

Stalker's Pro II Surface Velocity Radar (SVR)

Sets a new standard in water flow measurement.

When Stalker Radar, The World Leader in Speed Measurement, began development of its new Pro II Surface Velocity Radar, it began with its newest radar platform, the Pro II. Based on the Stalker II law enforcement radar, the Pro II is backed by Stalker's nearly two decades' experience in microwave radar and its 22 accumulated patents in the industry. In addition, Stalker Radar's manufacturing process is registered to ISO9001:2008.

Pro II Ideally Suited for Water Flow Measurement

The Pro II SVR features a rugged cast-metal exterior and the world's most sensitive transmitter/receiver as well as miniaturized and modernized electronics. Its direction sensing software and updated algorithms position the Pro II as a new-generation radar ideal for the task of accurate and reliable water flow measurement. Moreover, the Pro II's Ka-Band performance measuring water flow is superior to the K Band used by some of its competitors' radars.

Automatic Vertical Tilt Compensation

To make it better suited for the different elevated perspectives in comparing water flow at different times or locations, Stalker Radar engineers developed automatic vertical tilt compensation. Simply put, Stalker's SVR automatically adjusts its speed reading based on the angle the radar points at the target flow. With a vertical angle accuracy of $\pm 2^\circ$ and vertical angle resolution of 1° , if an operator takes one reading pointing down at 45° , then takes another at 50° , both flow readings will be adjusted and directly comparable.

Wide Speed Range & Settings

The Stalker Pro II SVR has a speed range of 0.2 m/s to 18.0 m/s – from below 1 mph to over 40 mph – with an accuracy of ± 0.1 m/s. And it measures in meters/second, feet/second, centimeters/second, miles per hour, and kilometers per hour.

Software Upgradeable

Utilizing a state-of-the-art Digital Signal Processor (DSP), Stalker Pro II SVR provides a level of performance, convenience, and accuracy previously unavailable. The DSP performs the critical filtering and timing functions required for speed measurement in its software, as opposed to hardware. This provides less unit-to-unit variation, more reliable performance, and easier maintenance. One unique feature is that it can be upgraded in the future by simply installing new software, preventing obsolescence!

And a Lot More

Tilt compensation, settings' range, and DSP, combined with direction sensitivity, horizontal angle adjustment, and 4 levels of sensitivity all make the Stalker Pro II SVR the new standard in water flow measurement.



Pro II SVR
Surface Velocity Radar

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CE Approved

STALKER® PRO II Surface Velocity Radar SPECIFICATIONS

General Specifications

TYPE:	Surface Velocity Handheld Radar
OPERATING FREQUENCY:	34.7 GHz (Ka-band)
FREQ STABILITY:	± 100 MHz
POWER REQUIREMENTS:	Voltage: 9 - 16 VDC Current (at 7.2 VDC nominal) Transmitting: 730 mA Standby: 320 mA Sleep Mode: 85 mA
ENVIRONMENTAL:	Operating: -30°C to +70°C, 90% relative humidity Non-operating: -40°C to +85°C
MECHANICAL:	Weight – 0.52 kg (1.15 lb) Diameter – 6.7 cm (2.6 in.) Length – 11.8 cm (4.7 in.) Case Material – Aluminum and magnesium die cast
ACCURACY¹:	± 0.03 m/s
SPEED RANGE:	0.2 m/s to 18.0 m/s
VERTICAL ANGLE ACCURACY:	±2°
VERTICAL ANGLE RESOLUTION:	1°

Microwave Specifications

ANTENNA:	Conical horn
POLARIZATION:	Circular
3DB BEAMWIDTH:	12° ± 1°
RF SOURCE:	Gunn-Effect diode
RECEIVER TYPE:	Two direct-conversion homodyne receivers using four low-noise Schottky barrier mixer diodes
POWER OUTPUT:	20 mW minimum 25 mW nominal 50 mW maximum
POWER DENSITY:	2 mW/cm ² maximum at 5 cm from lens

Factory Configuration (defaults in bold)

TILT SENSOR:	Automatic vertical angle from internal tilt sensor or Selected in Field Configuration settings
UNITS:	m/s (meters/sec), cm/s (centimeters/sec), MPH (miles/hour), km/h (kilometers/hour) or ft/s (feet per second)
SERIAL PORT:	RS-232 and RS-485 simultaneously
SERIAL PORT BAUD RATE:	The serial port operates at 8 data bits, no parity and 1 stop bit (8N1) with the following selectable baud rates: 1200, 2400, 4800, 9600 , 19200, 38400
SERIAL PORT MESSAGE FORMAT:	None – no data output 'A' – Averaged velocity 'AP' – Instantaneous velocity
SERIAL PORT MESSAGE LEADING ZEROS:	Space (ASCII 20h), "0" (ASCII 30h) or none
SERIAL PORT MESSAGE TERMINATION:	Carriage return (CR), carriage return and linefeed (CR LF), units and CR, or units and CR LF
SERIAL PORT MESSAGE ID STRING:	Insert unit's serial number at start of speed messages or do not
7 VOLT OUTPUT	7 volts (nom) supplied from 8-pin interface connector during sleep mode or not . (7 volts is always supplied when unit is in transmit or standby mode.

Field Configuration (defaults in bold)

TRANSMIT/ HOLD:	Turns the microwave transmitter On or Off
RADAR ZONE:	Away, Closing or Auto directional sensitivity may be selected
HORIZONTAL ANGLE:	Angles from 0° to 60° may be selected in 5° increments
VERTICAL ANGLE:	If not configured for automatic vertical tilt angle, angles from 0° to 60° may be selected in 5° increments
SENSITIVITY:	4 levels of field sensitivity may be selected (1/2/3/4 max)
TEST MODE:	Initiates a speed sensor self-test followed by a 60 second tuning fork mode, during which time directionality screening is disabled and the speed sensor will respond to any target direction (away or closing) or to non-directional targets (like tuning forks)

1) Specified at 25° C.