HydroMet

Meteorology | Precipitation | Rainfall

Meet the Rain Gauge range.

Rainfall measurement for every environment.

KISTERS

Empowering decisions of tomorrow

Introducing the Tipping Bucket all-star line up.

Technology developed by KISTERS offers a new global standard for Tipping Bucket Rain Gauges with increased accuracy, reduced maintenance and increased operational field life.

Engineered for accuracy, trusted for reliability.
Combining brilliant design, reliability, ultra-low maintenance, and exceptionally long life in the field, our tipping bucket rain gauges continue to exceed customer expectations.

Global standards beyond the average tipping bucket.
Trusted by local, state, and federal agencies worldwide, the TB3 and TB4 redefine reliability in rainfall measurement. With long-term calibration and minimal maintenance, the TB3 and TB4 deliver high accuracy of ±2% from 0 to 10 in/hr. and ±3% up to 20 in/hr. – ensuring unwavering data confidence when every measurement counts.

Driven by expertise, built with purpose.

With decades of experience in environmental monitoring and a passion for innovation, KISTERS' engineers have developed tipping bucket rain gauges for professionals who demand accuracy and reliability. Built to withstand extreme conditions, the TB3 and TB4 offer robust performance with advanced flow control technology, delivering reliable measurements even in high-intensity rain events. The TB7 delivers practical and reliable performance, balancing affordability with proven durability. Designed for long-term stability and minimal maintenance, our range of TBRGs provide critical, reliable data – when it matters most.

Best suited for professionals working in:

- ✓ **Water Resources Management & Hydrology.**
  Monitoring rainfall in watersheds, rivers, and reservoirs to support water balance studies, flood modelling, and resource planning.
- ✓ **Meteorology & Climate Science.**
  Providing accurate rainfall data for weather forecasting, storm tracking, and climate modelling to understand environmental changes.
- ✓ **Agriculture & Irrigation.**
  Provides real-time rainfall insights to optimize irrigation schedules, conserve water, and improve crop yields.
- ✓ **Urban Planning & Infrastructure.**
  Supports drainage design and flood mitigation strategies to improve urban resilience and protect communities from extreme rainfall events.
- ✓ **Environmental Research & Ecosystem Monitoring.**
  Captures accurate precipitation data to assess ecosystem health, track climate impacts, and guide conservation efforts.
- ✓ **Industrial Operations & Risk Management.**
  Monitors rainfall in industries such as mining and hydropower to ensure operational safety, regulatory compliance, and water management.

TB3
The one that started it all.

Robust. Delivers high accuracy. Across a broad range of rainfall intensities.

Engineered for precision, the TB3 features an innovative flow control mechanism that regulates the flow rate into the gauge, correcting intensity errors common in conventional (uncorrected) TBRGs - delivering high accuracy across a broad range of rainfall intensities (±2% from 0 to 10 in/hr, ±3% up to 20 in/hr). It's unique stainless-steel finger filter resists clogging, reducing site visits and preventing data loss. Sapphire pivots provide long-term stable calibration, making the TB3 a trusted choice even in the most challenging environments.

The TB3 is designed to deliver accurate and reliable rainfall measurements with minimal maintenance. It resolves data loss issues with a with a clog-resistant finger filter and sapphire pivots, and its long-term stable calibration ensures data confidence in any environment.

TB4

All the same features of the TB3 with UV-resistant ASA polymer base.

Tougher by design. Same precision, enhanced durability.

Designed for precision and reliability, the TB4 shares the advanced features of the TB3 while offering a UV-resistant ASA polymer base for added durability in harsh environments.

It's innovative flow control mechanism regulates the flow rate into the gauge, correcting intensity errors common in conventional (uncorrected) TBRGs – delivering high accuracy across a broad range of rainfall intensities (±2% from 0 to 10 in/hr, ±3% up to 20 in/hr). A stainless steel finger filter prevents clogging, reducing maintenance and ensuring uninterrupted data collection, while sapphire pivots provide long-term stable calibration.

The TB4 delivers the same high accuracy, clog-resistant design, and long-term calibration stability as the TB3, with a rugged UV-resistant polymer base for durability in any environment.

TB7

Trusted simplicity, proven performance.

A no-fuss, reliable solution for accurate rainfall measurement – built to last, easy to maintain, and cost-effective for a wide range of applications.

Practical, durable, and cost-effective, the TB7 delivers dependable performance, meeting WMO standards with ±5% accuracy from 0 to 10 in/hr. As a non-siphoning gauge, it delivers reliable rainfall measurement without a flow control mechanism. Built for long-term performance, it features Sapphire pivots, a non-clogging finger filter, and a Teflon™ polymer bucket for durability.

It's UV-resistant ASA polymer enclosure and base ensure low maintenance, while dual water outlets simplify data verification.

The TB7 provides a robust, non-siphoning option with essential features for accurate rainfall measurement, making it an excellent choice for professionals seeking a durable and economical solution.

RainTrak
Reliable rain monitoring made simple.

All-in-one autonomous rain gauge and reporting station.

RainTrak combines the proven accuracy of a tipping bucket rain gauge with integrated data logging, communication, and alerting capabilities – all in one complete package. Designed for fast deployment and minimal maintenance, RainTrak offers a reliable solution for remote rainfall monitoring, ensuring you stay informed whenever and wherever it rains.

Why RainTrak?

- ✓ **Complete and ready to go.**
  The RainTrak is a fully autonomous, all-in-one rain gauging and reporting station designed for quick and easy deployment. Delivered as a complete package featuring your choice of TBRG, IRIS UnderCover data logger, battery, antenna and solar panel for energy independence, RainTrak is ready to operate within minutes – just add a SIM card for network connectivity.
- ✓ **Seamless data management**
  RainTrak transmits data in real-time or at scheduled intervals to a user's FTP server or an optional secure KISTERS web data centre. Data can be accessed, visualised, and downloaded via the KISTERS datasphere software, which provides graphs, tables, and export options through a web browser on desktop or mobile devices. RainTrak also integrates seamlessly with KISTERS iRIS data loggers and select third-party devices.
- ✓ **Instant rain alerts.**
  With real-time IP data transmission, RainTrak can trigger alerts whenever rainfall exceeds user-defined thresholds. Optional SMS alerts ensure you're always informed.

What makes our TBRGs unique.

Innovative Siphon Design inspired by Pythagorean Cup principle (TB3 & TB4)

Ensures a steady flow of rainwater into the bucket, especially in heavy downpours, reducing measurement errors for highly accurate measurements.

Quick & Easy Maintenance

Corrosion-Resistant & Smooth Water Flow

The anodized, powder-coated aluminum rim and funnel (TB3 & TB4) prevent rust while ensuring seamless water collection for precise measurements.

Effortless Precision Installation

The built-in bullseye level guarantees perfectly horizontal installation for optimal performance.

Reliable Data Transmission & Protection

Dual magnetic reed switch outputs enable redundant transmission to two independent dataloggers. Varistor protection safeguards against electrical surges, ensuring long lifetime.

Ultra Durable Sapphire Pivots

Unlike traditional metal bearings, our stone hard and corrosion-free sapphire pivots ensure frictionless bucket movement, delivering long term calibration stability and extended equipment lifespan.

Factory-Calibrated for Unmatched Accuracy

Professional, factory-calibrated rain gauges. Each TB3 and TB4 unit is individually calibrated, with an optional certificate for verification. (TB7 models undergo batch calibration.)

Designed for Water Collection & Analysis

Built in **discharge outlets** allow seamless water collection for verification and analysis. Integrated insect screens prevent intrusion.

Teflon-Impregnated ASA polymer (UV-stabilised)

TB3, TB4, TB7 (0.1 mm, 0.2 mm, 0.5 mm, 0.01")

Painted brass

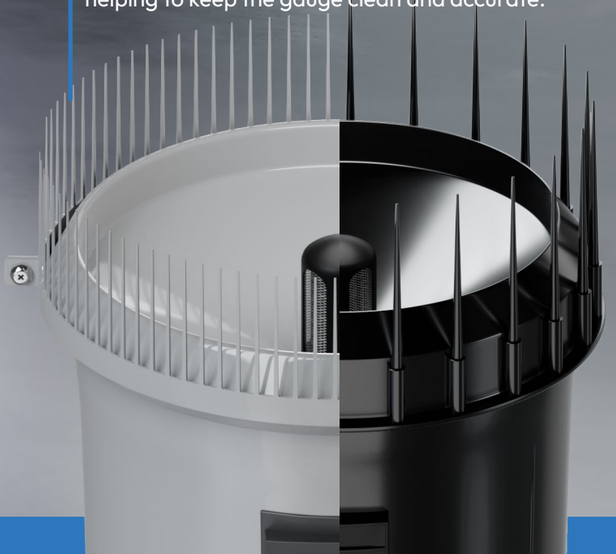
Brass bucket with painted finish
TB3 (0.1 mm, 0.2 mm, 0.5 mm, 1.0 mm, 0.01"),
TB4, TB7 (1.0 mm only)

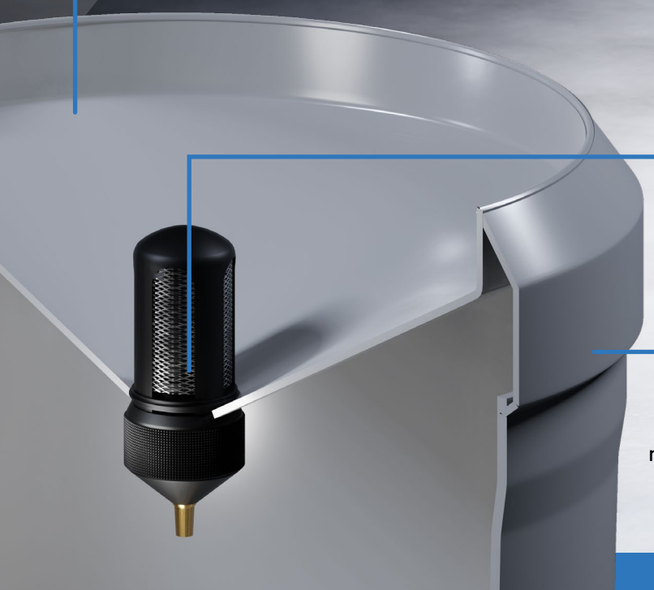
Precision Engineered Buckets

Very smooth surfaces and a surface tension breaking nose ensure complete drainage. Available in two high quality materials.

Effective Bird Protection

An integrated bird protector – standard on the TB7 and available as an option for the TB4 and TB3 – prevents perching and contamination, helping to keep the gauge clean and accurate.





Clog-Free Operation

A non clogging finger filter keeps dirt out while maintaining smooth water flow, reducing maintenance and ensuring accurate readings.

Built to Last in Harsh Conditions

Rugged construction and premium materials ensure long-term durability, even in extreme environments.

Enhanced Ventilation for Long Term Reliability

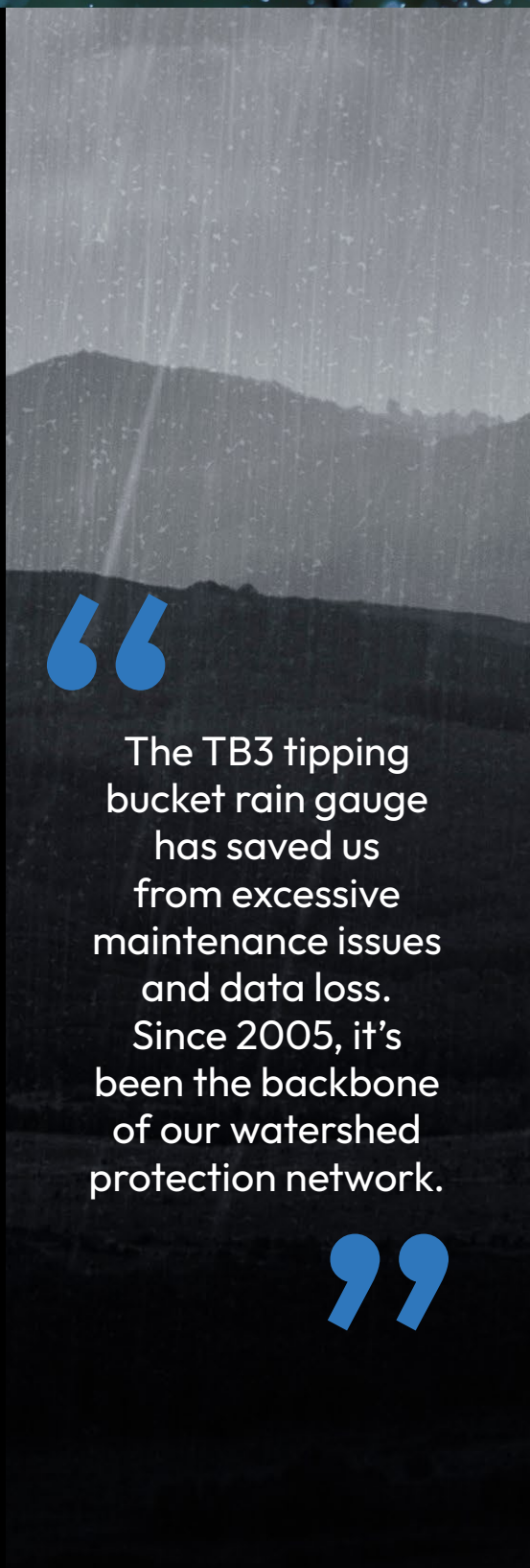
Strategically placed ventilation holes in the base plate and enclosure minimize internal moisture, preserving long term accuracy and reducing the risk of corrosion.

Technical specifications

	TB3	TB4	TB7
Accuracy	— 0-250 mm per hour; +/-2% — 250-500 mm per hour; +/-3%	— 0-250 mm per hour; +/-2% — 250-500 mm per hour; +/-3%	— 0-200 mm per hour; +/-5% — 200-500 mm per hour; +/-8%
Range	**0 to 27.6 inches per hour**	**0 to 27.6 inches per hour**	**0 to 27.6 inches per hour**
Enclosure	**Funnel: anodised aluminium Tube: annealed aluminium alloy sheet spun into seamless tube, powder coated**	**Funnel: anodised aluminium Tube: annealed aluminium alloy sheet spun into seamless tube, powder coated**	**UV-resistant ASA polymer**
Base	**Anodized, Powder Coated, Cast Aluminum**	**UV-Resistant ASA Polymer**	**UV-resistant ASA polymer**
Bucket	**Teflon-impregnated polymer, metal**	**Teflon-impregnated polymer, metal**	**Teflon-impregnated polymer**
Pivots	**Sapphire**	**Sapphire**	**Sapphire**
Reed Switch	**Dual Output (24 VDC max)**	**Dual output (24 VDC max)**	**Dual output (24 VDC max)**
Siphon Assembly	✓	✓	
Finger Filter	✓	✓	✓
Resolutions Available	— 0.01 inch — 0.2 mm — 0.5 mm — 1.0 mm — 0.1 mm * *with special order 300 mm catch	— 0.01 inch — 0.2 mm — 0.5 mm — 1.0 mm — 0.1 mm * *with special order 300 mm catch	— 0.01 inch — 0.2 mm — 0.5 mm — 1.0 mm

Why **KISTERS**?

- **Innovations that protect your rainfall data.**
  KISTERS' Tipping Bucket Rain Gauges are designed to deliver highly accurate rainfall data – even in challenging conditions. Our unique innovations ensure long-term reliability, minimal maintenance, and greater data confidence.
- **Flow Control Mechanism.**
  Ensures accurate measurement during heavy rain events – solving a challenge identified by the WMO.
- **Vertical Finger Filter.**
  Prevents blockages from debris to keep data flowing and minimise site visits.
- **Sapphire Pivots.**
  Deliver long-term calibration stability, especially for remote installations.
- **For over 20 years,**
  KISTERS' innovations have improved the accuracy, stability, and longevity of tipping bucket rain gauges – setting a new global standard.



> The TB3 tipping bucket rain gauge has saved us from excessive maintenance issues and data loss. Since 2005, it's been the backbone of our watershed protection network.

HydroMet

A tipping bucket for every need – reliable, accurate, and built to last.

Who we are.

We're KISTERS – and for over 60 years, we've specialised in helping our customers collect, analyse and share the environmental data that will shape the future.

Through innovative, digitally-focused solutions, we develop advanced systems that enable our customers to capture and manage information at a higher quality than ever before. So they can make the solutions our world needs to thrive.

Book your demo now.

Speak to a member of our team about booking your live demo today.

KISTERS Europe I hydromet.sales@kisters.eu I kisters.eu
KISTERS Australia I sales@kisters.com.au I kisters.com.au
KISTERS New Zealand I sales@kisters.co.nz I kisters.co.nz
KISTERS North America I kna@kisters.net I kisters.net

KISTERS
Empowering decisions of tomorrow