

# Boomerang in IVF

Boomerang is a wireless log system specially designed to simplify the important quality assurance work in IVF clinics. Boomerang continuously log temperatures, humidity, CO<sub>2</sub> and more critical parameters.



- |                               |                     |
|-------------------------------|---------------------|
| Continuous monitoring and log | ✓ Traceability      |
| Automatic documentation       | ✓ Quality Assurance |
| Alarms / Reports / Backup     | ✓ Safety            |
| Web based and centralized     | ✓ Accessibility     |

The Boomerang system is developed according to GLP, GMP and FDA CFR21 part 11

## Incubators continuous monitoring and log of Temperature, Humidity and CO<sub>2</sub>

Boomerang helps you to monitor the environment for traceability and for alerts when logged values deviate from desired conditions.

Typical performance parameters	
Temperature range:	-10°C to +85°C , ± 0,5°C
Humidity range:	0-100%, ± 1.8% at 10-90%
CO <sub>2</sub> range:	0-20%, down to ± 0.3%



without access port



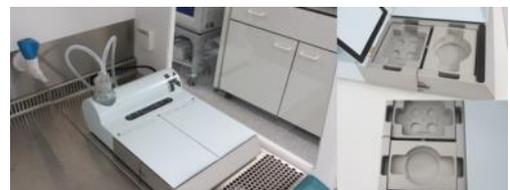
with access port

Parallel monitoring in incubators, external sensors, are required for achieving the highest security.

## Benchtop incubators Continuous temperature monitoring



Boomerang have sensors for use in small chamber incubators such as desktop and benchtop versions.



## IVF workstations, flow cabinets, workbench High precision temperature monitoring.

### High Accuracy Digital Temperature Sensor

Accuracy:  $\pm 0,07^{\circ}\text{C}$  within calibrated range  
Probe: 0,9 x 1100 mm (fast response time)

### Hermetically sealed Temperature sensor

Range:  $-60^{\circ}\text{C}$  to  $+250^{\circ}\text{C}$  ( $\pm 0,5^{\circ}\text{C}$ )  
Probe:  $\varnothing 2.1\text{mm}$



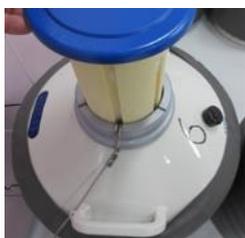
## Storage

### Continuous temperature monitoring in cryogenic (liquid nitrogen) tanks

Boomerang have sensors for use in  $-196^{\circ}\text{C}$  freezers (cryogenic tanks with liquid nitrogen). Continuously log the temperature at desired level in the tank, and allows for full traceability and alarms on deviations.

#### Pt100 sensors

Temperature range:  $-200^{\circ}\text{C}$  to  $+200^{\circ}\text{C}$ ,  $\pm 0,5^{\circ}\text{C}$   
Probe: 600 or 1800 mm  
(adjustable for any tank size)



## Laboratory environment

### Continuous monitoring of temperature, humidity, particle count etc.

In order to provide an ideal environment in your lab, there are a lot of measures taken and equipment used like air-cleaners, gas-mixers, cabinets etc.

Boomerang can assist you in many ways of environmental monitoring, such as: room temperature and humidity, particle count, differential pressure, O<sub>2</sub>, VOC, pH etc..



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