

Datasheet

AvTrak 6 HP



The Type 8220 AvTrak 6 HP is a high power version of the 8220 vehicle navigation system. The design offers a high power acoustic navigation and communication transceiver for long range applications.

The mechanical design is based on the field proven Compatt 6. The Avtrak 6 HP offers a complete vehicle navigation, communication and safety solution; simultaneously behaving as an Ultra-Short Baseline (USBL) transponder, a Long Baseline (LBL) transceiver, an acoustic modem and emergency ballast release system.

AvTrak 6 HP offers significant time saving using faster and more robust Wideband^{®2} acoustic ranging and telemetry protocols. This makes any system with an AvTrak 6 HP significantly easier to operate therefore de-risking operations, reducing vessel time and reducing training requirements for offshore personnel.

Sonardyne Wideband 2 advanced signal processing offers improved acoustic performance in challenging conditions, longer range, improved multipath rejection around structures and real-time range diagnostics for quality control. Wideband 2 also reduces the interference to and from adjacent Sonardyne and other acoustic positioning systems.

AvTrak 6 is fully compatible with all 6G[®] equipment and Sonardyne 6G USBL systems.

Depth ratings are available in 5,000 and 7,000 m, straight or right-angled connectors with hard anodised aluminium alloy construction and protective polyurethane sleeve.

Key features

- Medium Frequency (MF) band utilising Sonardyne's latest Wideband 2 ranging and telemetry protocols
- Quick and simple to set-up and operate
- Robust performance in shallow water and reverberant environments around structures etc
- Real time diagnostics available on ranges to enable quality control
- Reduced mutual interference to further improve simultaneous ops
- Advanced multi-user/multi-vessel capability
- More than 600 unique Wideband 1 and 2 addresses
- Sonardyne Wideband 1 and HPR400 navigation compatible
- Automatic power-down if not used for a programmable period
- Integrated modem mode with data rates ranging from 100 to 9,000 bits per second in multiple frequency bands
- Straight and right-angled connector options
- Isolated Power and Comms interface
- Field proven

Specifications

AvTrak 6 HP



Avtrak 6 HP 5000 m Version with Right-Angled Connectors

Feature		Type 8220 Avtrak 6 HP
Depth rating		5,000 and 7,000 m
Operating frequency		MF (20–34 kHz)
Transducer beam shape		Directional
Transmit source level (dB re 1 µPa @ 1 m)		190–202 dB (4 Levels)
Tone equivalent energy (TEE) ¹		196–208 dB
Receive sensitivity (dB re 1 µPa)		80–120 dB (7 Levels)
Ranging precision		Better than 15 mm
Number of unique addresses Wideband 1 & 2		>600
Battery life listening, disabled:	Lithium primary	40 days
	Li-ion (2.2 Ahr)	3 days
External voltage		24 V dc or 48 V dc +/-10%
External power	Quiescent	<2 W.
	Transmitting	80 W maximum
Operating temperature		-5 to 40°C
Storage temperature		-20 to 55°C
Mechanical construction		Anodised aluminium alloy,
Dimensions: (length x diameter)	5,000 m with straight connector	549.1 x 135.1 mm
	5,000 m with right-angled connector	565.1 x 135.1 mm
	7,000 m with straight connector	549.1 x 140.1 mm
	7,000 m with right-angled connector	565.1 x 140.1 mm
Weight in Air/Water ²		13.2/5.9 kg
Endcap Options		Type 8220 Avtrak 6 HP
Power for external sensors		Standard
Sync input		Standard
Modem port		Standard
Isolated external power and comms		Standard
Dual connector endcap – dual release drive		Standard

¹ WBv2+ signals are 4x the duration (WBv1 & WBv2 are twice) of Sonardyne tone signals, therefore the TEE figure is to give the user an idea of the operational performance when comparing Wideband2+ and Tone systems.

² Estimated weights.