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SPY® PIG TRACKING SYSTEMS



SPY®

SPY® PIG TRANSMITTERS



For the most reliable signal available, the SPY® Pig Transmitter uses low frequency signals to effectively and consistently penetrate a steel pipe wall. We offer numerous transmitter sizes to cover a full spectrum of pipe diameters. Each transmitter is self-contained and travels inside various pigs, attached to versatile brackets, or towed. A hand-held receiver and wand are used to locate the transmitter.

SPY TRANSMITTERS have been proven effective in the field for many years. Each SPY® transmitter is designed and built for long reliable service.

- Rugged casing is liquid-tight.
- Battery operated.
- Coded signal minimizes false readings.
- Strongest signal available.

APPLICATIONS

- Mainline Transmission
- Gathering Lines
- Subsea Lines
- Municipal Gas
- Water and Wastewater
- Refining and the Process Industries

ACCESSORIES



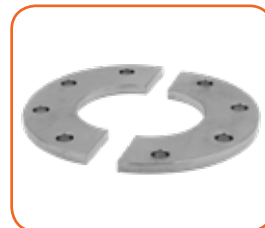
PT107 MOUNTING CAP
ITEM #13340



PT275 TOWING EYE
ITEM #10818



PT275 MOUNTING CAP
ITEM #12341



PT750 MOUNTING FLANGE
ITEM #11374



3/4 WRENCH FOR
PT275/750 CAP
ITEM #11902



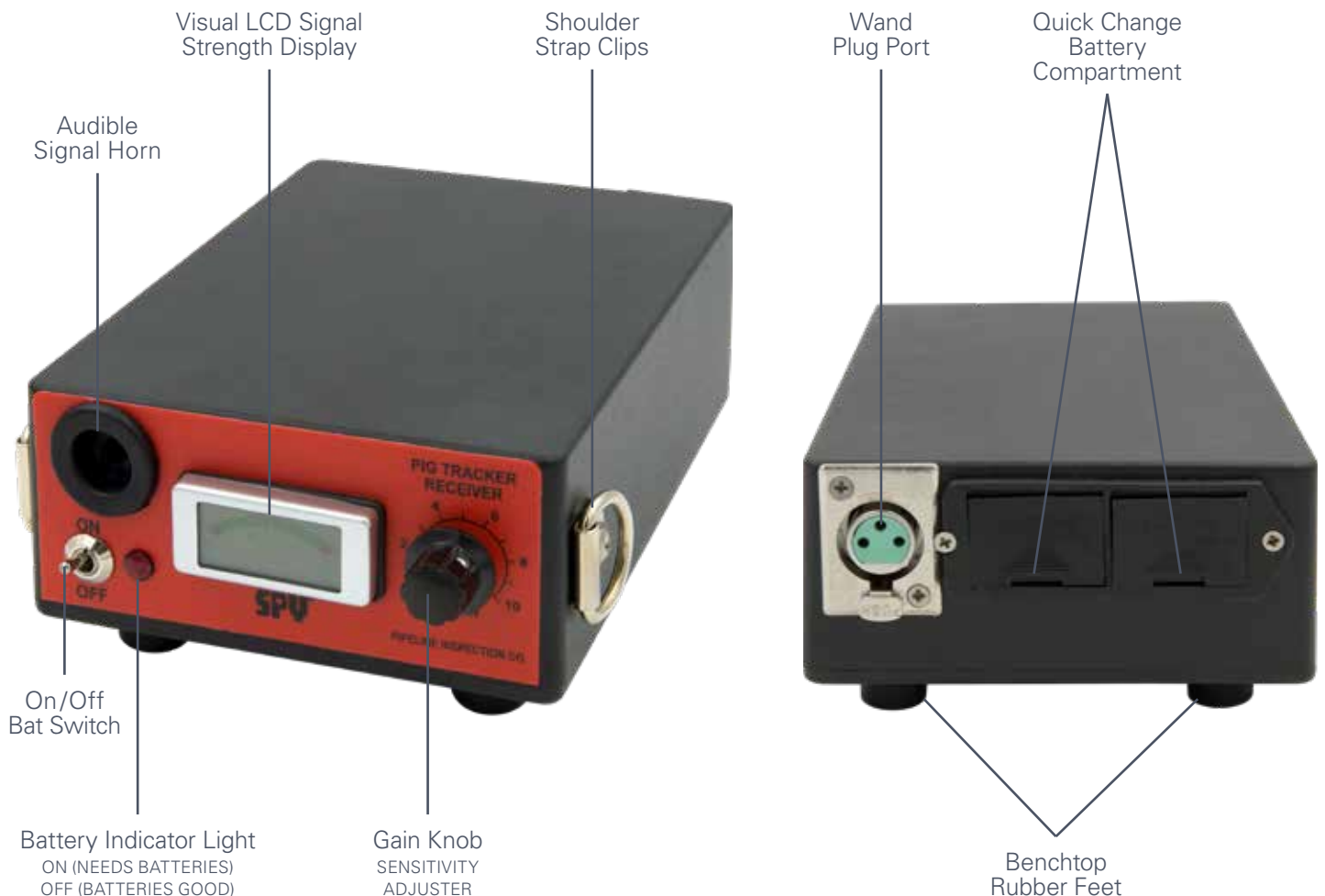
SHIPPING / CARRYING
CASE FOR MODELS
2, 4, 12 & 23 HZ RECEIVE
SYSTEMS
ITEM #12726

SPY® NON-INTRUSIVE PIG TRACKING SYSTEMS



RELIABLY AND CONSISTENTLY TRACK THE PASSAGE OF A PIG OR PINPOINT ITS LOCATION.

To locate a pig equipped with a SPY® Transmitter, the SPY® 23 HZ Receive (Pig Tracker Receiver and Wand) registers the changing magnetic field produced by any SPY® Transmitter. When the Transmitter is located, the 23 HZ Receive produces both an audio and visual output. With two standard 9-volt alkaline batteries, the 23 HZ Receive can be powered continuously for approximately 50 hours. Special waterproof wands are available for sub-sea applications, with depths of up to 10,000 feet [3000 meters].



SPY® NON-INTRUSIVE PIG TRACKING SYSTEMS

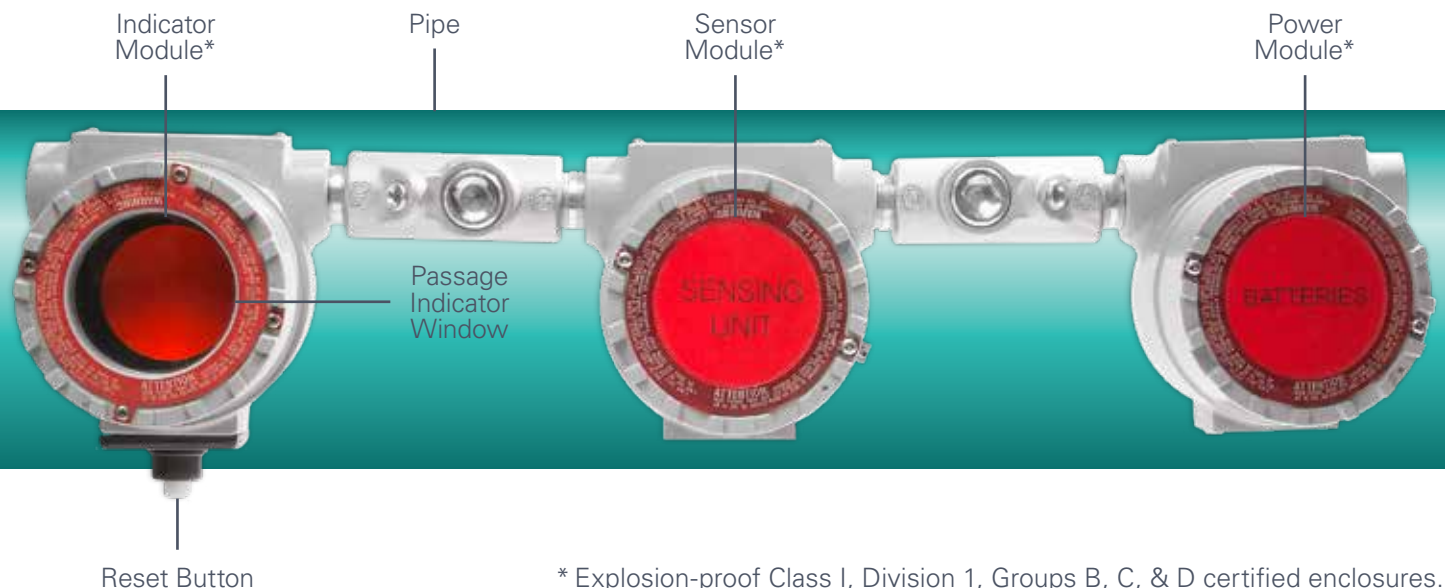
SPY® offers two stationary Non-Intrusive Pig Tracking Systems (PTS & PTS-M) when the need for noting the passage of a pig becomes a little less temporary, (i.e.; manpower or distance prevents leap frogging). The model PTS for use with electromagnetic transmitters and the model PTS-M for use with magnet equipped pigs.

NON-INTRUSIVE The PTS & PTS-M Systems are both non-intrusive systems that require NO HOLE to be drilled in the pipe. These non-intrusive systems allow for lower installation costs and significantly reduce the overall cost of the monitoring point. This non-intrusive feature makes the PTS & PTS-M a more desirable option than intrusive systems from an installation, maintenance and corrosion prevention standpoint.

EASY MOUNTING The systems can be permanent or temporary and can be accomplished by using pipe straps or clamps. Units can be installed along the above ground line as often as is needed.

SAFETY It also offers safer monitoring. The systems are provided in explosion-proof Class I, Division 1, Groups B, C, & D certified enclosures. The enclosures come complete with an "O" ring seal, which makes the housing NEMA 4X/7. When supplied by the factory as a complete system, proper explosion proof fittings are used and manufacturer specified procedures are followed to connect the units in order to maintain their rating.

MODULAR DESIGN The system was designed as a modular system and each section of the system can be sold separately allowing the user the flexibility of only buying and incorporating what is needed. Three quarter inch hubs are provided on each enclosure for conduit connection into your SCADA or recording system.



SPY[®] ACOUSTIC PIG TRACKER



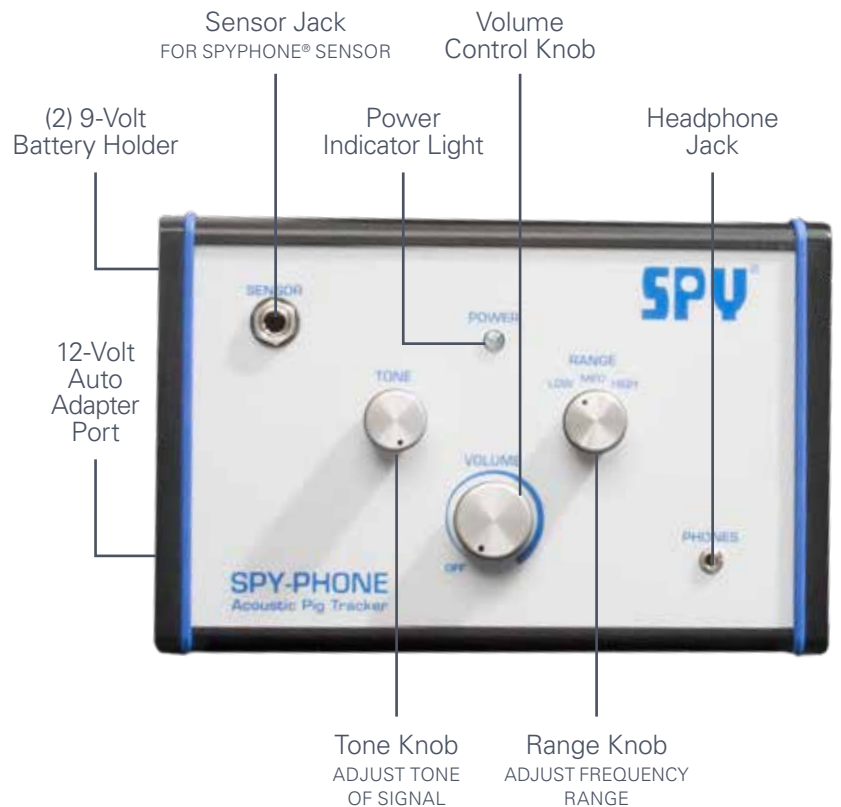
SPYPHONE[®]

The SPYPhone[®] allows you to listen to any internal pipeline travelers in motion. It is not a geophone. The pick-up sensors cover a wide range of frequencies from 1Hz–20KHz. The SPYPhone[®] also allows the user to set and restrict multiple frequency ranges. The versatile pick-up sensor, which comes with a 3" contact spike, can also be magnetically attached directly to exposed valves or pipes. You may also securely attach the sensor to a steel probe. The 12-volt auto adapter allows you to listen from the comfort of your vehicle. Plug in the full-spectrum FM transmitter and you can listen for pipeline travelers through your sound system.



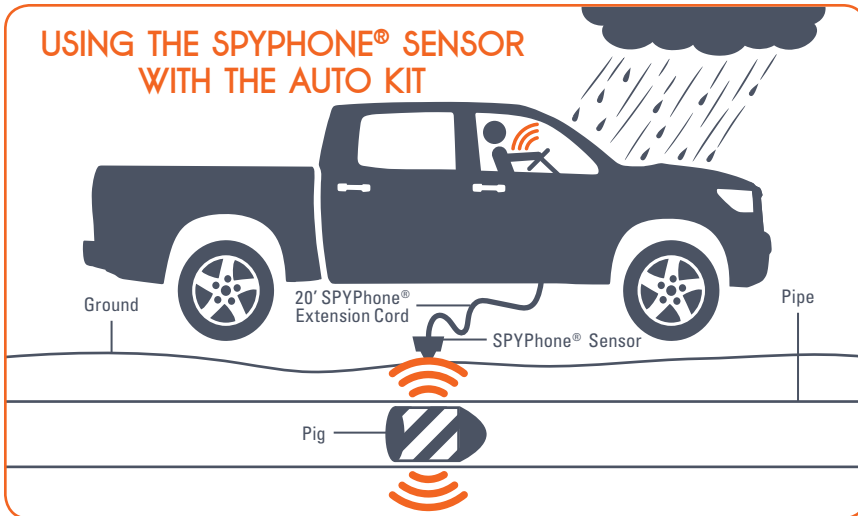
AUTO-KIT STANDARD ACCESSORIES

- 20' SPYPhone[®] Sensor Extension Cord
- FM Transmitter
- Auto Power Cord
- Head Phones
- SPYPhone[®] Sensor (pick up sensor)
- SPYPhone[®] Sensor Magnetic Base
- (2) 9-Volt Batteries

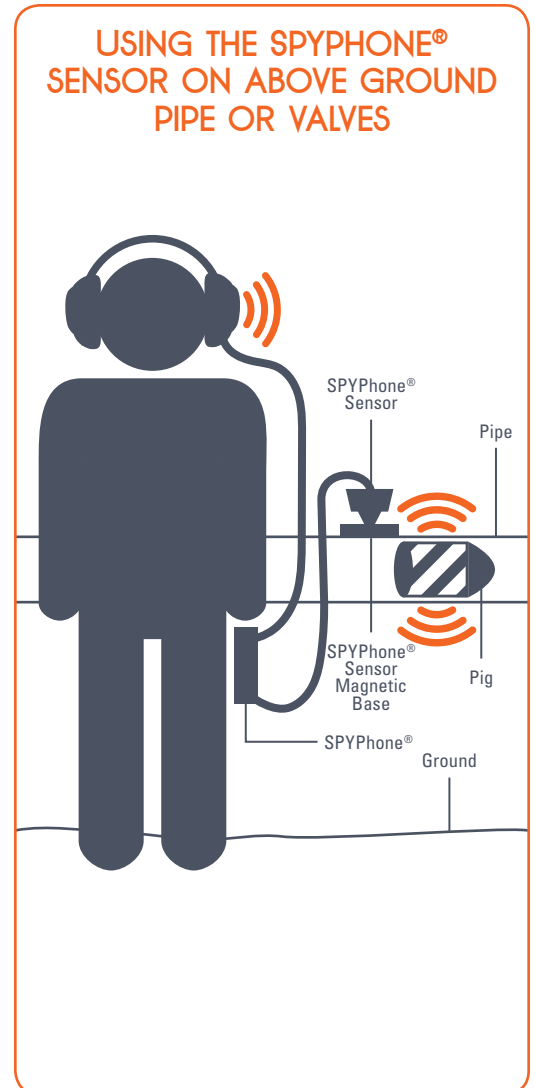


THREE WAYS TO USE THE SPYPHONE®

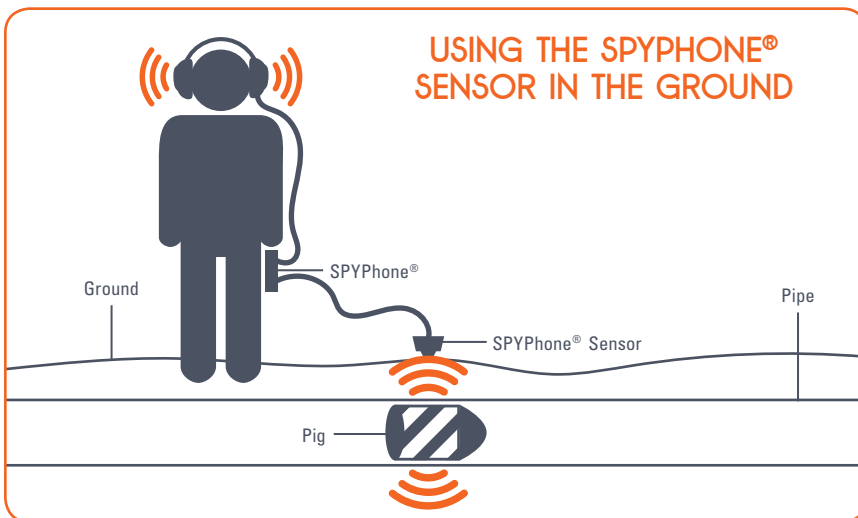
USING THE SPYPHONE® SENSOR WITH THE AUTO KIT



USING THE SPYPHONE® SENSOR ON ABOVE GROUND PIPE OR VALVES



USING THE SPYPHONE® SENSOR IN THE GROUND



SPECIFICATIONS

FREQUENCY	BATTERY	SIGNAL INDICATOR TYPE	UNIT WEIGHT	UNIT DIMENSIONS L x W x H	FACTORY WARRANTY	DOMESTIC / INTERNATIONAL STANDARDS
1 Hz – 20 KHz (Acoustic)	9V Battery or 12V Auto Adapter	Audible	1.5 lbs	8.5" x 5.5" x 2"	3 Month	CE Compliant

SPECIFICATIONS



TRANSMITTERS	PT101	PT107
Minimum Pipe Size	2" – 4" [50.8mm – 101.6mm]	2" – 8" [50.8mm – 203.2mm]
Transmitter Length	4.1875" [106.4mm]	6.3125" [160.33mm]
Transmitter Diameter	1" [25.4mm]	1.25" [31.75mm]
Maximum Hours of Signal	60 Hours	60 Hours
Batteries Required	1 Lithium 3V	1 Lithium 3V
Maximum Pickup Range (free air)	15' – 20' [4.72M – 6.096M]	20' – 25' [6.1M – 7.62M]
Ground Cover Depth Pickup Range	4' [1.23M – 1.83M]	6' – 8' [1.83M – 2.44M]
Maximum Operation Pressure	1000 PSI [69 Bar]	1000 PSI [69 Bar]
Temperature Range	-20°F – 180°F [-29°C – 82°C]	-20°F – 180°F [-29°C – 82°C]
Minimum Pipe Bend (Medium – High Density Polly Pig)	2" – 5D 3" – 4" 3D*	2" – 5D* 3" – 8" 3D*



TRANSMITTERS	PT275	PT750
Minimum Pipe Size	6" [152.4mm] and Up	12" [304.8mm] and Up
Transmitter Length	7.5" [190.5mm]	13.875" [352.4mm]
Transmitter Diameter	3" [76.2mm]	3.5625" [90.5mm]
Maximum Hours of Signal	200 Hours	500 Hours
Batteries Required	4 "AA" Batteries	8 "C" Alkaline
Maximum Pickup Range (free air)	60' – 75' [18.29M – 22.86M]	100' [30.5M]
Ground Cover Depth Pickup Range	15' [4.6M]	25' – 30' [7.6M – 9.1M]
Maximum Operation Pressure	2000 PSI [138 Bar]	3000 PSI [207 Bar]
Temperature Range	-20°F – 180°F [-29°C – 82°C]	-20°F – 180°F [-29°C – 82°C]
Minimum Pipe Bend (Medium – High Density Polly Pig)	3D	3D*

*When calculating pipe bends please reference the pig manufacturer. Additionally, when using steel mandrel pigs, the minimum pipe bend is determined by what the actual steel mandrel pig can negotiate.



PTR

FREQUENCY	BATTERY	BATTERY LIFE	DISPLAY TYPE	SIGNAL INDICATOR TYPE	UNIT WEIGHT (LB)	UNIT DIMENSIONS L x W x H	FACTORY WARRANTY	DOM. / INTL. STANDARDS
23 Hz Receive	2 x 9 Volt	50 Hrs	LCD	Audible / Visual	1.5	7.5" x 5.25" x 2.5"	12 Month	CE Compliant

PTS / PTS-M



ENCLOSURE	POWER INPUT	POWER OUTPUT	TRANSMIT SPEED	DISPLAY TYPE	UNIT WEIGHT (LB)	UNIT DIMENSIONS L x W x H	FACTORY WARRANTY	DOM. / INTL. STANDARDS
Enclosure Class 1, Division 1, Groups B, C & D Blind modules	Either 129 Volts AC or ±3VDC (Sensor Module) and 18 Volts DC for Indicator **	Normal Open non-latching Dry Contacts rated at 1A at 250 Volts AC	PTS Passage Indicator NOT a Presence Indicator PTS-M 1 fps. Minimum of One Gauss Outside of the Pipe	Visual	9.4	26" x 26" x 4.75"	3 Month	CE Compliant

** Other types of power supply inputs can be used, but must be specified on order entry to allow for modifications to be made to the modules.