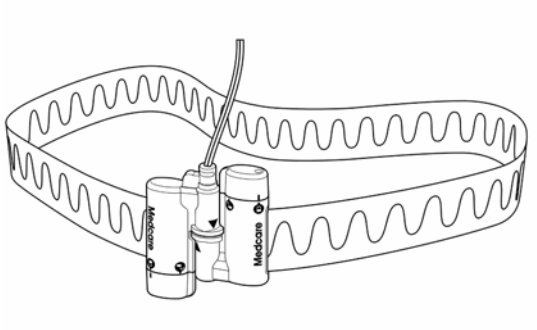
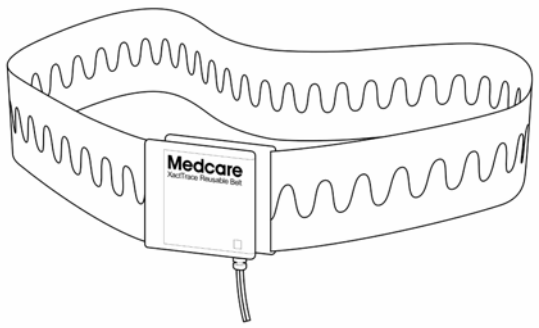
XactTrace Respiratory Effort Sensor



Single Use XactTrace



Reusable XactTrace

XactTrace Sensors

XactTrace, featuring Respiratory Inductive Plethysmograph (RIP) technology, delivers a highly sensitive and reliable respiratory effort tracing. This sensor creates a conductive loop when stretched around the patient. A precise quality signal is then generated that is a measure of the shifts in chest or abdominal circumference.

This technology is especially accurate in cases of paradoxical breathing, where an exact and reliable measure of respiratory effort is needed.

The XactTrace belts are available in two versions, single use and reusable. The hygienic, single use belts can be custom fit to each patient and no effort goes into cleaning and maintenance. The reusable belts are very light and have a button snap connector that reduces preparation time.

XactTrace Advantage

With XactTrace, the respiratory effort trace shows paradoxical chest and abdominal movements during an authentic obstructive event. Only XactTrace can deliver such an accurate tracing.

- A cross-sectional of the torso directly measured
- Paradoxical breathing reliably detected
- Breath-rate does not affect the amplitude of the signal
- Comfortable belts - soft edges, thin and elastic
- Very low pressure applied on the chest
- Suitable for pediatric use

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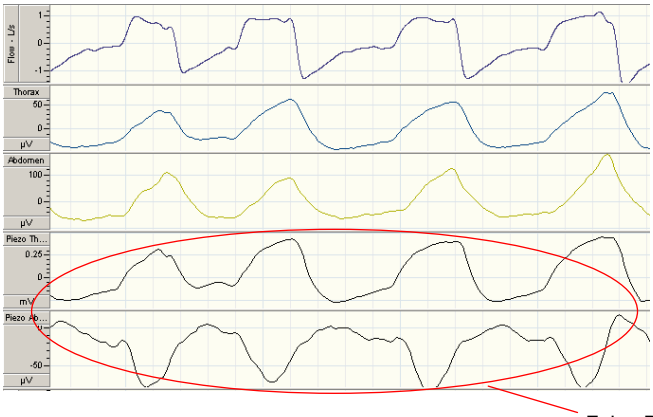
Why Choose XactTrace?

XactTrace measures a cross sectional area of the torso/abdomen and delivers a qualitative signal. This gives an accurate and reliable assumption of the volume in the lungs.

The polarity of the tracing is always consistent and the DC characteristics allow the user to see more clearly the residual volume in the lungs. The signal does not drift towards baseline, for example, if the patients hold their breath.

Piezo crystals measure the tension in one location where the Velcro bands pull the sensor during chest/abdominal movement. The tension gives an indication of the respiratory movement which corresponds approximately to the chest/abdominal circumference but is affected by how the bands pull the sensor. If the tension is too little, the polarity of the piezo signal may invert, which can indicate false paradoxical breathing.



If the patients lie on their side, the tension can be reduced, as the bands are not able to pull on the sensor consistently. Piezo crystals are AC coupled and drift relatively quickly to baseline.

XactTrace benefits users by overcoming these limitations and will be a supported sensor in all new sleep systems from Medcare.