

SOLINST TECHNICAL BULLETIN

Field-Replaceable Levellogger Nose Cone for Shallow Aerated Streams



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Overview

Solinst now offers an optional, field-replaceable unscreened nose cone design for the Levellogger (M5 models—Junior and LevelVent included). This enhancement is the result of customer feedback and field collaboration with Saso Consulting, who provided valuable insight from real-world monitoring in aerated, shallow stream environments—a special thank you to Paul Saso.

Key Improvements



Enhanced Bubble Release:

The redesigned nose cone geometry allows air bubbles to escape more easily from the sensor area, preventing them from becoming trapped near the pressure transducer.

Maintaining Data Accuracy:

Trapped air bubbles can introduce potential variability by acting as a compressible medium. This variability can be amplified by diurnal temperature changes*, which may lead to noise or drift in pressure and level readings. The new design reduces this effect, helping to maintain the accuracy and stability you expect from Levelloggers.

Field-Replaceable Design:

- Easy to install or swap in the field.
- Compatible with existing L5 and Edge M5 units.
- Provides flexibility—users can choose the standard nose cone, or swap the nose cone based on specific site conditions.

Benefits for Users

- Consistent Performance in aerated, turbulent, shallow streams.
- Reduced maintenance and post-processing, as data variability is minimized at the source.
- Operational flexibility, with optional accessory design to meet site-specific challenges.

Overall, if you are monitoring shallow, aerated streams, this optional nose cone provides a practical enhancement to maintain data quality and reduce variability caused by trapped bubbles.



Unscreened Nose Cone (pt#117702)



Note: As this nose cone design lacks a filter screen, care should be taken when deploying the datalogger.

Commitment to Continuous Improvement

This product enhancement reflects Solinst's dedication to:

Listening to feedback from the environmental monitoring community.

Learning from field experiences in challenging monitoring environments.

Innovating solutions that deliver measurable benefits to customers.

The optional nose cone is another example of Solinst's mission to provide reliable, accurate, and adaptable instrumentation to surface water professionals.

**Diurnal temperature change is the difference between the highest and lowest air temperatures over 24 hours, known as the diurnal temperature range (DTR). It results from the Earth's rotation, leading to daily heating from the sun and nighttime cooling. Factors influencing this change include clouds, humidity, proximity to water, vegetation, longitude, and altitude.*

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High Quality Groundwater and Surface Water Monitoring Instrumentation

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