

# Junction Pressure

The Junction Pressure tab allows you to assign field measured data to select junction nodes within the distribution system. During the calibration simulation, the properties of the system will be altered in order to generate a correlation between the actual field data and the simulation results. When a correlation is established within the parameters specified (junction pressures included), the model will reach a state of calibration with results being written to the Run Summary tab.

	Junction ID	Observed	Simulated	% Diff
1	89	109.00		
2	90	107.00		
3	99	89.00		
4	100	99.00		
5	67	100.00		
6				
7				
8				
9				
10				

> INFO: pipe roughness group settings of calibration analysis.  
> INFO: junction demand group settings of calibration analysis.  
> Retrieving associated element IDs ... 50 groups processed.  
> INFO: junction pressure measurement/result of calibration analysis.

## Main Menu

### Mode Run Help

**Mode** - Choose a mode (Steady State, Fire Flow, or Extended Period) for Calibrator.

**Run** - Go to **Run** to **Start** and **Stop** the trial. You can also choose **Options....** to view the Calibration Options dialog box:

Calibration Options
✕

	Measurement Unit	Weighting Factor	Evaluation Threshold (%)
Pressure :	<input type="text" value="Psi"/>	<input type="text" value="1"/>	<input type="text" value="5"/>
Level/Head :	<input type="text" value="Feet"/>	<input type="text" value="1"/>	<input type="text" value="5"/>
Flow :	<input type="text" value="Gallon / Minute"/>	<input type="text" value="1"/>	<input type="text" value="5"/>

Termination Criteria

Fitness Threshold (%) :	<input type="text" value="1"/>	Maximum Trials :	<input type="text" value="50000"/>
Least Fitness Improvement (%) :	<input type="text" value="0.1"/>		
Least Improvement Generation :	<input type="text" value="100"/>		

Convergence Method (Fitness Measurement) :

- Type #1 : AVERAGE of the absolute values of  $w(1 - P_{sim}/P_{obs})^2$
- Type #2 : AVERAGE of the absolute values of  $w(1 - P_{sim}/P_{obs})$
- Type #3 : MAXIMUM of the absolute values of  $w(1 - P_{sim}/P_{obs})$

Calibration Time :

**Help** - Click to go to **Contents**, **Index**, or **About Calibrator** to find more information on Calibrator.

**Junction ID**

Insert the junction ID where pressure data has been measured.

**Observed**

Insert the target pressure to be met for the corresponding junction node ID.

**Simulated**

Displays the pressure predicted based on the solution obtained for the calculated model parameters (i.e., pipe roughness, junction demand, and pipe status).

**%Diff**

Displays the percent difference between the observed and simulated pressures.

## Input Data Buttons

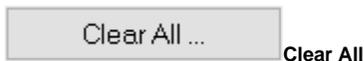
The Input Data buttons located on the right side of the dialog box allows you to input and edit data into the data fields as well as to analyze the data once it is entered.



This button allows you to select an element ID by using the map to select the element directly from the map display.



This button allows you to update an element ID assigned to the current grouping via graphical selection from the map display.



This button will remove each ID from the current dialog box.

Load ...

**Load**

Use this button to load a selection set of ID's into the table.

Save ...

**Save**

Use this option to save the ID's in the table as a selection set.

Insert Rows ...

**Insert Rows**

Use this button to insert the selected number of rows into dialog box display.

Delete Rows ...

**Delete Rows**

This button will remove the row at the current cursor location for the current dialog box.

Set Rows ...

**Set Rows**

Adds the selected number of rows to the dialog box.