

## PIPE-FLO® Professional - FLO-Master Training

### COURSE OVERVIEW

The two-day FLO-Master Training seminar provides attendees with a detailed understanding of how piping systems operate. By simulating the interaction of pipelines, pumps, components, and controls throughout the system participants will gain a greater knowledge of piping system devices and how they operate.

During the FLO-Master Training, instructors demonstrate a comprehensive step-by-step approach to using PIPE-FLO® which covers features, tips, and tools that are not available through the basic program tutorial.

After attending a FLO-Master Training seminar, attendees will be able to build PIPE-FLO® system models faster, tackle the most complex fluid piping project, and design a more efficient piping system.

### WHO SHOULD ATTEND?

FLO-Master Trainings are ideal for those using the PIPE-FLO® Professional program to design, build, operate, and maintain fluid piping systems. Both new and experienced PIPE-FLO® Professional users will gain from this class because it covers everything from piping system operation to a comprehensive exploration of the PIPE-FLO® software.

### COURSE OBJECTIVES:

Attendees will learn how to:

- Build a PIPE-FLO® Professional piping system model in less time
- Use fluid flow theory to gain an understanding of the total piping system
- Maximize the use of PIPE-FLO® Professional's program features and increase productivity while decreasing capital, maintenance, and operating costs

### COURSE TOPICS:

#### DAY 1 - BASIC TRAINING

##### Topic 1 Day 1: PIPE-FLO® Introduction

- Program Interface
- System Devices

##### Topic 2 Day 1: Building a Model

- Initiating a System
- Fluid Zones
- Pipe Specifications
- Draw the System
- Enter Design Data
- Improve Presentation Value

##### Topic 3 Day 1: Calculations

- Calculate the Model
- Evaluate Results
- Using Graphs
- Using Reports

##### Topic 4 Day 1: Validation & Operating Scenarios

- Validate Model
- Creating / Copying Lineups
- Evaluate Minimum Flow Recirculation Orifice
- Evaluate Varying Operating & Equipment Conditions
- Failure Analysis
- Changing Fluid Properties

## Topic 5 Day 1: System Modifications

- Duplex Strainer Tie-In
- Resize Pipes
- Resize Strainer
- Resize Pump
- Size Control Valve
- Dedicated Pump Option
- Pump Selection
- Size Control Valve

## DAY 2 - ADVANCED TRAINING

### Topic 1 Day 2: Using Datalink and Data Import

- Create ODBC Database
- Query Database from Excel
- Use Database to Calculate Pipe Weight
- Install Datalink DLQ Add-In
- Use Excel to Generate Data Import Files

### Topic 2 Day 2: Engineering Data Tables

- Downloadable Data Tables
- Table Manager
- Customizing Pipe Tables
- Customizing Valve and Fitting Tables
- Fluid Tables
- Custom Pipe Specifications

### Topic 3 Day 2: Closed Loop Piping Systems

- Locate the MHRL in a Closed Loop System
- Variable Speed Pump Operation
- Pump Energy Savings

### Topic 4 Day 2: High Point with Siphon Effect

- Modify System
- Evaluate Messages
- Install Control Valve at Tank
- Install BPV at Tank
- Install Balancing Orifice at Tank

### Topic 5 Day 2: Compressible Gas System

- Limits of Darcy-Weisbach
- Review System & Lineups
- Evaluate Messages
- Compressibility Check Sheet
- Update Model, Pass Compressibility Check
- SCFM vs. ACFM
- Choked Flow in Control Valve

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## Included

### FLO-Master Training Manual:

The FLO-Master Training Manual is a 200+ page full-color course manual and is the ONLY authorized guidebook available on PIPE-FLO® Professional.

### Continuing Education Units:

This training seminar qualifies for 1.6 Continuing Education Units (CEU) or 16 Professional Development Hours (PDH) needed to meet the continuing education requirements for Professional Engineers in many states.

### Course certificate:

After the training course, attendees will be awarded a Certificate of Completion, with a course content description included for confirmation of continued education units.

### Course Schedule

- Course length is 2 days. First day: 8 a.m. to 5 p.m. Second day: 8 a.m. to 5 p.m.
- Individual computers are provided for hands-on learning