

## Product Specification



**Part No.:** 1860000

**Drawing No.:** RR 0100 G 001

**Category:** Basic Device

## Description

The RoadRunner is a handheld instrument capable of detecting explosive materials, narcotics and homemade explosives.

### Sampling

The device offers two sampling modes. Direct sampling or so called sniff-mode for vapours and indirect surface sampling of particles and droplets with swipes and subsequent desorption.

### Technology

The RoadRunner detector operates on the principle of Ion Mobility Spectrometry (IMS) with a non-radioactive ionization source and internal calibration procedures.

### Features

The RoadRunner has been designed for detection of explosives and narcotics on surfaces and in air. The user is guided interactive step-by-step through the sampling process supported by information on a touch screen display. All final results are displayed by a traffic light. When a substance has been identified its name is displayed.

### Applications

The RoadRunner is dedicated for safety and security applications. Customs, police and airport security benefit from the flexibility of a mobile and light weight device when setting up temporary check-points and doing spot control onsite.

### Consumables and Maintenance

When it is necessary to replace consumables, this can be done without calling for the Manufacturer's Service Engineer. Recalibration is not required through the life of the instrument. All these features add together to reduce cost of ownership.

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### Size and Weight

<b>Size (approx.)</b>	Height x Width x Depth: (330 x 340 x 130) mm (13 x 13.5 x 5.0) in
<b>Weight (approx.)</b>	3.5kg / 7.7lb (including battery pack)

### General Specifications

<b>Ionization Source</b>	Non-radioactive photo ionization
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### Electrical Interfaces

<b>DC Power Inlet Socket</b>	19V DC ( $\pm 10\%$ ) 90W max. IEC 60130-10 Type A -2,5mm ID
<b>Data Interface USB</b>	USB 2.0 Type A
<b>Data Interface Ethernet</b>	10/100 Base-T (IEEE 802.3 RJ-45)

### Mechanical Interfaces

<b>Air Intake</b>	In front on the instrument, used for sample introduction in Sniff Mode
<b>Air Outlet</b>	On rear side of battery compartment
<b>Probe Port</b>	On the upper face of the instrument, covered by a hatch, used for direct introduction of Sample Collector strips
<b>Battery Compartment</b>	Closure of the battery compartment with has to be opened / closed for the replacement of the Battery Pack

### User Interfaces

<b>Touch Screen Display</b>	4.3" color touch-screen LCD panel
<b>Status LED</b>	Optical indicator for detection process steps
<b>Sounder</b>	Accoustic alarm unit can be enabled or disabled
<b>Trigger Switch</b>	Located on the grip, used to trigger sniff measurements
<b>On / Off Switch</b>	Starts-up and Shuts-down the device

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### Modes of Operation

<b>Selftest</b>	When switched on the RoadRunner carries out a start up and instrument self-test automatically.
<b>Sniff Mode</b>	The Sniff Mode is used for the identifications of explosive and narcotic vapors in the air.
<b>Swipe Mode</b>	The Swipe Mode is used for sampling of particles and droplets of explosives and drugs from surfaces with a Sample Collector strips and subsequent desorption.
<b>Alarm</b>	An acoustical (switchable) and optical alarm is indicated. Detailed substance information is indicated on the instrument's display.
<b>Cleaning Mode</b>	The Cleaning Mode is used to purge the instrument at temperatures higher than normal operation.
(Error indication)	Turns damaged components automatically off, displays an error message and / or code.

### Performance Data

<b>Continuous operation</b> (Runtime)	1 x Battery, Li-Ion rechargeable	~3.5h @ 20°C
<b>Detectable Substances</b> (Explosives)	Pentaerythritol tetranitrate (PETN) Cyclotrimethylenetrinitramine / Hexogen (RDX) Trinitrotoluene (TNT) Ammonium Nitrate (NIT) Urea Nitrate (NIT) Triacetone triperoxide (TATP) Hexamethylene triperoxide diamine (HMTD) Nitroglycerine (NG) 2,4,6-Trinitrophenylmethylnitramine / Tetryl (TET) 2,3-dimethyl-2,3-dinitrobutane (DMNB) Black powder (BP) Ethylene glycol dinitrate (EGDN) 2,4-Dinitrotoluene (DNT)	
<b>Detectable Substances</b> (Narcotics)	Cocaine (COC) Methamphetamine (METH) 3,6-Diacetylmorphine (Heroin) (HER) Δ9-Tetrahydrocannabinol (THC) 3,4-Methylenedioxyamphetamine (MDA) 3,4-Methylenedioxy-N-methylamphetamine (MDMA) Lysergic acid diethylamide (LSD)	
<b>Ready for Operation</b>	< 30 minutes	
<b>Processing Time</b>	< 30 seconds	

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### Environmental Parameter

<b>Storage Temperature</b>	-20°C to +60°C
<b>Operating Temperature</b>	0°C to +40°C
<b>Operating Humidity</b>	Up to 90% RH, non condensing
<b>Ambient Pressure Range</b>	606hPa to 1025hPa, absolute
<b>Environment Measurement Procedures</b>	
<b>IEC 60529 (11/89) IP 42</b>	passed
<b>Electromagnetic Compatibility</b>	
<b>EN 61326-1:2013</b>	passed
<b>Product Safety</b>	
<b>CE Marking IEC 61010-1</b>	passed

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### System Configuration, Accessories, Consumables, Training

PN	System Configuration	Picture
1860000	<b>Basic Device RoadRunner</b> Including: 1x Manual RoadRunner Document language: English (1x Basic Equipment for RoadRunner is mandatory to operate the Basic Device RoadRunner)	
1829976	<b>Basic Equipment for RoadRunner</b> Equipment set needed to operate the Basic Device RoadRunner	
1829976 Basic Equipment for RoadRunner consisting of:		
2pcs 1829975	Battery Li-Ion RoadRunner, rechargeable (for detailed specification see Consumables)	
1829973	Battery Charger Li-Ion RoadRunner (for detailed specification see Accessories)	
1829974	Power Supply, 19 VDC, RoadRunner (for detailed specification see Accessories)	
8210852	Confidence Sample G (for detailed specification see Consumables)	
8702660-E	Sample Collector (pack of 120) (for detailed description see Consumables)	










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PN	Accessories	Picture
8702515	<p><b>Sampling Wand</b></p> <p>Allows sample collection without the risk of probe and material contamination caused by the operator.</p>	
8703384	<p><b>Telescopic Rod</b></p> <p>Extension for Sampling Wand Length 0.5 to 2.5m</p>	
1829974	<p><b>Power Supply, 19V DC, RoadRunner</b></p> <p>Weight: ~400g Input Range: 100 to 240V AC / 50-60Hz / 2A max. Output: 19V DC / 4.7A / 90W max. CEE7/7 C13 Mains Connector 1EA Cordset Continental Europe CEE7 1EA Cordset United Kingdom BS1363 1EA Cordset North American QP-02</p>	
1829973	<p><b>Battery Charger Li-Ion RoadRunner</b></p> <p>Weight: ~450g Input Range: 100 to 240V AC / 50-60Hz / 2.5 A max. 1EA Cordset Continental Europe CEE7 1EA Cordset United Kingdom BS1363 1EA Cordset North American QP-02</p>	
1829972	<p><b>Vehicle Power Supply RoadRunner</b></p> <p>Weight: ~300g Input Range: 12V DC to 30V DC / 11A max. Input connector: Cigarette lighter adapter (CLP)</p>	
1829968	<p><b>Transport and Storage Container 1, RoadRunner</b></p> <p>Storage capability for:</p> <ul style="list-style-type: none"> <li>1 x Basic Device RoadRunner</li> <li>1 x Refill cartridge for Drying Filter</li> <li>1 x Dust Filter RoadRunner</li> <li>1 x Confidence Sample H</li> <li>1 x Sample Collector</li> <li>1 x Sampling Wand</li> <li>1 x Operator Manual RoadRunner</li> <li>1 x Battery Li-Ion RoadRunner rechargeable</li> <li>1 x Battery Charger Li-Ion RoadRunner</li> <li>1 x Vehicle Power Supply RoadRunner</li> </ul>	

# RoadRunner (Basic Equipment)



## Product Specification

PN	Consumables	Picture
8210852	<b>Confidence Sample G</b> Needed to perform a confidence check	
8702660-E	<b>Sample Collector</b> (pack of 120) Sampling Strips for introduction of samples collected in Swipe Mode. Suitable to use with Sampling Wand.	
8273163	<b>Solution Strip</b> (pack of 120) Sampling Strips for introduction of liquid samples and laboratory applications.	
8703439	<b>Nitrile Gloves Size 9</b> (pack of 100) Powder free, ambidextrous, non sterile, single use, beaded cuff, 0.12mm thickness	
1830328	<b>Consumables Set RoadRunner</b> (pack of 3) Ready to use refill cartridges including tools and materials, each cartridge includes the refill amount needed for one Drying Filter Operation time with one cartridge: ~340h	
1829967	<b>Dust Filter RoadRunner</b>	
1829753	<b>Dust Filter Air Intake, RoadRunner</b>	
1829965	<b>Calibrant RoadRunner</b> Calibration substance cartridge	
1829975	<b>Battery Li-Ion RoadRunner, rechargeable</b> Weight: ~ 490g Capacity: 95Wh Runtime: ~3.5h @ 20°C	

# RoadRunner (Basic Equipment)



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PN	Documentation and Training	Picture
1829970	<b>Manual RoadRunner</b> Document language: English	
1829971	<b>Maintenance Manual RoadRunner</b> Document language: English	
None	<b>1 Day Operator Training at Bruker Daltonik GmbH (Leipzig)</b> dependant on requirement and user experience – maximum 6 trainees	
None	<b>2 Days Maintenance Training at Bruker Daltonik GmbH (Leipzig)</b> - maximum 3 trainees	



# RoadRunner (Basic Equipment)



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### Dimensions RoadRunner

