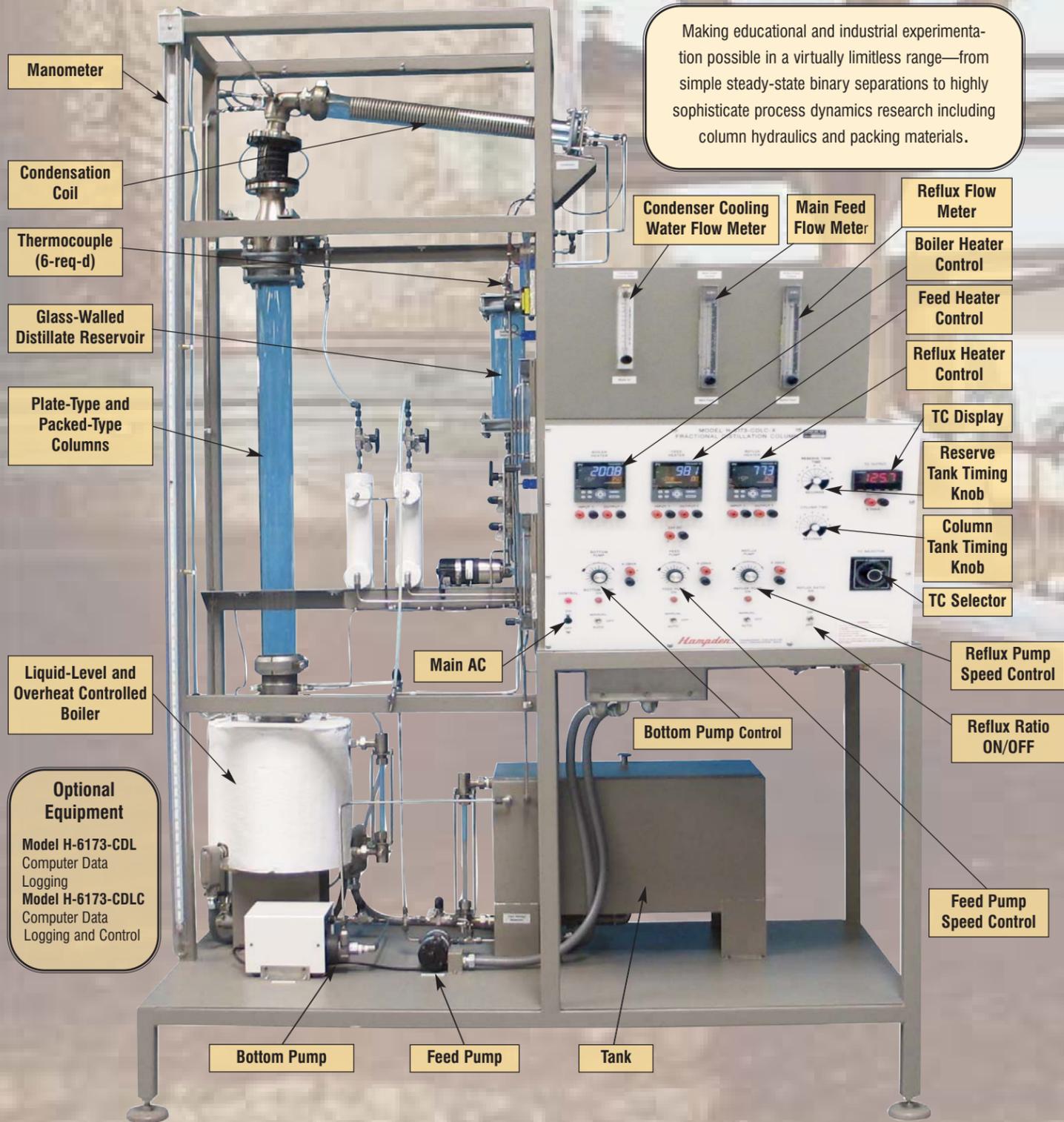
**Hampden**<sup>®</sup>  
ENGINEERING CORPORATION



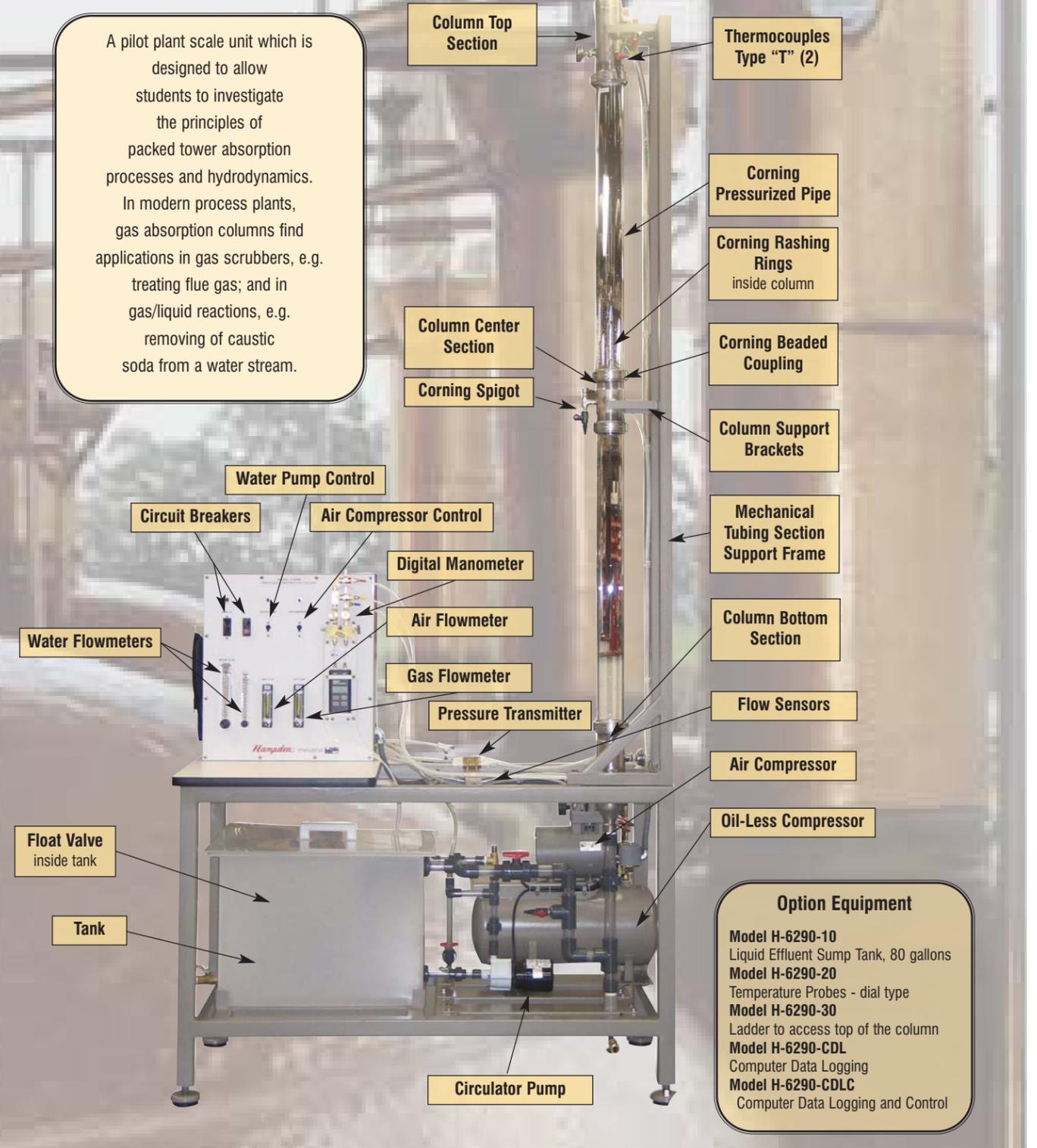
# DISTILLATION COLUMN SYSTEM

# ABSORPTION COLUMN

Hampden's Model H-6173 Continuous/Fractional Distillation System



Hampden's Model H-6290 Gas/Liquid Absorption Column



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

# DISTILLATION AND EXTRACTION



The **H-ETS-1A Ethanol Production Process System** has been developed to have hands on training with the following processes:

- ▶ Milling
- ▶ Distillation
- ▶ Heat
- ▶ Fermentation
- ▶ Condensation

Students will be able to mix batches and distill mixtures of alcohols into individual components.

They will be able to ferment sugars into alcohols from multiple fermentation experiments.

They will be able to grind agricultural components to yield base starches.

These base starches can be converted to sugars that can be fermented. These multi-step processes of fermenting organic material to alcohol can lead to the creation of bio-fuels and other fuel substitutions.

**Optional Equipment:**

**H-ETS-1A-CDL-L** Computer Data Logging

The Hampden **H-6150-TT Tabletop Liquid-Liquid Extraction Demonstrator** is equipped with the basic facilities necessary to permit student study of the liquid-liquid extraction.

The trainer components consist of the following:

- ▶ Extraction Column
- ▶ Flowmeters
- ▶ Extract Tank
- ▶ Needle Valve
- ▶ Pumps
- ▶ Overhead End Plate Assembly
- ▶ Solvent and Feed Pumps
- ▶ Collection Tank 1
- ▶ Three-way Ball Valve
- ▶ Main Circuit Breaker and Pilot Light
- ▶ Bottom End Plate Assembly
- ▶ Solvent Tank
- ▶ Feed Tank
- ▶ System Vent



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