



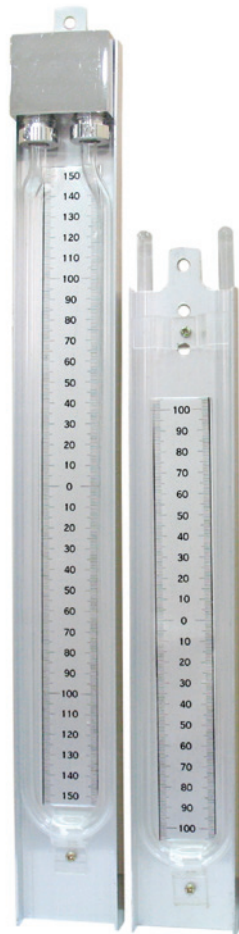
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# NEW-FLOW

MANUFACTURE OF U-TUBE MANOMETER  
U SERIES

AND CONTROL INSTRUMENTS

## *Instruction Manual*



**Approvals:**



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# 1. DESCRIPTION

## 1.1 Principles of Operation

$$p = P2 - P1 = \rho gh$$

p = differential pressure

P1 = pressure at the low pressure connection

P2 = pressure at the high pressure connection

$\rho$  = density of the liquid

g = acceleration of gravity

h = height of the liquid column

## 1.2 Technical Data

- Tube Size: O.D  $\varnothing$ 8mm x I.D  $\varnothing$ 6mm
- U-Tube Material: Glass
- Working Pressure: max. 3 kg/cm<sup>2</sup>
- Working Temperature: max. 80°C

## 1.3 Range Table

### 1. mm H<sub>2</sub>O

Model	Range	Dimension		
		L	H	W
200	±100	300	200	50
300	±150	400	300	50
400	±200	500	400	50
500	±250	600	500	50
600	±300	700	600	50
800	±400	900	800	50
1000	±500	1100	1000	50

\*Special range on request.

### 2. Inch of Water ("W.C.)

Model	Range	Dimension		
		L	H	W
8"	±4"	300	200	50
12"	±6"	400	300	50
16"	±8"	500	400	50
20"	±10"	600	500	50
24"	±12"	700	600	50
36"	±18"	1100	1000	50

\*Special range on request.

## 2. INSTRUCTIONS

### 2.1 Safety Instructions

There is a risk of injury if the U-Tube manometer breaks.

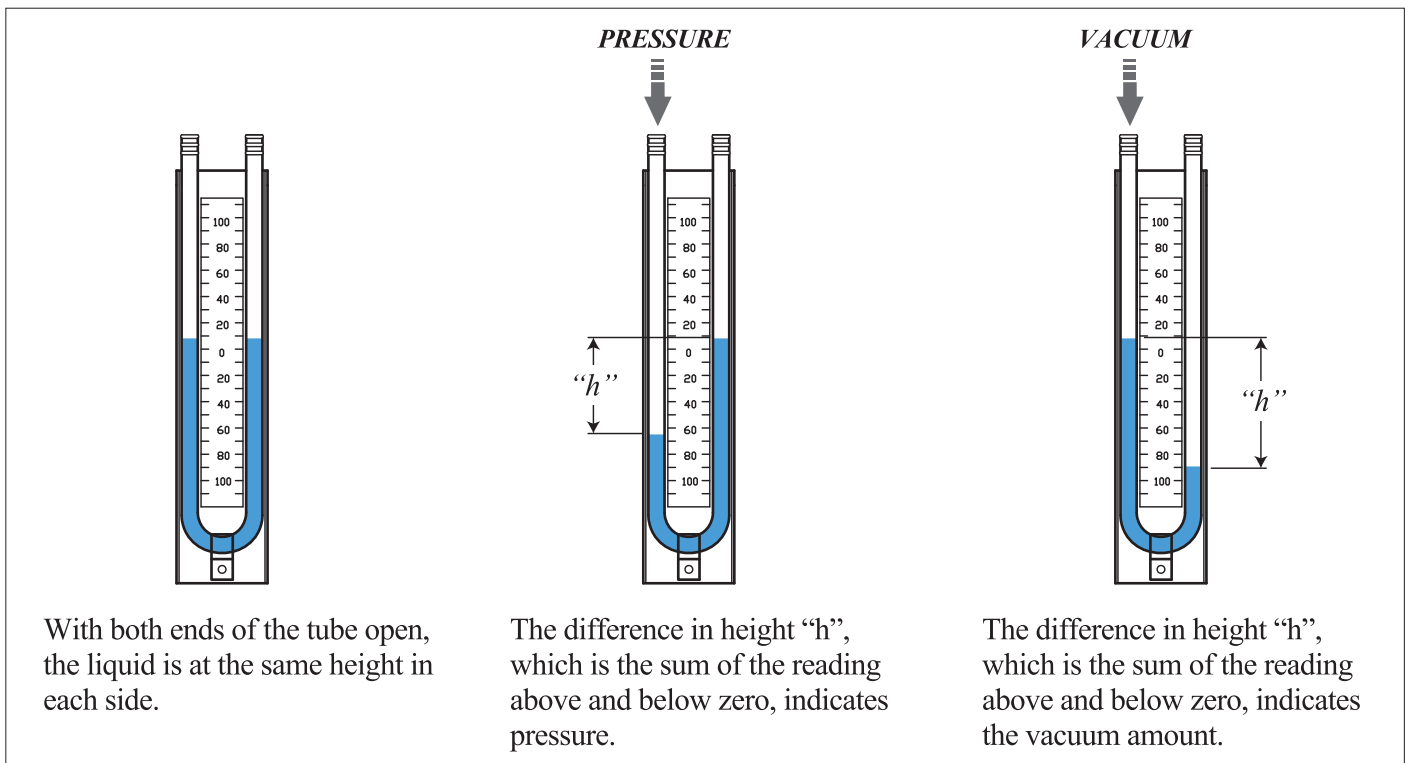
- Do Not subject the glass to any mechanical stresses.
- If the tube is filled with dangerous liquid, safety regulations for the use of dangerous liquid must be observed.

### 2.2 Operation

#### 2.2.1 Filling the U-Tube Manometer

The tube can be filled with dyed distilled water or petroleum.

- The manometer tube is to be filled with liquid slowly using a funnel until both sides of the tube are filled up to half way.
- When filling with dangerous liquid or petroleum, the tube should be placed in a collecting basin.
- To empty the manometer of dangerous liquid or petroleum, tip it out over a collecting basin while using a funnel to pour the dangerous liquid or petroleum into a storage bottle.



#### 2.2.2 Measurement

- For small differences between the pressure and atmospheric pressure, the recommended filling would be dyed distilled water or petroleum.
- Use a hose to connect the manometer to the vessel for which the pressure is to be measured.

The column of fluid will rise on one side of the U-Tube.

- Read off the difference in height  $\Delta h$ .
- Calculate the pressure.

## 3. MAINTENANCE

### 3.1 Notice Items

- If cleaning is necessary, remove fittings, drain fluid, and rinse with mild soap and water, and please dry it well.
- Avoid using soaps and solvents which may damage manometer and void warranty.
- When replacing O-ring, apply a thin coat of petroleum jelly to assure a good seal.  
Do Not coat O-ring used in the overpressure safety trap.
- Avoid using fluids other than those specified. Corrosive fluids may damage the manometer.
- If return is necessary, please contact with the service person of manufacturer to receive a return goods authorization number before shipping back.