

TEMPERATURE SENSORS FOR VALIDATION

THERMOCOUPLE

AUTOClave THERMOCOUPLE

Thermocouples with special Sleeves & Needle Type with Moisture Stopper.

Type : "T" (Cu-CuNi)
Application : 121-134°C
Temp.

Insulation type
FEP : -70 to 200°C continuously, 316°C peak
PFA : -70 to 260°C continuously, 285°C peak

Accuracy
At 40°C : ±0.1°C
At 121°C : ±0.3°C



RTD

AUTOClave RTD

RTDs avoid moisture inside probe, which is caused by Autoclave pressure cycling.

Type : Capsule Type RTD

Application : 121-134°C
Temp.

Insulation type
FEP : -70 to 200°C cont., 316°C peak
PFA : -70 to 260°C cont., 285°C peak

Accuracy
At 40°C : ±0.1°C
At 121°C : ±0.3°C



TUNNEL THERMOCOUPLE

Thermocouples :- Special TIP Type & Needle Type

Type : "T" (Cu-CuNi)

Application Temp.: 160-300°C

Insulation type
Kapton : 300°C continuously, 350°C peak

Accuracy
At 40°C : ±0.1°C
At 121°C : ±0.3°C
At 300°C : ±0.5°C



TUNNEL RTD

Type : Capsule Type RTD

Application Temp.: 160-300°C

Insulation type
Kapton : 300°C continuously, 350°C peak

Accuracy
At 40°C : ±0.1°C
At 121°C : ±0.3°C
At 300°C : ±0.5°C



TEMPERATURE SENSORS FOR PROCESS

CIP (Cleaning In Place) / SIP (Sterilisation In Place)

Clean-In-Place (CIP) is an everyday practice in Pharma manufacturing and involves cleaning reactors, pumps, heat exchangers, distribution loops and process filling machines.

Steam-In-Place (SIP) system is widely used for in-line sterilization of various processing equipment.

Temperature Sensors Used in CIP/SIP : Sanitary RTD's

SANITARY RTDS

Temperature Range : -20 to 250°C

Type : Simplex, Duplex

Class : A

Head : Die Cast Alu., SS Head.

Process Connection : Tri-clover Fitting, Fixed Fitting

Thermowell : with or without Tri-clover



CABLES & WIRES



- ✓ Thermocouple Extension & Compensating Cables
- ✓ RTD Triad Cables
- ✓ High Temperature Cables
- ✓ Instrumentation Signal Cables
- ✓ Low Voltage Control & Power Cables
- ✓ Heat Resistance Power Cables
- ✓ PVC Lead Wires/Hook up Wires

- ✓ Special Cables & Sleeves (Composite Cable, Load Cell, RS-485, EB-XL Irradiated Cables etc.)
- ✓ DC Solar Photovoltaic Cables
- ✓ Digital Linear Heat Sensing Cables
- ✓ Automotive Wires & Cables
- ✓ Fire Survival Cables
- ✓ Mineral Insulated Metal Sheathed Cables

INDUSTRIAL HEATERS



- ✓ Silicon Rubber Heater
- ✓ Tubular Heater
- ✓ High Watt Density Cartridge Heaters
- ✓ Ceramic Band Heaters

CALIBRATION EQUIPMENT

- ✓ Liquid Bath (-80°C to 250°C)
- ✓ Dry Block Furnaces (-196°C to 1700°C)
- ✓ Black Body (50° to 2700° C)
- ✓ NABL Accredited Calibration Lab: -196°C to 1600°C for contact and up to 2900°C for non-contact pyrometers



PYROMETER



- ✓ Pyrometers (-60°C to 3200°C).
- ✓ Single & two Color Pyrometers.
- ✓ Fiber Optic Pyrometers
- ✓ Portable Pyrometers

LABORATORY FURNACES

Laboratory furnaces for universal applications. Easy operation, fast heating and cooling cycles. Stainless steel housing for corrosive environments. Standard PID controller with one heating ramp.

Model	Liters	Inside Dimensions (mm) (WxDxH)	kW	Heating Element	Max. Temp(°C)
MF 412	7.9	175 X 300 X 150	3.2	Kanthal A1	1200
HTF 1800	4.0	150 x 240 x 110	4.0	MoSi2	1800



Tempens Instruments (I) Pvt. Ltd. U#I
B-188A, Road No.5, M.I.A.,
Udaipur - 313003 (Rajasthan) INDIA
Ph. 91-294-3057700, Fax .91-294-3057750
Email: info@tempens.com

Tempens Instruments (I) Pvt. Ltd. U#II
A-190, Road No.5, M.I.A.,
Udaipur - 313003 (Rajasthan) INDIA
Ph. 91-294-3052900, Fax .91-294-3052950
Email: info@tempens.com

