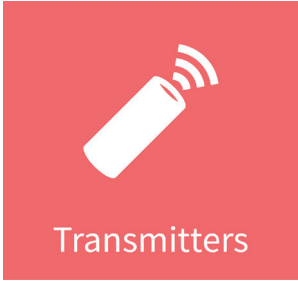


V9 Continuous Transmitters



Continuous pinger for real-time studies of small species



The **V9 continuous tag**, 9 mm in diameter, was developed to provide researchers with the means to track small and juvenile fish in real-time for behavioural studies. The V9s have been successfully implanted in salmon pre-smolts as small as 150 mm fork length. They feature rounded ends for better implant retention but have also been externally attached. The tags are shipped with a magnetic switch for easy activation.



V9 transmitter

Continuous Mode

In continuous transmission mode, the acoustic ping is sent as a fixed rate that is factory pre-set and typically between one and two seconds. This mode is ideal for real-time tracking studies. V9 continuous tags are used with the VR100 active tracking receiver.

Available Frequencies

V9 continuous pingers are available in the following frequencies: 60, 63, 75, 78, 81 and 84 kHz and can be used with a number of hydrophone and receiver types. For information on specific applications of the V9 or for technical details, please contact VEMCO.

V9 Continuous Tag Sensor Options

For research requiring temperature and depth information, V9 tags can be equipped with temperature (V9T), depth (V9P) or both temperature and depth (V9TP). V9P pressure transmitters are available in the following full scale pressure options: 34, 68, 136 and 204 meters. V9T temperature transmitters are available in four temperature ranges: -5 to 35°C, -4 to 20°C, 0 to 40°C and 10 to 40°C. (See sensor tables on page 2 for accuracy and resolution details.)

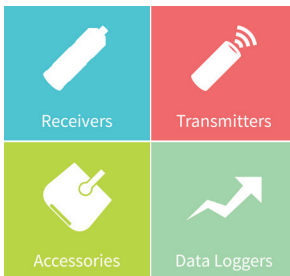


V9P with pressure sensor

Physical Specifications

		Battery Option:				
		6L	1L	1H	2L	2H
V9	Length (mm)	21	24	24	29	29
	Weight in air (g)	2.9	3.6	3.6	4.7	4.7
	Weight in water (g)	1.6	2.1	2.1	2.9	2.9
	Power Output (dB re 1uPa @1m)	145	145	151	145	151
V9P/V9TP	Length (mm)	37.5	40.5	40.5	44	44
	Weight in air (g)	4.9	5.5	5.5	6.3	6.3
	Weight in water (g)	2.5	2.9	2.9	3.5	3.5
	Power Output (dB re 1uPa @1m)	145	145	151	145	151

Stated tag length, weight and output power are nominal. Small manufacturing variations can be expected. Please contact VEMCO sales for details on V9T temperature tag weights and lengths.



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Temperature Sensor		
Range	Accuracy	Resolution
-5 to 35 °C	±0.5 °C	0.15 °C
-4 to 20 °C	±0.5 °C	0.1 °C
0 to 40 °C	±0.5 °C	0.15 °C
10 to 40 °C	±0.5 °C	0.12 °C

Pressure Sensors (at room temperature)		
Max Depth	Accuracy	Resolution
34 m	±1.7 m	0.15 m
68 m	±3.4 m	0.3 m
136 m	±6.8 m	0.6 m
204 m	±10 m	0.9 m

Expected Battery Life

The V9 continuous pinger's life span depends on battery size (either 6, 1, or 2), power output (high or low) and the ping period (in milliseconds). The table describes the life span of each battery type at the standard ping periods.

V9 pingers incur a small current drain prior to activation. Tag life will be reduced if tags are shelved for a significant period of time (months). V9 pingers should be activated within 6 months of delivery. Contact VEMCO for information.

Notes: The projected battery life is an estimate and users will experience a decrease in battery life if their tags are operating in extreme warm or extreme cold temperatures.

VEMCO transmitters are programmed to stop transmitting when they reach their stated battery life.

VEMCO tags are warranted to be free from defects in material and workmanship for one year from date of delivery.

V9 tags with sensors will ping at varying rates depending on the sensor readings and therefore battery life will vary depending on the behaviour of the animal. The two battery lives shown for sensor tags are the extremes.

Consult your VEMCO representative to determine the expected battery life for your study and for additional information regarding battery life.

V9 Continuous Tags Battery Life (days)					
Period	V9-1L	V9-1H	V9-2L	V9-2H	V9-6L
1000ms	20	7	37	13	14
2000ms	37	14	68	25	26
	V9T-1L	V9T-1H	V9T-2L	V9T-2H	V9T-6L
1000 ms	19 (9)	7 (3)	34 (17)	12 (6)	13 (7)
2000ms	35 (23)	13 (8)	66 (51)	23 (18)	24 (16)
	V9P-1L	V9P-1H	V9P-2L	V9P-2H	V9P-6L
1000 ms	6 (3)	4 (2)	11 (5)	7 (3)	3 (1)
2000ms	12 (7)	8 (5)	22 (14)	14 (9)	6 (4)
	V9TP-1L	V9TP-1H	V9TP-2L	V9TP-2H	V9TP-6L
1000 ms	12 (8)	6 (4)	21 (15)	10 (7)	7 (5)

