ROVVER X

The Power of One.

ROVVER X is the one system that lets you do everything—control inspections, view and record digital video, log observations, generate reports, and link directly to asset-management software. All this capability is packed into a simple three-piece layout, with no CCU or other components to clutter your truck.

Though remarkably self-contained, ROVVER X is built on an expandable digital backbone. Not only can you add side-scanning and laser profiling, you can view data from onboard sensors, automate tasks with macros, and measure defects on-screen. And future capabilities are limitless—ROVVER X's firmware updates automatically to the latest features, and its architecture is ready for any accessory—even ones that don't exist yet.

Advanced technology aside, ROVVER X is built for the rigors of sewer inspection. Twelve wheel options—plus camera lift, carriage and illumination accessories—mean ROVVER X transforms in seconds to inspect pipelines 6–72 inches diameter. Its six-wheel drive with proportional steering navigates past obstacles, and overlapping wheels climb offsets better than tracks. Powerful motors and a geared drive train maximize range and pivot capability, even with carriage and pneumatic tires installed.

Ultimately, however, reliability and productivity have made ROVVER the number one crawler brand in the world. ROVVER X continues this tradition with unsurpassed video resolution and 50% more illumination, leaving no detail hidden. Its powerful reel monitors cable tension optically to prevent slack and minimize resistance, allowing one-man operation. And self-diagnostic capabilities, plus access to operating history, only enhance the uptime of the one crawler that already leads the industry.

ROVVER X

Envirosight

Responsive Controls

Control multiple camera and crawler functions at once using proportional joysticks. • View live and recorded video directly on control pendant. • Enhance productivity with custom controls. • Use macros to automate common inspection tasks like joint scanning. • Access specialized functions using intuitive touchscreen interface.

on-screen measurement

*camera controls*

crawler/reel controls

Recording

Capture digital video and images to onboard memory. • Export video, images and data using USB media or network port. • Review inspections directly on screen.

Reporting

Enter observations on touchscreen interface. • Use standard defect catalogs (PACP, WRc), or custom ones. • Generate simple reports, or transfer data to WinCan for full reporting and asset management. • Overlay text on video without external hardware. • View system status and lifetime operating history.

observation entry

manhole-to-manhole report

incline report
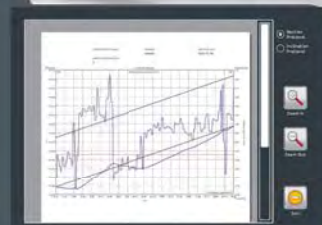
Import data directly to WinCan (now or any time in the future) and benefit from: database capabilities (filtering/querying) • full PACP compliance • GIS integration • advanced technology modules (laser, DigiSewer, 3D) • enhanced reporting • support for network installation and enterprise databases (Oracle, SQL) • links to municipal applications (ArcGIS, Hansen, Maximo, CityWorks, GBA, Cartegraph).

WinCan export

system status

Remote Control

Included standard with every system, this wireless remote lets you control camera, crawler, lift and reel from the palm of your hand.

Visibility

Capture the best video resolution possible from an inspection crawler. • Illuminate distant targets with 50% brighter LED lighting. • Boost illumination in large pipelines with auxiliary lamp. • See above flow with high-mount rear-view camera, plus additional rear-view camera on auxiliary lamp.

Adaptability

Remotely adjust camera height over 7" range with lift accessory. • Address pipe of any size, material and condition with 12 wheel options. • Extend height and wheelbase with carriage accessory to inspect pipelines up to 72" diameter.

Maneuverability

Control any number of camera and crawler functions simultaneously. • Pivot in place with zero-degree turn capability. • Use macros to automate common inspection tasks (like joint scanning). • Avoid high-centering on offsets and debris with overlapping wheels.

Range

Crawl up to 1000' with standard cable reel. • Overcome tough obstacles with unmatched maneuverability and power. • Prevent tangles and maximize crawl range with optical cable tension control. • Control reel direction, force, speed and operating mode directly from operator pendant.
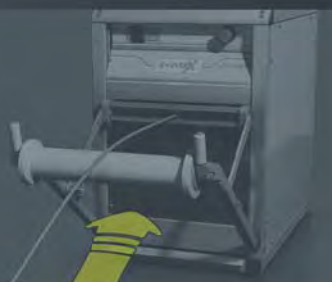
Measurement

Track pipe grade with inclinometer. • Monitor temperature and pressure with onboard sensors. • Locate crawler using built-in sonde transmitter. • Easily add side-scanning and laser profiling capability. • Size defects with twin laser dots. • Avoid flips with warnings from integral roll sensor.

Field-Readiness

Inspect from truck, pickup or ATV using simple three-component system layout with no CCU. • Run off generator or inverter with low power requirement. • Inspect pipelines 6–72" diameter with single, reconfigurable crawler design. • Store 1000' of strong, lightweight cable on compact, automated reel. • Transport system in compact, weatherproof enclosure.

Specifications subject
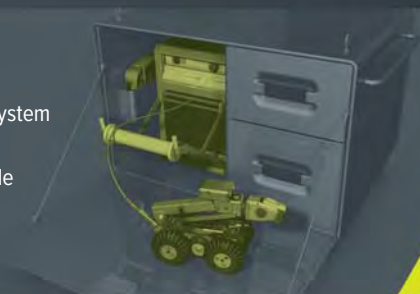
Complete Capability

With a selection of 12 wheel types—plus a detachable automatic lift, carriage and auxiliary lamp—ROVVER X is the only single system that lets you inspect pipelines 6–72" diameter. With single-screw attachment of wheels, you'll be ready in record time to inspect any combination of pipe size, material and condition. (For wheel chart, see reverse panel.)

24" and up   *15"*   *12"*   *8"*   *6"*

Power to Maneuver

ROVVER was the first inspection crawler to introduce a compact, steerable 6-wheel drive, giving operators the agility to navigate past obstacles that stop other crawlers.

ROVVER X adds to that legacy with CAN-bus controls, which allow you to perform multiple functions concurrently. Now you can steer while panning the camera and adjusting camera lift height. Proportional joysticks give you fine control over speed and direction, and also let you pivot in place (perform zero-degree turns).

Many Ways to Inspect

▶ **DigiSewer.** Generate side-scan images that capture every square inch of a pipe's interior surface. With DigiSewer, you can perform detailed inspection three times faster than with CCTV—all at a price point and learning curve anyone can manage. Inspection results are optimized for rapid transmission (3000 ft/GB) and analysis. Attach the DigiSewer laser ring, and you can also scan for pipe deformity.

◀ **Laser.** ROVVER X's twin lasers project measurement dots 2" apart, helping you size features and defects. What's more, when you pan the lasers 360 degrees, WinCan's laser module automatically determines the ovality of the pipe at that point.

For full laser scanning, connect the ROVVER X laser accessory or the laser-equipped DigiSewer side-scan camera. WinCan's laser module will track ovality along the full length of the pipe and generate a graphical report.

Onboard Intelligence

ROVVER X uses CAN-bus, the same control architecture built into modern automobiles. This gives ROVVER X capabilities not found anywhere else:

Automatic Updates: When connected wirelessly or via LAN, the pendant updates its firmware automatically, ensuring the latest features and maximum reliability.

Concurrent Control: High-bandwidth communications mean you can control any number of camera, crawler and accessory functions simultaneously.

power

video

actual size

CAN-bus

Agility & Uptime: With only six conductors, lightweight ROVVER X cable is easy to pull long distances, and also easy to field-reterminate. Kevlar gives it a 1000-lb. break strength, and a tough jacket maximizes abrasion resistance. CAN-bus architecture supports thousands of functions over a single wire pair.

Future-Readiness: Technology evolves, so ROVVER X's capability isn't hard-wired. Add any number of sensors and end effectors, even ones that don't exist yet.

Information: Access real-time system information using intuitive touchscreen controls—from real-time sensor data to lifetime service and operating history.

Self-Diagnostics: Connect your system to a PC running ROVVER X Studio, and our technicians can log in to read error codes and perform diagnostic tests.

To perform side-scanning, all you need is a DigiSewer camera (shown here) connected to your crawler, and WinCan software with the Scan Explorer module.
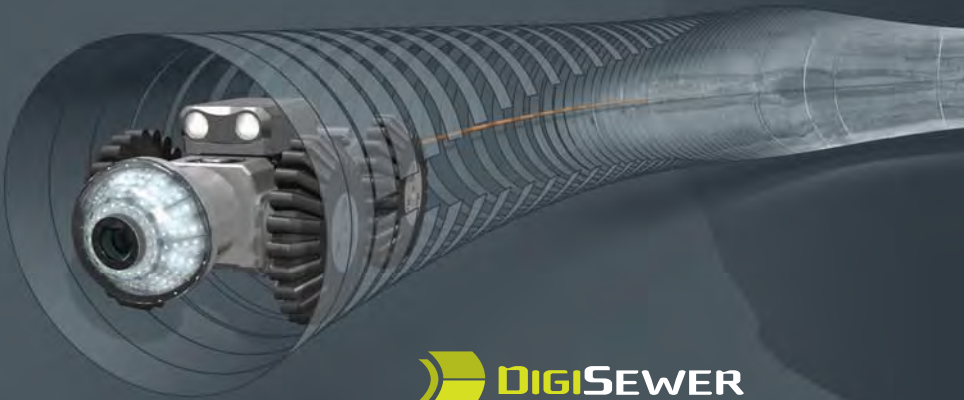
DIGISEWER

Wheels

ROVVER X wheel options help you address any combination of pipeline diameter, material and condition. With single-screw attachment, wheels swap out in seconds, and keyed axles ensure positive traction.

3.4"

3.8"

4.3"

5.3"

8.7"

Pneumatic wheels require the ROVVER X accessory carriage.

10.2"

Specifications

system

ratings . . . . CE, NRTL
power . . . . 120-240 Vac, 60 Hz
viewing capability . . . . . pipelines 6–72" diameter

camera (RCX90)

imager . . . . color ¼" CCD
resolution . . . . 720 × 576 pixels
zoom lens . . . . 120× (10× optical, 12× digital)
pressure rating . . . . 1 bar
features . . . . auto shutter; auto/manual focus
illumination . . dimmable shadowless 40-LED array
articulation . . . . ±145 deg tilt; infinite pan
measurement . . . . twin laser diodes
sensing . . . temperature, pressure, pan/tilt angles
size . . . . 6.6" × 3.1" × 2.8" (168 × 81 × 72 mm)
weight . . . . 3.3 lb (1.5 kg)
materials . . . . aluminum, stainless steel

crawler (RX130)

wheels 6
turn radius . . . . down to 0.0"
camera . . . color rear-view w/ high-lux tri-LED lamp
sensors . . . . pitch, roll, temperature, pressure
pressure rating . . . . 1 bar
size . . . . 12.2" × 4.4" × 3.2" (310 × 111 × 90 mm)
weight . . . . 13.2 lb (6 kg)
materials . . . . aluminum, stainless steel
sonde transmitter . . . . 33 kHz / 512 Hz

control pendant (VC200)

controls . . twin proportional joysticks; push-button
            controls (power, lamp intensity, camera lift,
            zoom, focus, reel mode, pull force, crawl
            speed/direction); 10 soft keys; touchscreen
touchscreen . . . . 8.4" color (800×600 pixels)
video capture MPEG-4 (H.256)
image capture . . . . JPEG
storage . . . . . . external USB; internal flash (64 GB)
connectivity . . . . Ethernet
size . . . . 13.5" × 9.3" × 3" (342 × 236 × 75 mm)
weight . . . . 4.4 lb (2 kg)
firmware . . . . VisionControl (auto-updating)
bundled software . . . . VisionReport

axial auxiliary lamp (optional)

lamps . . . . four (4) hi-lux tri-LED lamps
dimensions . . 4.6" × 5.2" × 5.2" (117 × 132 × 132 mm)
materials . . . . aluminum, stainless steel

cable reel (RAX300)

cable length . . . . 1000' (300 m)
cable diameter . . . . ¼" (6.5 mm)
cable weight . . . . 0.03 lb/ft
cable strength . . . . 1000 lb
cable conductors 6
controls (local) . . . . power, emergency stop
controls (via pendant) . . . . auto/manual, speed,
                        forward/reverse, pull strength
sensors . . . . tension, tilt
size . . . . 24.2" × 12.4" × 19.3" (620 × 315 × 490 mm)
weight . . . . 68.3 lb (31 kg)
connections . . . . pendant, service port, video in/out

camera lift (optional)

lift range . . . . 3.1–10.2" (132–312)
materials . . . . aluminum, stainless steel

carriage (optional)

wheelbase (width/length) . . . 14.5"/12.2" (368/310 mm)
weight . . . . 34.2 lb (15.5 kg)
materials . . . . aluminum, stainless steel

auxiliary lamp/rear camera (optional)

forward illumination . . . . . twin hi-lux tri-LED lamps
camera . . . color rear-view w/ high-lux tri-LED lamp
sonde transmitter . . . . 33 kHz / 512 Hz
materials . . . . aluminum, stainless steel

basic system

- RX130 crawler body
- RCX90 camera head
- RAX300 reel with 1000' cable
- VC200 control pendant
- VisionReport software
- wireless remote control
- small rubber wheels (6)
- medium rubber wheels (4)
- medium grease wheels (4)
- large rubber wheels (4)
- wheel spacers (4)
- crawler body transport case
- camera head transport case
- tools (wrenches, pressure kit)

optional accessories

- laser profiler
- DigiSewer side-scan camera
- remote camera lift
- large-pipe carriage
- auxiliary lamp/rear-view camera
- desktop mount for pendant
- USB media for pendant
- wheel sets (see chart on flap)
- cable management accessories
- lowering devices
- WinCan observation and asset
  management software
- other accessories

ENvirosight LLC

www.envirosight.com • (866) 936-8476 • (973) 252-6700
111 Canfield Ave., Unit B3 • Randolph, NJ 07869

*Regional sales, support and service partner
network spanning North and South America.*

*Envirosight custom inspection trucks, vans, trailers
and enclosures make field inspection with your
ROVVER X even easier and more productive.*