



TECHNICAL MANUAL

H₂S Sensing Tape

Technical, Handling & Compatibility Manual

BD-H2ST-100 • 100 ft

BD-H2ST-330 • 330 ft



100 ft - Portable H₂S analyzer



330 ft - Online H₂S / Total Sulfur

PRODUCT FAMILY

One sensing chemistry. Two reel formats.

Blue Dragon H₂S sensing tapes are controlled lead-acetate sensing consumables for tape-based hydrogen sulfide analysis. The 100 ft and 330 ft formats use the same sensing principle and core material specification, while reel length is selected for the analyzer platform and service interval.


BD-H2ST-100
100 ft / 30.48 m
Primary analyzer: 810H₂S-P

 Portable and field-oriented H₂S analyzer service.

LEAD-ACETATE SENSING TAPE

BD-H2ST-330
330 ft / 100.58 m
Primary analyzers: 810H₂S, 810H₂S-TS

Long-roll format for continuous online analyzer service

LEAD-ACETATE SENSING TAPE
12.7 mm

Tape width

0.01 ppm

Tape sensitivity

≤5%

Batch response tolerance

10 years

Minimum shelf life

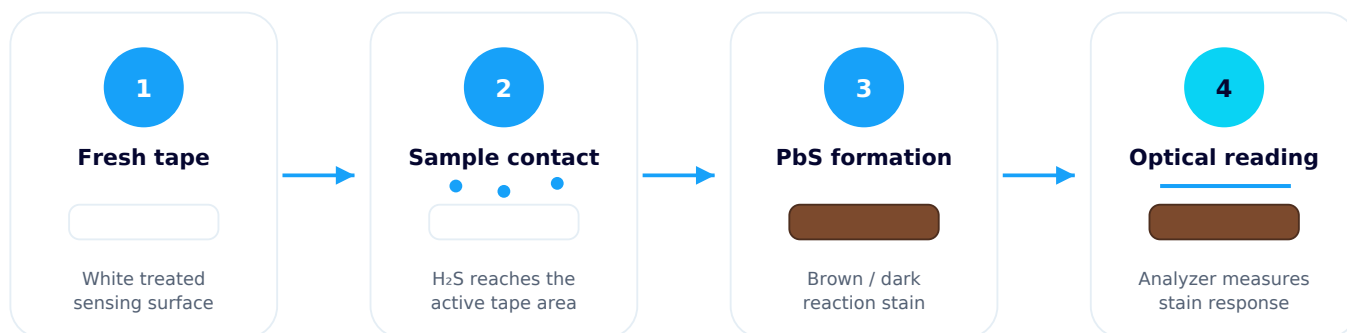
Selection principle

Use the tape format specified for the analyzer. Blue Dragon analyzer applications are the primary use; third-party part numbers in this manual are provided as cross-reference identifiers for configuration review, not as an implication of manufacturer affiliation or endorsement.

SENSING PRINCIPLE

Lead-acetate reaction with optical stain measurement

Fresh white sensing tape is advanced through the analyzer measurement zone. Hydrogen sulfide in the conditioned sample reacts with the lead-acetate treatment and forms a brown-to-dark lead-sulfide (PbS) stain. The analyzer optical system measures the change on fresh tape to determine H₂S concentration.

**SIMPLIFIED REACTION**

The visible PbS stain is the optical response used by the tape-based analyzer.

Tape sensitivity vs. analyzer performance

The tape sensitivity specification is 0.01 ppm H₂S. Overall analyzer detection performance also depends on the complete instrument configuration, sample conditions, flow, optical system, calibration and operating parameters.

810H₂S-TS NOTE

For Total Sulfur measurement, the 810H₂S-TS uses an analyzer conversion section before H₂S detection. The sensing tape chemistry remains the same.

TECHNICAL DATA

Common sensing and material specifications

The specifications below apply to the Blue Dragon H₂S sensing-tape family unless a format-specific value is shown separately.

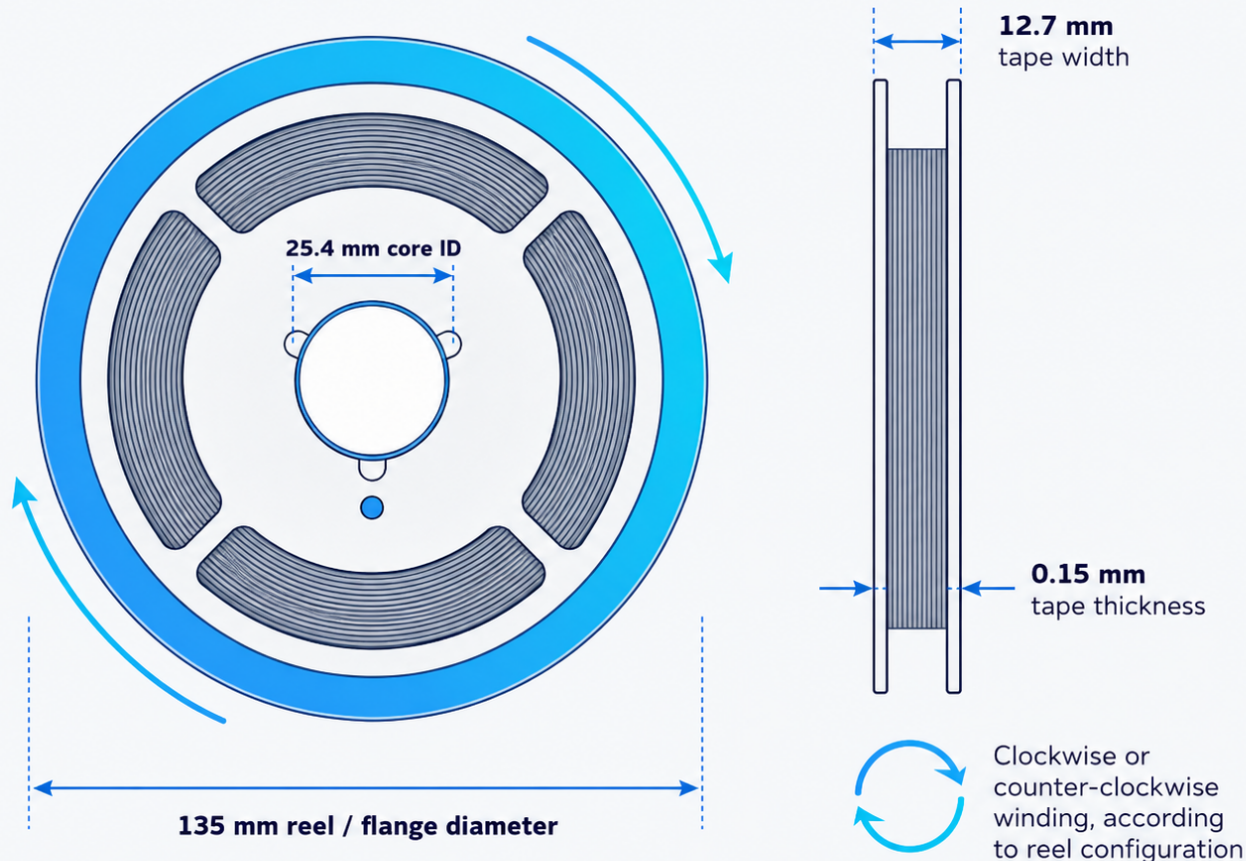
Parameter	Specification
Detection chemistry	Lead-acetate treated sensing substrate
Lead-acetate treatment	9.5-10.5% by volume
Treated substrate loading	≥22 g/m ²
Substrate composition	89.5-90.5% by volume cotton fibre (paper tape)
Tape sensitivity	0.01 ppm H ₂ S
Batch-to-batch response tolerance	≤5%
Optical response	Brown to dark lead-sulfide (PbS) stain on a white background
Tape width	0.5 in / 12.7 mm
Tape thickness	0.15 mm
Tensile strength	0.58 kg/mm ²
Core internal diameter	25.4 mm
Reel / flange diameter	135 mm
Winding direction	Clockwise or counter-clockwise, according to reel configuration
Shelf life	Minimum 10 years in original protective packaging under specified storage conditions
Storage	Store in original protective packaging in a cool, dry environment
Batch documentation	Batch inspection report available

Specifications are controlled as product data. For analyzer-specific measurement ranges, resolution and operating limits, refer to the applicable analyzer documentation.

MECHANICAL FORMAT

Common reel interface for controlled tape feeding

Both tape formats use the same nominal tape width, thickness, reel/flange diameter and core internal diameter. Roll length is the primary format difference.

SCHEMATIC REEL VIEW - NOT TO SCALE


Product	Roll length	Primary Blue Dragon use
BD-H2ST-100	100 ft / 30.48 m	810H ₂ S-P
BD-H2ST-330	330 ft / 100.58 m	810H ₂ S; 810H ₂ S-TS

PRIMARY APPLICATIONS

Designed first for Blue Dragon tape analyzers

Blue Dragon analyzer applications are the primary use for the sensing-tape family. Select the roll format specified for the analyzer and confirm reel configuration before service.

100 ft FORMAT**BD-H2ST-100****Model 810H₂S-P**

Portable Hydrogen Sulfide Tape Analyzer

- Routine tape replacement for the portable H₂S analyzer.
- 100 ft / 30.48 m roll format.
- Controlled 12.7 mm lead-acetate sensing tape.

330 ft FORMAT**BD-H2ST-330****Models 810H₂S and 810H₂S-TS**

Online H₂S analysis and H₂S / Total Sulfur analysis

- Long-roll format for extended online analyzer operation.
- 330 ft / 100.58 m roll format.
- 810H₂S-TS uses the same tape chemistry after its sulfur-conversion section.

Do not interchange roll formats solely on length. Analyzer reel geometry, winding direction and tape path must be compatible with the supplied reel configuration.

COMPATIBILITY IDENTIFICATION

Selected sensing-tape cross-reference identifiers

These references identify selected lead-acetate sensing-tape applications for configuration review. Confirm analyzer model, current tape reference, reel geometry and winding requirements before ordering.

100 ft CROSS-REFERENCE

Manufacturer / family	Reference	Application note
Galvanic	CO0081	100 ft lead-acetate H ₂ S sensing-tape cross-reference.
Envent	330131XS	Legacy / cross-reference 100 ft H ₂ S sensing-tape identifier.
Thermo / Tracor / Houston Atlas	000098	100 ft lead-acetate H ₂ S sensing-tape cross-reference.
DelMar	305-0007-00	100 ft H ₂ S sensing-tape cross-reference.

330 ft CROSS-REFERENCE

Manufacturer / family	Reference	Application note
Galvanic	CO0329	Long-roll lead-acetate tape applications, including selected ProTech903 configurations.
Envent	2000040	Current 300 ft lead-acetate H ₂ S sensing-tape reference for selected 330S / 331S configurations.
Envent	330133XS	Legacy / alternate 300 ft H ₂ S sensing-tape reference.
Thermo / Tracor / Houston Atlas	000098B	300 ft lead-acetate H ₂ S sensing-tape cross-reference.

IMPORTANT

Galvanic, Envent, ProTech, Thermo, Tracor, Houston Atlas, DelMar and referenced model or part numbers are trademarks or identifiers of their respective owners. Blue Dragon Technology is an independent supplier and is not affiliated with or endorsed by these manufacturers. References are provided solely for equipment compatibility and cross-reference identification.

LIFECYCLE CONTROL

Controlled from batch inspection to analyzer service

Sensing-tape performance depends on controlled chemistry, protected storage and correct handling. Blue Dragon tape specifications include batch-response control and long-term storage requirements.



Storage & service recommendations

- Keep the tape in its original protective packaging until required for service.
- Store in a cool, dry environment; the supplied safety information also calls for a well-ventilated storage area.
- Protect the sensing surface from moisture, dirt, oils and unnecessary handling.
- Do not use visibly damaged, contaminated or improperly stored tape.
- Record the batch / inspection information when replacing tape where site procedures require traceability.

SAFE HANDLING

Handle as a lead-acetate sensing consumable

This manual summarizes product handling and service practices. It is not a Safety Data Sheet. Consult the current product SDS for complete hazard, first-aid, fire, transport and disposal information.

Lead-acetate safety summary



- Wear protective gloves when handling the sensing tape.
- Prevent tape material from entering drains or the environment.
- Dispose of used or waste tape in accordance with applicable regulations.

Recommended tape replacement workflow

**Confirm**

Verify analyzer model, tape SKU and roll format.

**Inspect**

Check packaging, reel condition and tape cleanliness.

**Orient**

Confirm winding direction and reel fit before loading.

**Load**

Follow the analyzer-specific tape path and tension instructions.

**Protect**

Avoid unnecessary contact with the active sensing surface.

**Verify**

Complete analyzer checks / calibration verification as required by the analyzer procedure.

Safety information identifies acids and bromates as incompatible materials and advises avoiding heat exposure. For site-specific handling and disposal requirements, follow the current SDS and local regulations.

PRODUCT IDENTIFICATION

Specify the analyzer, roll format and current reference

For Blue Dragon analyzers, order the tape SKU assigned to the analyzer model. For third-party configurations, provide the analyzer model and current tape reference so reel compatibility can be reviewed before supply.

Blue Dragon SKU	Roll format	Primary Blue Dragon analyzer
BD-H2ST-100	100 ft / 30.48 m	810H ₂ S-P
BD-H2ST-330	330 ft / 100.58 m	810H ₂ S; 810H ₂ S-TS

When requesting tape

- Analyzer manufacturer and model
- Current tape part / reference number
- Required roll length
- Reel / winding configuration if known
- Quantity and destination

Traceability records

- SKU and roll format
- Batch / lot identification
- Batch inspection documentation
- Date placed into service where required
- Storage condition records where applicable

**PRODUCT INFORMATION & SUPPORT**

General enquiries: contact@bluedragontechnology.com
Technical support: support@bluedragontechnology.com
Website: bluedragontechnology.com

Specifications and compatibility information may be updated as products and analyzer configurations evolve. Confirm the current product specification and analyzer requirements before ordering. This manual does not replace the analyzer operating manual or the product Safety Data Sheet.