



## High accuracy flow measurement for single use processes

### **BIOSONIC**

#### **Unique ultrasonic flowmeter for single-use processes**

BIOSONIC is an ultrasonic flowmeter featuring a disposable flow sensor (detector) specifically designed for biopharmaceutical applications such as filtration processes, chromatography, buffer and medium preparation.

The flow sensor manufactured in a clean room is biocompatible, gamma-sterilizable for adaptation to single-use systems and has a single-barb fitting to meet biopharmaceutical requirements.

BIOSONIC, as an ultrasonic flow meter, provides accurate volumetric flow measurement of various fluids used in biopharmaceutical manufacturing processes including WFI.

### High accuracy without recalibration when replacing the flow sensor

With the measurement principle of ultrasonic flow meter and precise manufacturing of the flow sensor (detector), BIOSONIC achieves highly accurate measurement with excellent repeatability. Since the converter and flow sensor (detector) are calibrated at the factory, there is no need to recalibrate when replacing the flow sensor.

### Clean manufacturing environment and design

BIOSONIC was developed for single-use biopharmaceutical manufacturing processes. The flow sensor (detector) is molded in a factory certified to ISO 13485 and assembled in a clean room environment. In the integrally molded flow sensor flow path, there are no welded parts, O-rings, or other mechanical seals that are prone to liquid accumulation.

### Features

- The flow sensor designed for single-use
- Accuracy: Within  $\pm 1\%$  of the reading at flow velocity of 1m/s or more
- Integrally molded flow path
- Pulse and current output
- Factory calibrated
- No maintenance required
- The wetted parts material of the detector have biocompatibility (FDA, USP VI, BSE/TSE)
- The detector using gamma-sterilizable material (up to 50kGy)
- Power Supply: DC24V

### Converter: SFC4000-EV

The panel-mounted converter used in combination with the BIOSONIC flow sensor (detector) can display the instantaneous flow rate, the integrated flow rate and various statuses. At the same time it can check and change various settings. The latest electronic technologies such as digital signal processors (DSPs) have been adopted to reduce the influence on bubbles contained in fluids in pharmaceutical processes, enabling stable measurements.



### Single-use flow sensor (detector): BS

The single-use flow sensor is gamma-sterilizable (up to 50kGy). The wetted parts of the detector is made from the material which has biocompatibility such as USP class VI / ISO 10993, and is BSE/ TSE free.



### Option - Flow Simulator: USG01

At the time of periodic calibration, it is possible to check the soundness of the converter without using the actual flow.



USG01



Dedicated aluminum case



AC adapter



Power supply  
dedicated USB cable



Strap



Signal cable

\*Specification is subjected to change without notice.

**TIV TOKYO KEISO CO., LTD.**

Head Office: Shiba Toho Building, 1-7-24 Shibakoen, Minato-ku, Tokyo 105-8558

Tel: +81-3-3431-1625 (KEY); Fax: +81-3-3433-4922

e-mail: [overseas.sales@tokyokeiso.co.jp](mailto:overseas.sales@tokyokeiso.co.jp); URL: <https://www.tokyokeiso.co.jp>