

# INDUSTRIAL THERMOMETERS

## Installation, Operation & Maintenance Instructions

### Installation & Operation

Miljoco Industrial Thermometers should always be installed in a separable socket or test well to help protect the stem against fluid erosion, corrosion or other hazards. Do **NOT** install the thermometer directly into a pressurized hydronic HVAC system or process media. The well should first be primed with a heat transfer medium, such as oil, graphite or paste, to provide optimal accuracy and response time.

All Miljoco thermometers are factory-calibrated to the stated accuracy. However, the instrument may be subjected to mishandling during transportation, therefore accuracy should always be verified against a known standard before installation. The thermometer should be installed at a location as free from vibration as possible in order to avoid the potential for fluid separation within the tube, rendering the instrument inaccurate.

1. Select the proper-sized wrench tool so as to fit the metal flat adjacent the pipe threads on the separable socket.
2. Treat the pipe threads with appropriate sealant material to suit application.
3. Insert the thermometer stem into the socket and thread the brass swivel coupling nut on thermometer into the internal threads on the socket to secure stem.
4. Carefully loosen the angle adjustment screw only enough to allow the teeth on the joint fitting to disengage. Do **NOT** remove this screw. Adjust the readout scale to the desired viewing angle as near to vertical as possible, and retighten the angle adjustment screw.

### Maintenance

Generally, a properly installed thermometer should require no mechanical maintenance. If there is a clear indication of erroneous readings, the unit should be removed and forwarded for inspection by a professional instrument service technician.

### Re-Uniting a Separated Column

Occasionally, mishandling of the thermometer during transportation will result in a separated fluid column within the tube, causing the unit to give an inaccurate reading. The column can usually be reunited by following the steps listed below.

1. Remove the thermometer from the application and slowly heat the stem while keeping the unit in a vertical position.
2. Observe the upward movement of the fluid until the separation point approaches the expansion chamber at the top of the tube.
3. When the separation reaches the chamber, tap the thermometer to expel any trapped gas upward beyond the fluid into the expansion chamber and remove from the heat source. **Warning:** Do not expose the stem to a temperature more than 20°F above the high end of the scale, or the instrument may suffer irreparable damage. If above prescribed action does not reunite the column, return the thermometer to the factory under the conditions of the limited warranty.

### WARNING

Miljoco industrial thermometers are currently supplied with a non-toxic, spirit-filled tube. However, if you have a mercury-filled thermometer that becomes damaged, it should be treated as a hazardous material and disposed of in a manner consistent with environmental regulations of the appropriate governing jurisdictions.

