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## TRANSDERMAL TAGS PRODUCT SHEET

Researchers worldwide use our transdermal satellite telemetry tags to study cetacean movements and habitat-use patterns.

Transdermal tags are intended for long-term monitoring of baleen whales. In most applications the tags are deployed using a pneumatic air gun or fiberglass pole and are fully implanted in the fascia layer just ahead of the dorsal fin.

The electronic components are cast in surgical-quality stainless steel housing with only the wet/dry sensor and Argos antenna left exposed.

Wildlife Computers offers several transdermal tag options:



Model:  
SPOT-372  
SPLASH10-373

Tag Type	SPOT-177 (Classic)	SPOT-303 (Integrated)	SPLASH10-302 (Integrated)	SPOT-372 (Integrated)	SPLASH10-373 (Integrated)
<b>Sensors</b>	Temp	Temp Light	Depth Temp Light	Temp Light	Depth Temp Light
<b>Data Products</b>	Argos Locations Percent Dry Timelines Time at Temp Histograms	Argos Locations Percent Dry Timelines Time at Temp Histograms	Argos Locations Depth & Temperature Time-Series Histograms Dive Behavior Summaries Temperature Profiles	Argos Locations Percent Dry Timelines Time at Temp Histograms	Argos Locations Depth & Temperature Time- Series Histograms Dive Behavior Summaries Temperature Profiles
<b>Battery Life (days)<sup>1</sup></b>	300	540	190	540	190
<b>L x W (mm)</b>	Model R - 98 x 22 Model S - 145 x 20	300 x 24	300 x 24	293 x 24	293 x 24
<b>Weight (g)</b>	Model R - 140 Model S - 180	390	390	390	390

<sup>1</sup>The above estimated battery life relies on the battery variability, temperature, power settings, features utilized, etc. Life estimates are calculated using manufacturer specifications and assumes 250 transmissions per day.

*This is a small representation of our available tags.  
Tag features and specifications subject to change without notice.*

# TRANSDERMAL TAGS – continued

## Classic Tags

The classic tags include a threaded screw on the base for anchor attachment. For most configurations, researchers supply their own dart-head, anchor, and delivery system. This allows the dart length and penetration depth to be customized per project. The top of the tag is built with either a circular or rectangular stop plate to keep the tag from fully embedding below the skin and to ensure the wet/dry sensor and antenna remain external. Wildlife Computers offers several variations of the classic cetacean tag in tubes with two different wall thicknesses, and a “blubber-only” tag with a dart head and retention umbrella that lodges in the blubber rather than the fascia.

## Integrated Tags

The integrated tags include the dart-head and retention umbrellas. These complete tags are now the standard for most humpback and right-whale projects. They include a three-blade dart head that is the same diameter as the tag shaft to create an entry point on the animal that is the right size. Retention is maintained through three circles of passively deployed umbrella-shaped “petals.”

## ARTS Delivery System

The ARTS launcher is a modified line-thrower with variable pressure to suit different firing situations. The cost of the ARTS launcher and filling hose is approximately \$8,000 USD. It can be purchased directly from RESTECH in Norway. Further information can be found at <http://restech.no/product/arts-whale-tagger/>.

## Custom Launching Tube

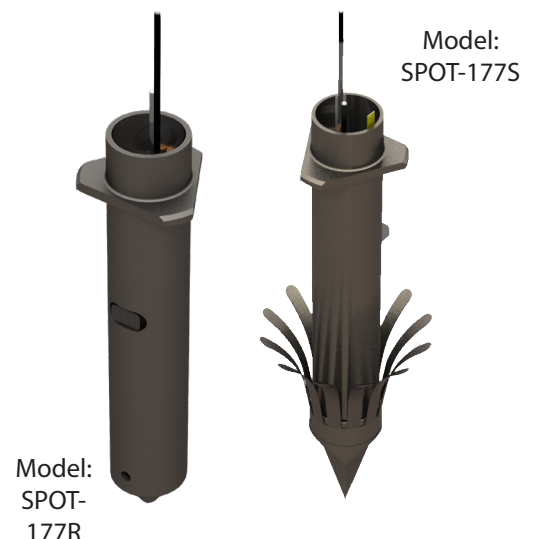
A projectile launching tube may be used for delivery. On firing, the tag and launcher are ejected. The rapid deceleration of the impact retracts the retention teeth from the launcher, separating it from the tag. The tag stays with the animal and the launcher floats for recovery and reuse. The custom launcher tubes are available directly from Wildlife Computers.

## Deployment Collar

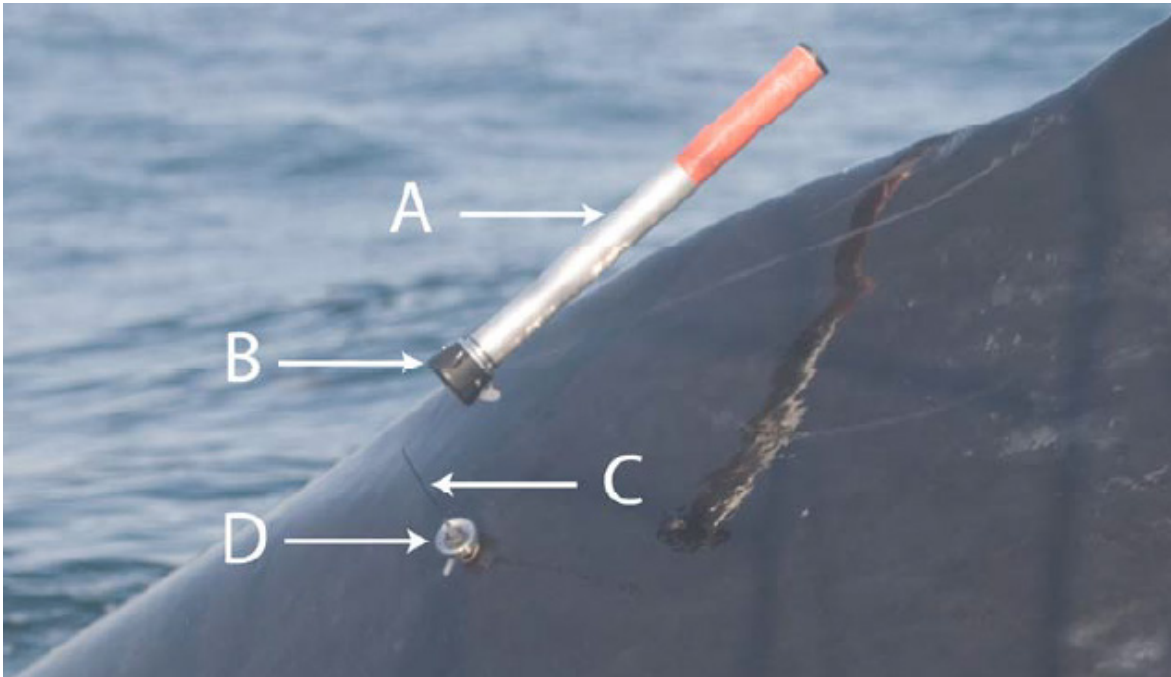
An ultra-light aluminum “collar” is used to fix the tag to the launching tube. The collar stays with the tag during deployment then falls away after the tag sets in the tissue.



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## TRANSDERMAL TAGS – continued



*Deployment of a tag immediately post-implantation showing: A- Launching tube; B- Launching tube attachment mechanism; C - Tag antenna; D - Implanted tag with deployment ring collar. © Nick Gales*

### **Sterilization**

All external components of the tags are built from stainless steel and can be gas-sterilized prior to deployment.

### **Etched Bands**

Etched bands are included on the transdermal tag housings. When animals are resighted, the etching serves as a guide allowing the researcher to see if the tag has migrated out of the whale, and if so, by how much.

### **Lead Time**

Please allow 16 weeks for manufacturing and testing.

### **Deployment Duration**

Tag retention is greatly dependent on placement and how flush the tag sits after implantation. Typical deployments run several months, although missions over one year have been achieved.

To Learn More Call: +1 (425) 881-3048 or Email: [tags@wildlifecomputers.com](mailto:tags@wildlifecomputers.com)