SONOCHECK® ABD06
Non-Contact Bubble Detectors

SONOTEC
SENTINEL PROCESS SYSTEMS, INC

The highly precise clamp-on SONOCHECK ABD06 bubble sensors are ideal for continuous air bubble monitoring and full/empty detection.

An implemented patented closed loop algorithm ensures fast air bubble detection and guarantees constant bubble sensitivity, widely independent of the quality of the acoustic coupling. Dependent on the inner diameter of the tubing and flow velocity, the sensors can detect bubbles as small as 1 µl.

Key Features

- High grade sensors for air bubble monitoring and full/empty detection
- Compact design with integrated electronics
- Non-contact clamp-on mechanism enabling direct measurement through the tubing wall
- For a wide range of specific bioprocessing plastic tubing, e.g. PCS, PE, PTFE, FEP, PFA, TPE, PVC, reinforced tubing
- No contamination and no shear stress on cells
- Suitable for WFI, cell culture media, buffer solutions, and most aqueous solutions
- Stable sensor reliability to changing acoustic conditions, e.g. fluid density or viscosity
- Optional ATEX certification for hazardous environments

Bioprocessing Applications

Chromatography: Prevention of air being pumped into columns and diversion of air infused liquids around the columns

Tangential Flow Filtration: Prevention of air entry into filter cassettes

Pump Protection: Detection of air bubbles caused by cavitation and protection from dry running

Bioreactors/Fermentators: Detection of foaming in feed/harvest lines

Feed Stream: Continuous monitoring for air bubbles in the feed stream to prevent air entering the filter

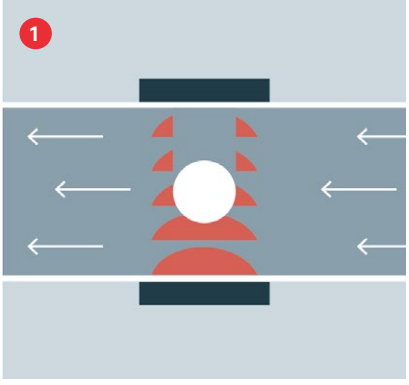
Transfer Lines: Notification when reservoirs run dry

Fill & Finish: Detection of undesired air entering vessels to prevent inaccurate volume dose

Tubing Size Chart for SONOCHECK® ABD06

Tube OD inch	Soft / Flexible Tubing		Hard Tubing		Braided Tubing		4-20mA	PNP
	SONOCHECK	Lid Order No.	SONOCHECK	Lid Order No.	SONOCHECK	Lid Order No.		
0.0625			ABD06.85	Integrated				✓
0.125			ABD06.100	Integrated				✓
0.250	ABD06.125	200030064	ABD06.125	200030064			✓	✓
0.375	ABD06.120	200030055					✓	✓
0.438	ABD06.120	200030060					✓	✓
0.500	ABD06.117	200030054	ABD06.117	200030049	ABD06.117	200030054	✓	✓
0.563	ABD06.117	200030052					✓	✓
0.625	ABD06.117	200030060	ABD06.121	200030054	ABD06.117	200030057	✓	✓
0.750	ABD06.121	200030058	ABD06.121	200030057			✓	✓
0.875	ABD06.121	200030061			ABD06.121	200030061	✓	✓
1.000	ABD06.102	Integrated	ABD06.102	Integrated	ABD06.102	Integrated	✓	✓
1.125	ABD06.116	Integrated			ABD06.116	Integrated	✓	✓
1.375	ABD06.123	Integrated					✓	✓
1.405					ABD06.123	Integrated	✓	✓

Measurement Principle



Bubble Detection | Ultrasonic Transmission

SONOCHECK ABD06 bubble sensors detect air bubbles and obstructions by means of dynamic amplitude monitoring. Depending on the sound impedance of the adjacent media, reflection and transmission take place at the interface. When an air bubble passes the sensor channel, the signal level of the transmitted sound wave drops. The higher the drop of the signal level, the larger the bubble size.

1 Amplitude monitoring for bubble detection

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SONOTEC GmbH certified acc. to ISO 9001 and EN ISO 13485

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