



**Application Driven Designs
for Pharmaceuticals and Biotech**

At Weed Instrument, we provide a complete line of sanitary and high-purity temperature sensors for accurate, reliable temperature measurement. Our products offer the real-life functionality to keep manufacturing processes tightly within specification. They excel in tough applications such as bioreactors, cell culture, fermentation, blending, vaccine production, sterilization, and more. Weed has earned a reputation for providing accurate, reliable sensing devices for both everyday dependability and critical temperature situations. Our customers continue to tell us that our products last longer than similar or competitive products. Longer product life decreases your cost of ownership. In addition to cost savings, Weed continues to offer the product consistency, dependability, and quick turnaround that our customers depend on.

We specialize in custom designs; thus, we are comfortable producing small or large production runs, special finishes, unique calibration, and special materials and sizes. We offer unique solutions to fit your unique processing equipment needs.

We've successfully combined our years of temperature measurement experience with compliance to the latest sanitary regulations and quality standards, putting our certification

expertise to work in obtaining approval from various organizations.

High-purity applications require extra measurement accuracy and repeatability to maximize product quality as well as stay within operating budgets. Ultra-clean surfaces are critically important. Ease of entry for validation and calibration enhance productivity. Sensor corrosion and product contamination are totally unacceptable. Add the expense of maintaining and monitoring high temperatures, and you'll find that downtime in sanitary industries is costly indeed.

Weed also offers Plug-and-Play temperature sensors that can aid and assist in a pharmaceutical or biopharm validation and quality program. Compliance with the recently introduced IEEE1451.4 standard for plug-and-play compatibility will digitally describe and identify each discrete sensor by means of a TEDS (Transducer Electronic Data Sheet) written on an EEPROM, which resides with the sensor. This offers added security in testing, providing manufacturer and user information that is unique and permanently affixed to the sensor. The correct sensor is always correctly identified and calibrated, thus increasing confidence and reliability in system validation.



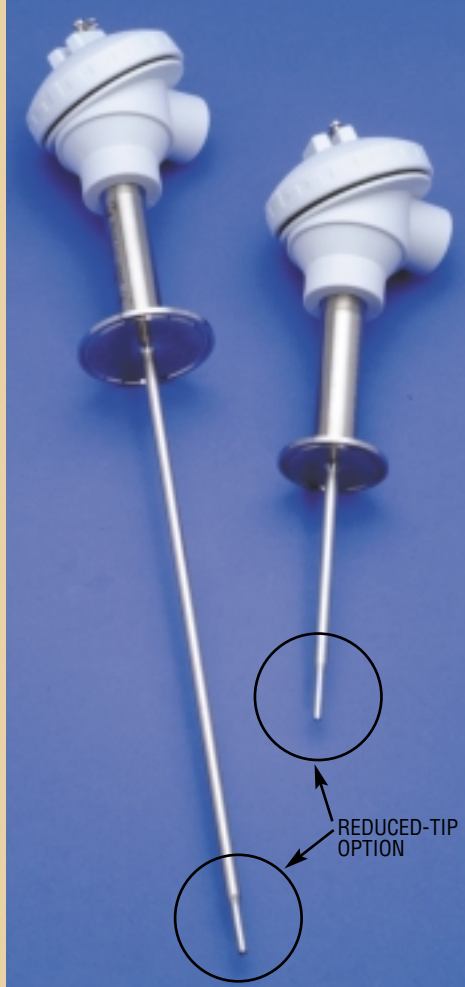
Model 451

Sanitary direct immersion RTD



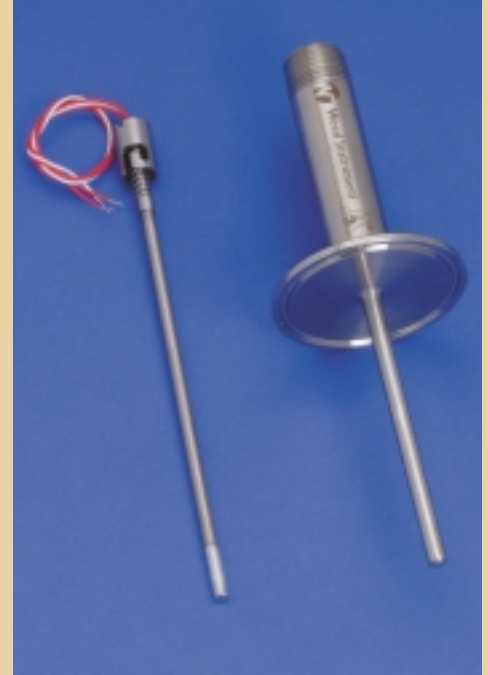
For use in tanks where sensor corrosion and product contamination are critical factors.

- Various surface finishes available (30 to 4 Ra)
- Clean-in-place design
- Various fitting options available (Tri-Clover, Cherry-Burrell)
- Reduced-tip option for faster time response
- Standard fitting sizes (1", 1-1/2", 2")
- Special accuracy options available
- No exposed threads for hose down cleaning
- Can add local transmitter in weatherproof housing, or mount remotely
- All 316L stainless steel all welded construction
- Options for dual sensors for redundancy concerns



Model 461

Removable sensor RTD



For use where sensor needs to be calibrated or replaced without shutting down the vessel system.

- Lower replacement costs
- Combines fast time response of standard sanitary sensor with advantages of a thermowell
- Can add local transmitter in weatherproof housing, or mount remotely
- All 316L stainless steel all welded construction
- Quick sensor disconnect to check calibration, validation, or replacement

**U.S. Patent number 5,632,557 for removable sensor design*

Model 2824 Mini sanitary RTD



Small, compact design to fit into tight spaces.

- Multiple sheath lengths and diameters available
- Multiple Ra finishes available
- Reduced tip option for even faster time response
- Mini Tri-Clover fitting standard (1/2", 3/4")
- -50°C to 200°C temperature range
- Option to mount transmitter locally or remotely
- 3- and 4-wire RTD options and special accuracy available
- All welded construction
- Sensor housing transition options in PVC strain relief or threaded NPT straight sheath

Model 3142 Non-intrusive tank sensor for sanitary tanks



Ideal where wipers, mixers, or agitators would interfere with insertion type probe or thermowell.

- True CIP mounting with tank wall via welded spud connection
- Can be retrofitted onto existing tanks
- Teflon insulation protects sensor from false tank readings
- No more broken or damaged probes
- Patented removable sensor design option
- Fast time response options

Patent-pending unique design

Model 2543 Non-intrusive flow through sanitary sensor for small piping systems

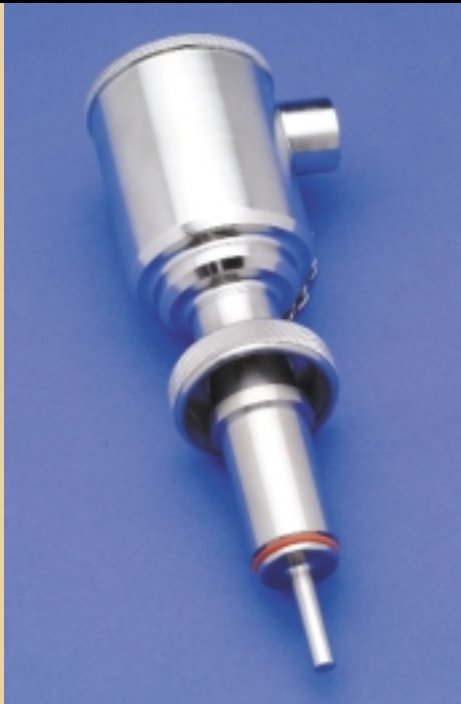


For use where insertion probes cannot be used in critical monitoring areas.

- True CIP and SIP design
- Does not obstruct flow
- Where direct insertion, viscosity and flow rate would affect accuracy
- AWF, Tri-Clover, Cherry-Burrell piping connection options
- Internal flow surfaces polished for range of sanitary finishes (30 to 4 Ra)
- Variable pipe lengths and diameters available (down to 1/4" line sizes)
- Single and dual sensor configurations
- 316SS or polypropylene connection head option if local transmitter desired



Model 3179 Sanitary insertion style RTD probe



For European designed high purity production vessels.

- Ingold fitting design for easy installation
- Sanitary O-ring for moisture proof operation
- Stainless steel locking nut for Ingold port
- Local transmitter options in integral stainless steel connection head
- Quick disconnect option eliminates wiring of RTD to control system

Model 3213 Penetration thermocouple



For use in sterile penetration applications.

- Sharp tip for easy penetration
- Small diameter and backstop for exact penetration length
- Variable length wire for access to control systems
- Plug and jack termination for easy connection
- Completely sterile and waterproof design
- Armored cable option for additional protection in sterilizers and autoclaves

Temperature transmitter options



- Head mount transmitters for mounting near sensor
 - PC programmable and HART
 - Universal inputs
- DIN rail remote mounted transmitters—HART and PC programmable
- Low cost RTD only PC programmable head mount transmitter
- Loop powered local indicator option available in some styles





You may know Weed Instrument for our work with industrial and nuclear temperature measurement applications. For over 35 years, we've been providing quality temperature sensors known for strength, accuracy and dependability. What you may not know is that we offer a wide range of instruments for sanitary applications—in the research, manufacture and processing of pharmaceuticals, bio-technology products, and life science.

Weed is an ISO 9001 approved facility. Our large manufacturing area, state-of-the-art metrology lab, and well equipped QA/QC department assure that from concept to finished product, the integrity of your design is maintained. All equipment used for comparison in our Metrology Lab is NIST traceable. Our commitment to quality in all areas has been audited and approved to stringent industry standards.



**707 Jeffrey Way
Round Rock, Texas 78680**
Phone: 800.880.WEED (9333) or 512.434.2900 Fax: 512.434.2901
E-mail: temperature@weedinstrument.com

www.weedinstrument.com