

## Zephyr BioHarness 3.0 Side Strap

### PRODUCT DESCRIPTION

The BioHarness™ strap is a lightweight elasticised component which incorporates Zephyr Smart Fabric ECG and Breathing Rate sensors.

It is designed to be used in conjunction with a BioHarness 3.0 – shown below, which captures and analyses sensor data from the strap. The module records or transmits this data to a remote location.

The strap is micro-adjustable over a range of fittings, and there are two sizes of strap available – XS – M and M - XL.



### Company Information

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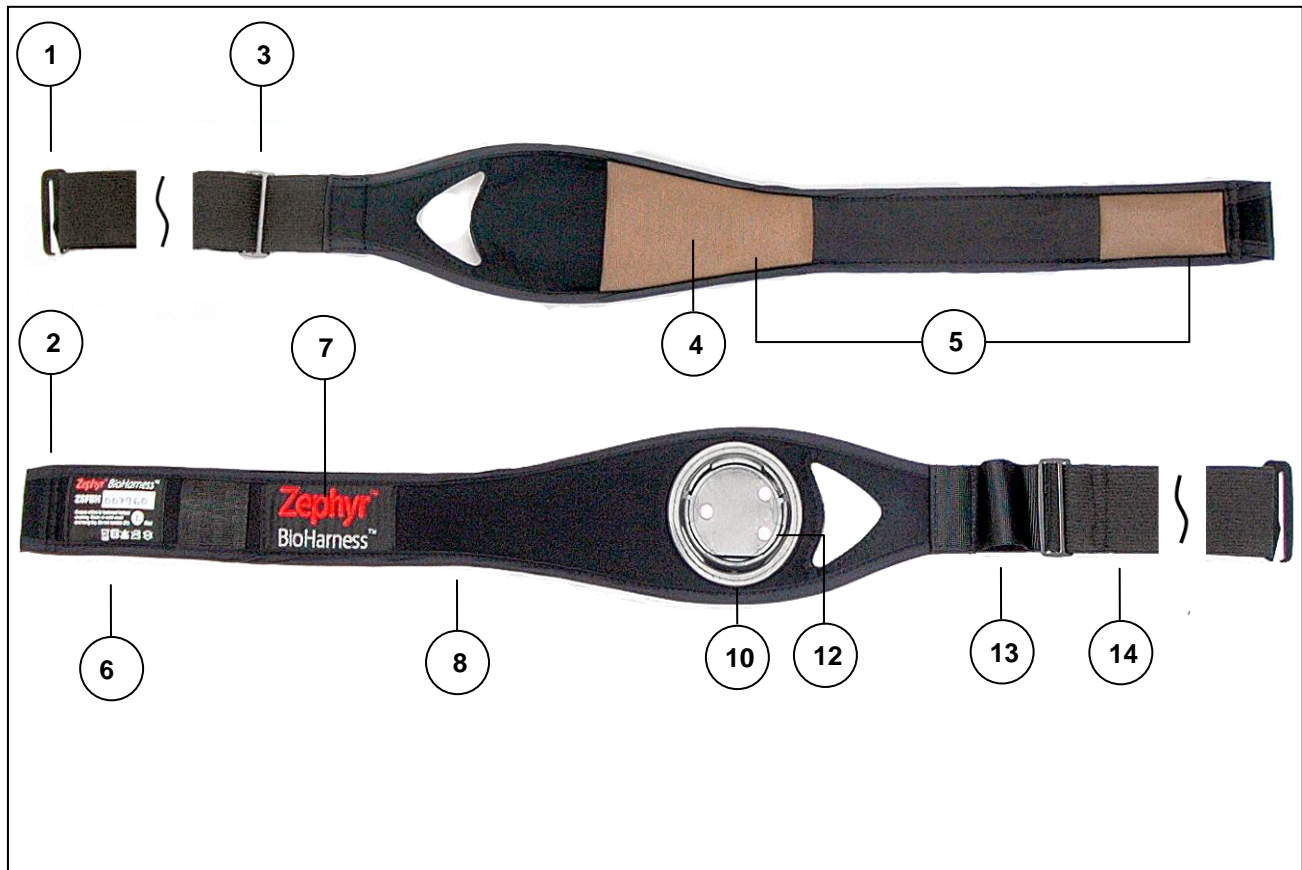
*Data subject to change*

### FEATURES

- Lightweight
- Fabric-based
- Elasticised
- Adjustable
- Comfortable
- Detachable shoulder strap
- Machine-washable
- Anti-bacterial sensor material
- Biocompatible

### APPLICATIONS

- Biomechanical and physiological research
- Remote Patient Monitoring
- Physical status monitoring in real world situations



**Component Parts:**

1. Main fastener hook
2. Main fastener sleeve
3. Size adjustment slider
4. Internal Breathing Rate Sensor
5. ECG sensors
6. Care label with Size, Serial # & Wash symbols
7. Brand label
8. Strap main body
9. Device receptacle
10. Electrical contacts
11. Shoulder strap (detachable, not visible)
12. Shoulder strap adjuster buckle (not visible)
13. Tension indicator loop
14. Strap (rear)

**Material**

steel  
steel  
EVA foam  
Silver-coated nylon  
Nylon  
Polyester  
Nylon  
Polycarbonate  
Stainless steel  
Elasticized webbing, steel fastener & velcro  
ABS  
Nylon  
Elasticized webbing

## Identifying Marks & Wash Label



## Strap Sizes:

Size	To fit (cm)	To fit (Inches)	ZPN
Small (XS – M)	69 – 84	27 – 33	9600.0262
Large (M – XL)	84 – 104	33 – 41	9600.0255
XLarge (L – XXL)	Up to 129	Up to 51	Pending

Note that size is stated at the strap location when worn, which may be smaller than a subject's normal chest size. As a general rule add 2.5inches/6cm to equate to conventional male chest size.

An XLarge size option is currently in development.

## Shoulder Strap

Integrated into chest strap, detachable (hook at front and Velcro loop at side) and length adjustable.

Chest straps can be supplied individually or in packs of 5 or 50.

## Service Information

### Garment Location

- Strap located immediately below pectoral muscles as shown (Fig. 1)
- Device under left arm, located on apex of rib curvature (Fig. 2) for optimal breathing detection, or slightly to rear if uncomfortable (Fig. 3)
- Zephyr brand label will not necessarily be centred on torso



Fig. 1

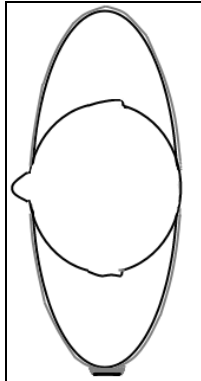


Fig. 2

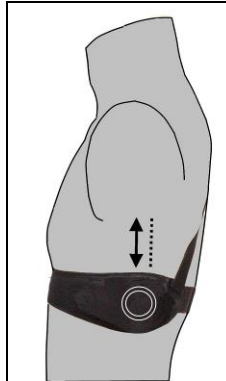


Fig. 3



Fig. 4

### Tension

A tension indication loop is attached to the rear of the strap as shown (Fig. 4). This loop should be tensioned flush with the strap rear when the subject has inhaled and fully expanded their chest. If any slack remains, then there is inadequate tension in the strap. The illustration shows the loop *not* fully tensioned.

Strap tension should only need be adjusted once on initial strap fitting.

### Sensor Moistening

The garment will function with dry sensor surfaces, but it is recommended to lightly moisten the ECG sensor pads with tap water before use. This will ensure optimal performance of the garment. When against the skin during activity, perspiration will ensure the pads remain moist.

### Durability

The chest belt, like any other fabric garment will be exposed to sweat, dirt & detergents. It is designed to withstand the rigours of daily use. It should be treated like any other garment and washed regularly. Performance may degrade over time if the garment is not maintained according to the care instructions below. All materials are UV stable, but prolonged exposure to sunlight may cause discolouration of materials.

Recommended Wash Schedule:  
Minimum No. of Machine Washes:

Every 3 weeks of use  
80

## Care Instructions

For optimum performance, detach the BioHarness device and rinse the garment in water after use, to prevent salt and grime accumulation caused by perspiration.

## Washing

- Detach the BioHarness Module
- Hand wash using a mild soap or detergent
- Machine Wash:
  - Cool temperature (40°C maximum)
  - Delicate setting
  - Wash pouch recommended
  - Spin dry or hang out of direct sunlight
  - DO NOT TUMBLE DRY
  - DO NOT BLEACH or DISINFECTANT
  - DO NOT IRON
  - DO NOT DRY CLEAN

## Storage

- Store cool dry place out of direct sunlight

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