

# MODEL GEO-T200B

## All-weather precipitation gauges



- More than 20 years of field use
- Easy installation and maintenance
- Precipitation intensity can be calculated
- Proven long term reliability
- No internal heating required
- No moving parts
- Interfaces to METEODATA-300C data acquisition station
- Vibrating wire weighing sensors



**GEONICA, S.A.**  
EARTH SCIENCES

SINCE  
1974

# Proven long term reliability

## DESIGN



Precipitation can be reported at real-time intensity to any interval required. The precipitation gauge is simple to configure for use with automatic data acquisition units. The standard T-200B has a 600 mm capacity and one vibrating wire sensor.

The gauge has a protective housing with a WMO standard 200 cm<sup>2</sup> inlet. Inside there is a container for collecting the precipitation. The amount of precipitation is measured by using vibrating wire load sensors. The instrument as well as a wind shield is mounted to the pedestal.

With the use of antifreeze any solid precipitation is melted in the container. No electrical heating is therefore required, thus eliminating a common source of error. A thin layer of oil is added to impede any evaporation.

The sensor can be connected to the METEODATA-3000C Data Acquisition and Transmission Unit.

## APPLICATIONS

The T-200 series precipitation gauges are used world wide by:

- National weather services
- Climatic research institutes
- Hydro power companies
- Airport authorities
- Road authorities
- Agricultural services
- Avalanche prediction centres
- Winter sport resorts



## MEASURING PRINCIPLE

The precipitation collected in the container are weighed with a vibrating wire load sensor, which gives a frequency output. The frequency will be a function of the applied tension on the wire, i.e. from this, the amount of precipitation can be computed. The frequency is recorded as a square-shaped 0-5 V signal. This signal can easily be transmitted and interfaced to most data acquisition systems. There are no mechanical moving parts, eliminating other possible sources of error.

Because of its simplicity and low power requirement, the T-200B is well suited for remote locations where power may only be available from solar energy.

## OPTIONS



### 1000 MM CAPACITY

A version of the T-200B with 1000 mm capacity will be available in 2005. The design will make it possible to retrofit existing T-200B units with the larger capacity.

### 3 SENSOR SYSTEM

Using a 3 sensor system ensures the continuation of data recording if one of the sensors should fail. This is made possible with a level retaining device. It also ensures that the total amount of the precipitation will be measured even if there is a slight deviation from the horizontal plane.

Standard single sensor units can easily be upgraded to 3 sensor systems.



### WHITE HOUSING

The standard T-200B comes with anodized housing and black inlet. The housing, including the inlet, is also available in white.

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## ACCESORIES

### Easy access windshield hinges

Two hinges on the circumference of the windshield make it possible to raise half of the shield to give clear access to the gauge during servicing and maintenance. Hinges can be installed on existing windshields.



### Inlet heater system

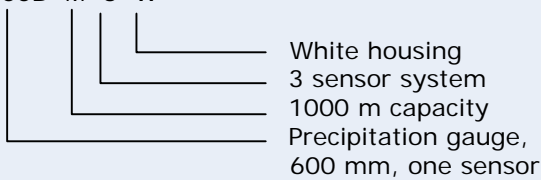
To prevent capping of the inlet, Geonor can provide inlet heating. The system to be used is dependent on power supply available.



## TECHNICAL SPECIFICATIONS T-200 B

<b>Capacity:</b>	0 – 600 mm including antifreeze	<b>Temperature range:</b>	Sensor -25°C to 60° C (can be changed upon request)
<b>Collecting area:</b>	200 cm <sup>2</sup>	<b>Temperature drift:</b>	0.001% FS/°C
<b>Sensitivity:</b>	0.1 mm	<b>Materials:</b>	Aluminium alloy
<b>Accuracy:</b>	0.1% FS	<b>Size:</b>	Ø = 390 mm, H = 760 mm
<b>Repeatability:</b>	0.1 mm	<b>Mounting:</b>	Universal 3-point with leveling system incorporated in base

## ORDER REFERENCES

Part No. System	Part No. Equipment
T-200B M 3 W 	470250 Windshiel with stainless stell blades
	470400 Pedestal, galvanized steel 1 m high
	470450 Pedestal, galvanized steel 2.5 m high
	470260 Easy access windshield hinges
	455000 Excitation unit PCB
	455055 Excitation units for data loggers, rail mounting
	470800 Sensor with level retainig device

