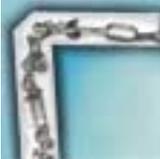


Pipe Deployment Platforms

Technology name	Technology Description	Pipe dia. (small/ largest)	Capital cost	Cost/pipe	Vendor info	Deployment info	Pic
P448 Steerable Tractor	The P448 is capable of inspecting up to 1.2Km of pipeline from a single setup point and covers an unprecedented range. Complete with remote controlled elevator, skid steer operation, high-speed/high-torque dual range transmission the P448 is perhaps the most maneuverable and versatile tractor system on the market.	450mm/ 2400mm			Pearpoint, Inc. 72055 Corporate Way Thousand Palms CA 92276 USA Tel: 760.343.7350 Fax: 760.343.7351		
Pipemouse	The Pipemouse is an tethered tractor based inspection system. Some of its best features are that it can navigate elbows and tees at ranges up to 5,000' from entry into the pipe at 10'/min.	3.5"/ 6.5"			Foster Miller www.foster-miller.com Contact: Al Fisk Contact Phone Number: 781-684-4383		
Telespec Crawler	There are three crawlers in the Telespec range for use in pipes from 100mm. The Mini crawler is designed to be used in pipes from 100 - 150mm diameter and can be used with the Compact 152 and Mainline Console units. The Midi crawler, for use in pipes of 150 - 600mm diameter can also be used with both of these Console units. The Mainline crawler, designed for use in pipes from 225mm diameter can only be used with the Mainline Console unit. The Minicam Crawler provides a cost-effective solution for contractors looking for a small-pipe crawler system. The crawler, camera and lighting head are all combined in a brass / stainless steel construction designed for maximum reliability and ease of use. For use in 100mm dia. to 225mm dia. pipes, high quality colour camera, four wheel drive tractor, Twin 20w lights, minimum travel with cable - 100m, compatible with Telespec 152 and Mainline console units.				Telespec Limited Pearpoint House 47 Woolmer Way Bordon, Hampshire GU35 9QE England Tel: +44 (0)1420 489901 Fax: +44 (0)1420 477597		
Segmented Robot Moccasin	The segmented robot Moccasin II uses air pressure to force padded "feet" against pipe walls as it extends and contracts its body along the pipe course. Moccasin II, a narrow and nimble craft able to navigate a complicated course of piping, complete with 90-degree turns and vertical climbs. The segmented robot uses pneumatics to force padded "feet" against inner pipe walls as it extends and contracts its body along the way.				Dr. Eddie Grant North Carolina State University		
AiS Snake	Up to fifteen sections can be mounted together to form the snake robot. Three motors within each section adjust the universal joint which connects two adjacent sections. Each section has six infrared distance sensors, three torque sensors, one tilt sensor and two angle sensors to measure the joint's position. A video camera at the head of Snake2 sends pictures to a remote monitor. In future applications, we plan to extend this link to serve as a means for supervised autonomous operation modes. This operational scenario will require an operator monitoring the pictures on a screen and directing the robot to zoom in on interesting objects. Ultrasonic sensors at the head of the snake are used to detect obstacles. A special tail element with batteries can also be attached to the snake. The snake can then work in a fully autonomous mode for up to thirty minutes. To teach our snake robot planar motion, we developed the modeling and simulation tool MOSES. The motion is optimized for minimum power consumption. On a plain surface, the motion is based on forces which drive wheels and the angul				Dr. Bernhard KlaassenFraunhofer AiS, Schloss Birlinghoven, 53754 Sankt Augustin, GermanyPhone: +49 2241 14-2851, Fax: +49 2241 14- 2384, Email: klaassen@ais.fraunhofer.d e		

6" Crawler	<p>The body of this crawler is specifically designed to be used in 6" diameter pipes. The unit can also be adapted for use up to 24" diameters. If larger diameters are encountered, a gantry can be installed to accommodate these sizes. Other features include: Durable tough bronze and stainless steel construction. · Straight line or Pan & Rotate capability in 6" diameter pipes. · Powerful DC motor drive - variable speed. · Industry compatible - No complicated interface boxes needed - (plug and play). · No manhole entry required. · Optional rear connector swivel to eliminate cable failure. GENERIC FEATURES: Available as 6" thru 24" or 8" thru 48". The Cobra crawlers are built for performance and ruggedness. · Powered by a 110VDC motor with a planetary reduction gear head, providing a maximum speed of 45 rpm. · An electric tooth clutch is incorporated into the drive train, providing forward, neutral and reverse functions. · The crawler housing on both the 6" and 8" units is sealed with o-rings and high pressure lip seals. · The units are tested at 50 psi. · The rear connector is a stainless steel 8</p>				<p>Optical Robotics 3349 Citation Drive, Green Cove Springs, FL 32043, Voice: 904-282-6267, Fax: 904- 282-6240, Email: support@opticalrobotics.co m</p>	
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