



TECHNICAL SPECIFICATIONS

# V1800 Product sheet



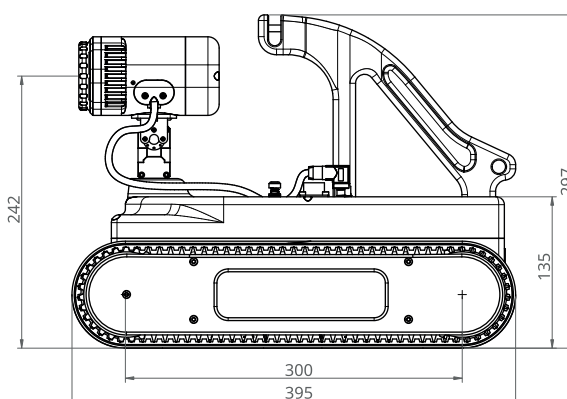
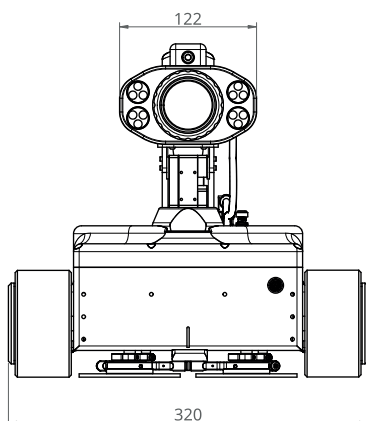
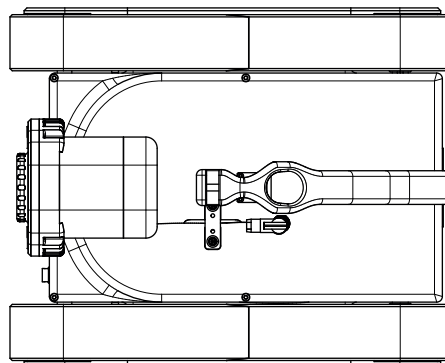
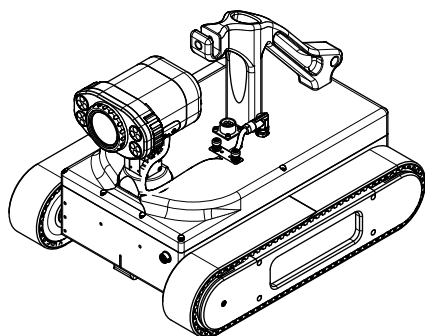
**With no entrance in confined spaces or working at heights being required, Invert Robotics' multi-technology NDT robotic platforms – the V-, M, and H-series – offer the safest, fastest and fail-safe way to make sure your assets' health is up to par.**

Our V1800 robot is designed for carrying out inspections in larger vessels, light chemical vessels and aircraft fuselages.

- Whatever surface – glass, plastics, composites, stainless steel, aluminium – the V1800 goes anywhere. Climbing or descending, our platform's robust adhesion technology keeps it crawling smoothly and securely over both non-magnetic and magnetic surfaces. It can even complete inspections hanging upside, also when carrying heavy, customised NDT tooling.
- Whoever carries out inspections – your own or third party inspectors – our platform enables you to follow inspections even at a distance.
- Wherever in the world they're needed, our small and robust robots – with ditto carrying case – can be deployed instantly and travel anywhere as check-in luggage.



## V1800 product sheet



### V1800 Technical specifications

<b>Weight</b>	8 kg (without camera)
<b>Dimensions</b>	395 x 320 x 297 mm (W x L x D)
<b>Material</b>	Any smooth surface such as glass, plastics, composites, stainless steel, aluminium
<b>Max. cable length</b>	Standard 40 m can be extended up to 100 m
<b>Constr. materials</b>	UHMWPE, aluminium, rubber

### Speed

<b>Max. linear speed</b>	200 mm/sec
<b>Tracked based differential steering</b>	Yes

### Performance

<b>Power consumption</b>	350 W
<b>Power supply (V/amp)</b>	35/10
<b>Operational temperature range</b>	-10°C to 50°C (configurations for other temperatures are available)
<b>Nominal diameter for operation (mm)</b>	1800
<b>Maximum diameter for operations (mm)</b>	1600
<b>Maximum height for operations (m)</b>	50
<b>Maximum surface roughness (<math>\mu</math> Ra)</b>	<6.5
<b>Maximum payload</b>	5 kg



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### Adhesion system (vacuum)

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- Active and passive sliding suction adhesion system
- 4x adhesion pads - redundancy built into the suction system
- Active vacuum pump system, prevents the robot from falling in case of power loss
- Adhesion system force (max) (N) 528

### Certifications

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- **CE- and AVI-certified**
- **All robotic surfaces that touch vessels are made of food-grade materials**
- **Machinery Directive 2006/42/EC**
- **Low Voltage Directive (LVD) 2014/35/EU**  
Harmonised Standards  
IEC 60950-1, Ed 2.2(2013) including national variations for EN 60950-1(2006 + A2:2013)
- **Electromagnetic Compatibility (EMC) Directive (2014/30/EU)**  
Harmonised Standards  
EN 55032:2015  
Electromagnetic compatibility of multimedia equipment  
EN 61000-6-2: 2005  
Electromagnetic compatibility (EMC)  
EN 61000-3-2: 2014  
Electromagnetic compatibility (EMC) - Part 3-2: Limits  
EN 61000-3-3: 2013  
Electromagnetic compatibility (EMC) - Part 3-3: Limits
- **RoHS 2 directive (2011/65/EU)**

### Control case

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- Easy to set up and versatile
- Fully integrated control system
- Standard game controller to drive the robot
- Daylight readable LCD screen - even in the brightest light
- Pelican Air 1637 carrying case
- Tested against the ISTA-6-FedEx-A standard

### Working surfaces

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- Any smooth surface, including stainless and carbon steel, glass plastics, composites and aluminium

### Payload capability

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- Visual inspection cameras as standard payload
- Ultrasonic thickness tester
- Customised NDT tools

### Other capabilities

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- Transitions at any angle between floor and wall with or without payload