



TECHNICAL SPECIFICATIONS

Suction based crawler

Suction based crawler for non-destructive inspection services

We cannot say it often enough; safety always comes first. Are you worried about the contamination of your assets during inspections? Spend a lot of time and funds on erecting and removing scaffolding? Are you concerned about the risks of people entering confined spaces or working from heights? Let our robot do the job instead.

Invert Robotics offers a vacuum-based robotic crawler to inspect all kinds of assets. The story of this very useful robot goes back to 2013 when it was originally developed for the dairy industry. Our company's development team very soon came to realise that it was not limited to just this one industry. They continued working on its performance, functionality, user-friendliness and versatility to improve the tool and software for many other industries.

Nowadays, the suction based crawler is suitable for everyone. It's currently working at companies in the Food Production, Aviation, Energy and Chemical industries. Our technical sales team is ready to help you evaluate your assets and determine whether our crawler is the right tool for you. Together we'll consider the rent or

lease options, depending on surface roughness, cleanliness, asset dimensions and accessibility. We can even conduct your inspections for you.

We believe that there is no need to put personnel in harm's way. Using our robotic crawler provides a safe and efficient way for you to inspect your asset. The elimination of scaffolding, as well as time savings, repeatability of inspections and easy integration into risk based inspection systems are some other important advantages. It's not hard to understand why end-users easily adapt to our robotic way of working.

The robot, controls, and umbilical are packed in two light-weight cases for easy ground and air transportation. That's how it can readily be transported as air freight to minimise costs and increase speed.

Request a demo or contact your local Invert Robotics sales representative for additional information. With seven offices around the globe, Invert Robotics can quickly respond to your inspection needs.





TECHNICAL SPECIFICATIONS *BM1.1 version*

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Crawler Size

Mass	8 kg (12.8lbs)
Dimensions	325W x 400L x 300H mm 12.8W x 15.7L x 11.8H inch
Main construction materials	UHMWPE, Aluminium, Rubber
Maximum cable length	Standard 40m (131ft)

Payload

5kg (11lbs) payload permissible
Visual inspection offered as standard payload
Other payloads by request include UTT
Powered from robot

Equipment/Asset applications

Maximum height	50m (164ft) Tall
Minimum diameter	Greater than 1.2m (4ft)
Maximum surface roughness	Less than Ra 6.3-micron (Ng)
Surface materials allowed	Any smooth material such as Glass, Plastics, Composites, Stainless steel, Aluminium
Allowable contaminants	Dirt and dust

Performance

Maximum linear speed	200mm/sec 7.9inch/sec
Power consumption	200W - Nominal 500W - Peak
Power supply	36VDC
Operational temperature range	0 - 50-degree Celsius 32 - 122-degree Fahrenheit

Visual Inspection

Camera specs	1080p, 15fps
Camera streaming	Yes, in real-time
Camera recording	Yes
Optical Zoom	30x
Integrated lighting	Yes
Defect resolution	65 micron (close) 0.6mm at 10m

Suction system

Adhesion mechanism	Active sliding suction
Adhesion redundancy	Multiple redundancy built into the suction system
Vacuum pump	Yes, integrated

