

SCIENTIFIC & TECHNICAL CENTER
RATEC, Ltd

**Systems for detecting explosives
and other dangerous materials on
the basis of neutrons analysis
methods**

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THE CORE PROBLEM:

The demand for explosive and HAZMAT detection has never been greater

Current systems are not performing adequately for the needs of the global security market.

- **Have high level of false alarms**
- **Cannot stably detect explosives masked as common things**
- **Cannot stably detect liquid explosives**

Current explosive screening processes require constant manual re-inspections. High level security objectives are compromised.

OUR CORE SOLUTION:

We strategically developed an EDS system that uses a *neutron analysis screening method*.

Advanced Thermal Neutron Analysis (ATNA)

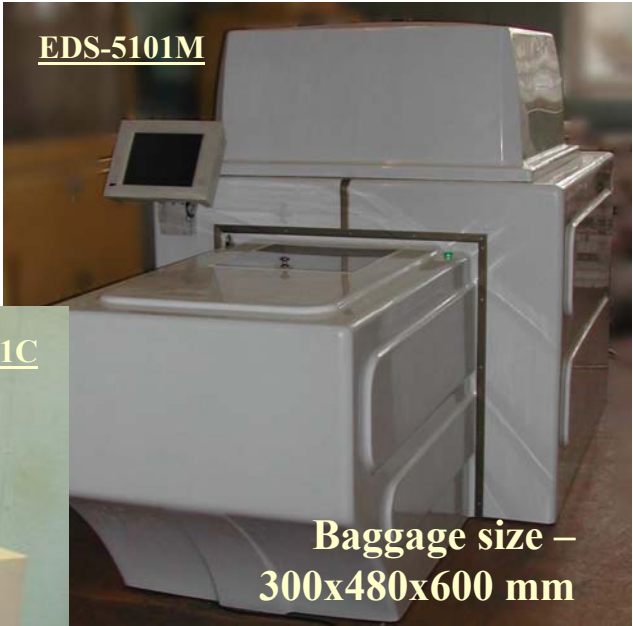
By effectively including ATNA EDS systems in inspection zones and baggage checks, RATEC allows:

- *Significant Security Increases*
- *Minimization of false alarm rate*
- *Exclusion manual baggage inspection*
- *Security vs. System Cost Optimization*

OUR EDS PRODUCT LINE:



EDS-5101 series
In use at St.Petersburg
& Moscow
International airports



UPCOMING PRODUCTS:

Model	Detected materials	Target Application
EDS-1101 (portable)	Explosives, Radioactive, toxic agents, Special nuclear materials	Fast neutrons analysis system with registration of associated alpha particles Inspecting suspicious bags, found in public places
EDS-7101 (hold baggage)	Explosives Radioactive Special nuclear materials	Integrated ATNA with x-ray device. For checked baggage inspection
EDS-8101 (cargo)	Explosives, Toxic HAZMATs Narcotics, Radioactive Using ATNA allows to detect special nuclear materials masked in sealed box	Integrated FNA and ATNA with x-ray device. For checking cargo containers

HISTORY OF THE DEVELOPMENT:

1991 – Company was found by group of the engineers and scientists
Company actively investigated two directions:

- *Explosives detection systems (EDS) development on the basis of neutron analysis*
- *Detectors of the radioactivity development (numerous sales)*

1993 – Testing first EDS-2101 device in Saint-Petersburg airport

1993-2001 – R&D process, including ISTC grant carrying out

2001 – Providing international IP protection

2002 – Involvement of the first investor and successful testing of the EDS-5101 prototype in the USA

2003-2005 – First orders on the EDS-5101 (3 units)

2004-2007 – Seeking of the investors (VC, producers and so on)

2005-2006 – Russian government R&D grants involvement (development of the several new EDS systems) (1,5 mln. US Dollars)

2007 – Russian government R&D grants and strategic investor (Gasprombank) involvement (12 mln. US Dollars)

PLANS & BUSINESS MODEL:

2007-2009 – Completing EDS products range, strategic cooperation with leading US producers, sales in Russia and CIS, international certification, Serial production line completing for Russian market

Business model variants:

Production and Direct sales of the devices in Russia
Sales of license on production to foreign partners

1. Establishing US company, involving VC partners
2. Cooperation with foreign partners directly from Russia, involving financial partner in Russia