SONOFLOW clamp-on flow sensors are designed for upstream and downstream monitoring in the bioprocess industry. These innovative sensors offer integrated electronics which allow them to function without an external board or transmitter, giving you a complete flow meter in the size of a small transducer. The systems are suitable for applications from process development through manufacturing to fill and finish operations.

**KEY FEATURES**

- High accuracy measurements to improve process performance
- Minimize equipment footprint with a compact flow meter
- Reduce risk of contamination with non-product contact flow sensors
- No moving parts to induce shear stress on cells
- Sustainable and reusable to reduce process costs and waste
- User friendly software for onsite calibration
- Seamless process integration with multiple output options

- Reliable flow measurement from 10 ml to 200 L / min
- Accuracy of up to 1% when adjusted for customer specific tubing / fluid
- Ideally suited for silicone, TPE, and most standard bioprocess tubing
- Real-time instantaneous flow measurement
- Volume totalizing
- Volume dosing output switch for precise volume delivery
- Built-in electronics, no external electronic board required
- Software for easy parameterization and testing

**INTUITIVE AND EASY HANDLING**

1. **Sensor Selection**
   - Select the flow sensor that fits best your bioprocessing application

2. **Parameter Setting**
   - Set all relevant sensor parameters for your upstream or downstream processes

3. **System Integration**
   - Connect the clamp-on flow sensor to your PLC or pump system

4. **Flow Measurement**
   - Start the flow measurement and evaluate the recorded data
SONOFLOW flow meters use the transit time ultrasound method to accurately determine the flow rate. The sensor measures the time of flight of the ultrasonic wave with and against the streaming liquid (grey arrows). The time difference between both signals is a measure of the velocity of the streaming liquid. Measurements are taken in picoseconds and averaged to readings of 10 ms cycle. The fluid velocity and known area of the measurement channel are related to the specific volume flow.