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DEFENSE & SECURITY

BIRUCH C04

Explosives Detector

BIRUCH has been successfully tested for compliance with CE standards!

This makes the product even more attractive together with excellent technical characteristics and the lowest price on the market!

BIRUCH (C04), using innovation methods, successfully detects explosives in gas phase and particles form with extremely high sensitivity, not reachable by other explosive detectors.

It's strongest feature - extremely high sensitivity, not reachable by other explosives detectors!

- Direct non-contact detection of TNT vapor and less volatile explosives, including RDX and HMX, as well as Nitroglycerin, Ethylene glycol dinitrate (EGDN), Pentaerythritol tetranitrate (PENT) and its compounds, Semtex, Cyclotriacetone triperoxide, Ammonium nitrate, Dynamite;

- Direct operation in smoky and dusty areas, without usage of extra tools and without the risk to fail due to excessive concentration of explosive vapors;

- Detection of traces of low-volatile explosives on the surface using a piezo desorber;
Explosives detection by using defining points, allows confident detection in wide range of temperatures and humidity;

- Self-cleaning and automatic protection against concentration overload – detector stays in operable mode without long cleaning procedures;

- Expandable list of detected explosives via USB or Bluetooth connection, or directly via detector interface. Entering new explosives can be done even by operator in field conditions without a computer;

Small size and weight, long-term usage under the operational situation.



BIRUCH C04

Explosives Detector



Main advantages:

Direct non-contact detection of TNT vapor and less volatile explosives, including RDX and HMX, as well as Nitroglycerin, Ethylene glycol dinitrate (EGDN), Pentaerythritol tetranitrate (PENT) and its compounds, Semtex, Cyclotriacetone triperoxide, Ammonium nitrate, Dynamite

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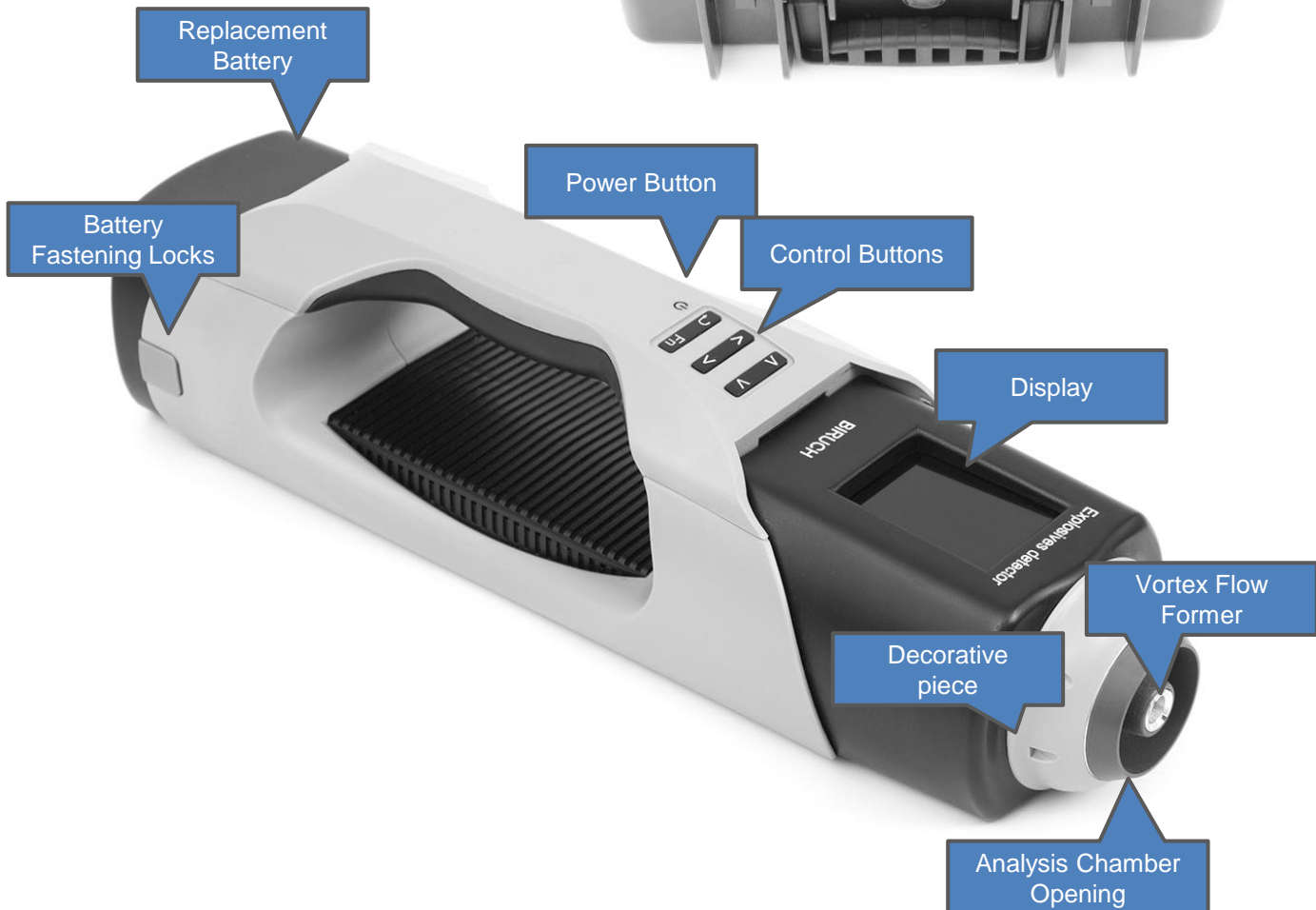
Device operation is based on the principle of nonlinear dependence of ion mobility on the electric field. Despite the application of radio-emitting source, detector is absolutely safe for the operator and has special confirming certificate.

BIRUCH C04

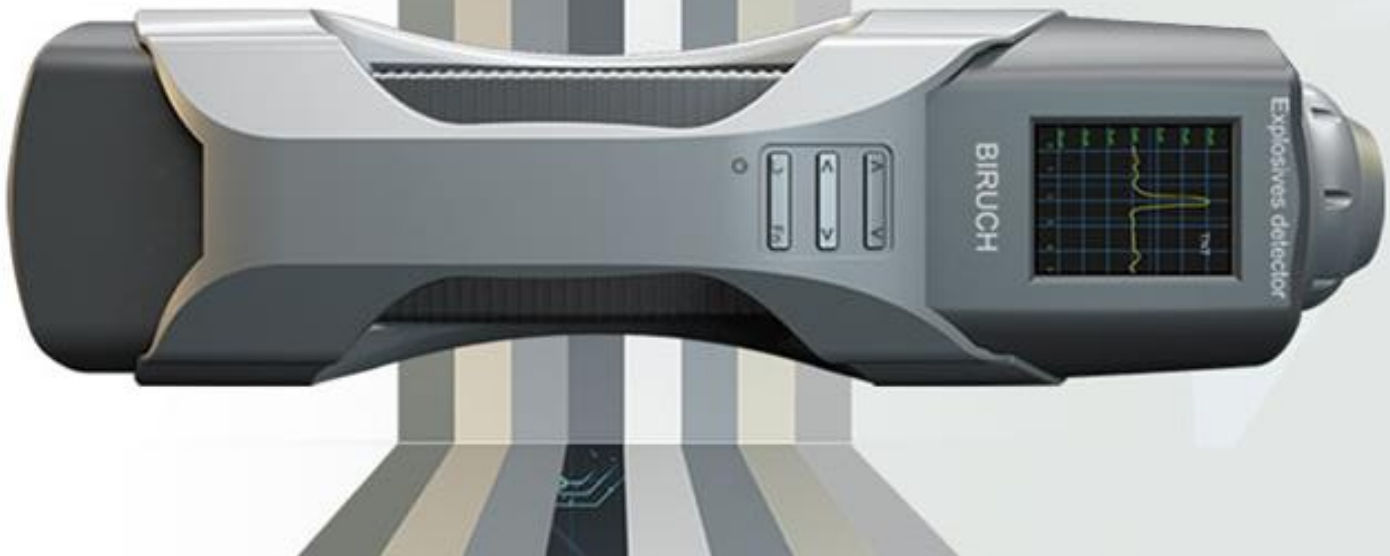
Explosives Detector

Height	350 mm
Width	103 mm
Thickness	94 mm
Weight	up to 1,7 kg

Explosives detector BIRUCH, despite the application of radio-emitting source, is absolutely safe for the operator.



BIRUCH C04 Detector of Explosives



Parameter	Unit	Value
Sensitivity to TNT vapors, at least	g/cm ³	10 ⁻¹⁴
Analysis time, up to	sec	2
Target detectable substances	-	TNT, RDX, HMX, as well as Nitroglycerin, Ethylene glycol dinitrate (EGDN), Pentaerythritol tetranitrate (PENT) and its compounds, Semtex, Cyclotriacetone triperoxide, Ammonium nitrate, Dynamite
Signal indication of a target substance detection	-	sound, light
Start time from stand-by mode	sec	6
Distance of vortex sampling, at least	mm	60-100
Range of operating temperatures	°C	5... 50
Battery life for mixed operation mode	hour	6-10
Battery life on a single battery	hour	3,5
Dimensions, LxWxH, up to	mm	350x103x94
Weight, up to	kg	1,7

Device operation is based on principle of nonlinear dependence of ion mobility in the electric field. Despite the application of radio-emitting source, detector is absolutely safe for the operator and has special confirming certificate.

BIRUCH C04

Detector of Explosives

BIRUCH (C04), using innovation methods, successfully detects explosives in gas phase and particles form with extremely high sensitivity, not reachable by other explosive detectors.

It was confirmed during inspection of personal belongings, baggage, mail, parcels, packages, vehicles, buildings, etc even in smoky and dusty environment, without extra tools, without the risk to fail due to excessive explosive concentration and without long term cleaning and service procedures. List of detected explosives can be expanded even in field conditions.




Device operation is based on the principle of nonlinear dependence of ion mobility on the electric field.

Explosives Detector BIRUCH exceeds characteristics of the best mass-produced analogue devices because of the most optimal construction, which combines high sensitivity, compact size of basic elements, and low power consumption

The main competitive advantage of the explosive detector C04 by the Innovative center Biruch over the domestic equivalents and foreign analogues, is the combination of low size and weight, ultimate sensibility and possibility of the explosives remote detection, including low-volatile explosives.

Competitive advantages over the domestic and foreign analogues:

- The best-in-class weight and size characteristics;
- Detection of the traces of low-volatile explosives on the surface using a piezo desorber;
- Identification of the explosives by using defining points;
- Self-cleaning and automatic protection against concentration overload;
- Low size and weight, log-term exploitation under the operational situation;
- Operation over a wide temperature and humidity range.

Designation	Detector BB C04 (IC Biruch, CJSC, Russia)	Pilot-M1 (Lavanda-U, LLC, Russia)	MO-2M (Sibel, CJSC, Russia)	Kerber (Modus, LLC, Russia)	Sabre 5000 (Smiths Detection, USA)	Quantum Sniffer (Implant Sciences Corp., USA)
Threshold sensitivity, g/cm ³	10 ⁻¹⁴	10 ⁻¹³	10 ⁻¹³	10 ⁻¹⁴	10 ⁻¹²	10 ⁻¹⁴
Analysis time, sec	2	1,5	2	5	10	10
Ramp-up time, sec	6	10	10	900	900	900
Distance of sampling, mm	100	100	100	Remote sampling is absent	Remote sampling is absent	Remote sampling is absent
Battery life, h	4...6	4	3	4	4	4
Ionizer type	Radioactive source	Coronary discharge	Radioactive source	Coronary discharge	Radioactive source	Photon source
Overall dimensions, mm	350x103x94	300x180x90	310x100x90	410x162x110	363x110x130	493x127x188
Weight, kg	1,7	2	1,4	3,7	3,2	5,4
Appearance						

BIRUCH C04

Detector of Explosives

1. Biruch has sensitivity at least 10 times better than other detectors

(Tests show that Biruch has sensitivity even better than MO-2M. Biruch is the first explosives detector, which was officially certified at the stated sensitivity (10^{-14}). The certification organization made special research on how to make sensitivity measurements for such minor concentrations)

2. Biruch's warm up time is the fastest

(It is 6 sec versus 10 and more seconds of other explosives detectors)

3. Biruch uses beta radioactive source which is safe already in 2 cm by open air or via a slice of foil

(Biruch has just 5th Hazard Class. For comparison, Mo-2M with radioactive source has 7th Hazard Class)

4. Biruch's dimensions are smaller and weight is lower than of most other detectors

(Its dimensions 350x103x94 mm and weight 1.7 kg)

5. Biruch can be directly used in dusty and smoky environment while other models require usage of gauze sampler pump and then analyze the probes outside of dusty and smoky territory.

(Sample collection using the pump exceeds 20 seconds. Plus it is required time for delivering the samples to the device and analyzing time by the detector)

6. Automatic self-cleaning and protection against concentration overload

(Most of other detectors perform self-cleaning only from not very high concentrations (otherwise can be damaged) and have no function of protection against concentration overload)

7. Fast and easy cleaning procedure from strong pollutions

(Requires just replacement of filter-screen using a supplied filter replacement tool, with later cleaning of the filter-screen by alcohol napkins)

8. Explosives identification using the built-in benchmark in real time mode. Specialist is able to add new signs of explosives himself in field conditions. Biruch's method of explosive identification allows successful identifying of explosives at wide range of temperatures and humidity, even and at variable conditions.

(Most of other detectors provide explosives identification using the data, saved in the detector memory by manufacturer. Adding new explosives will require contacting manufacturer and computer connection for data base update. This method of explosives identification is good for stable weather conditions only. In case of significant changes of temperature and humidity the device may not detect explosives at all)

Delivery set: Explosives detector C04 (Biruch)

Safety cover;

Additional battery unit;

External power supply GS60A18-P1J or of similar characteristics;

Power cord;

Source of TNT vapor imitator;

Evaporation chamber of piezo desorber;

Removable filter grids - 3pcs.;

User manual;

Device passport;

Passport to the source of ionization radiation - 2 pcs;

Packing case for storage and transportation.

CERTIFICATION

Applicant : Intel Ltd
Address : B.10-1, Sosnovaya alleya, Zelenograd, Moscow 124489, Russian Federation
Manufacturer : Innovative center «BIRUCH»
Address : Russia, Belgorod region, v. Malobykovo, Belaya Vezha str, b.1
Description of EUT : Explosive detector
Trade Name : Biruch C04
Model Number : 1606012
Product Series : N/A
Type of Test : EMC Directive 2014/30/EU for CE Marking
Technical Standard : **Emission**
EN 61000-6-3:2007+A1:2011
Immunity
EN 50130-4:2011+A1:2014
IEC 61000-4-2:2008
IEC 61000-4-3:2006+A1:2007+A2:2010
Report Number : HA181147-CE
Receipt Date : 23-NOV-2018
Issued Date : 18-DEC-2018
Test Result : **Compliance**

The above equipment was tested by *HongAn TECHNOLOGY CO., LTD.*, for compliance with the requirement set forth in EMC Directive 2014/30/EU and the technical standards mentioned above.

Note :

1. The results of the test report relate only to the sample tested.
2. The test report shall not be reproduced without the written approval of *HongAn TECHNOLOGY CO., LTD.*

Approved

by:



Adam Yang / Section Manager

HongAn TECHNOLOGY CO., LTD.



HongAn TECHNOLOGY EMC Laboratory

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SL2-A1-E-0023, SL2-R1-E-0023,
SL2-R2-E-0023, SL2-L1-E-0023

FCC Designation No. : TW1071, TW1163

TAF Accreditation No. : 1163

VCCI Registration No. : R-2156, C-2329, T-219, G-696

