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Presentation for partners



## Sinara - Transport Machines

JSC “Sinara - Transport Machines” (STM) - Russian Machine-building Holding is a division of Sinara Group which integrates scientific and production resources of the Russian manufacturers, engineering companies, companies involved in production and maintenance of railway engineering and industrial diesel plant.



Year of foundation

2007



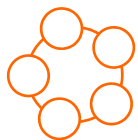
Personnel

>22 000



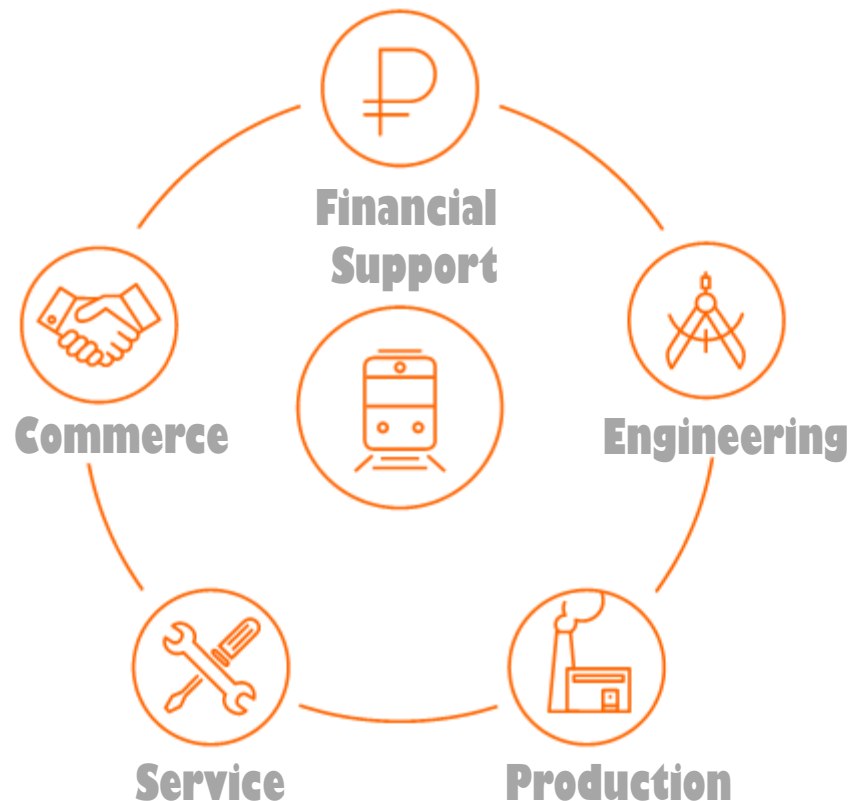
Headquarters

Ekaterinburg



## STM Competencies

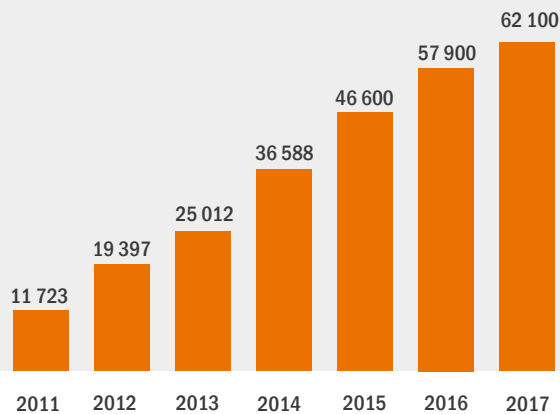
Sinara - Transport Machines – the Russian machinery Holding experienced in transport machinebuilding. Covers the full scope of operation: from design to production and from market promotion to services for wide spectrum of railway equipment, for creation the synergy effect in operation.



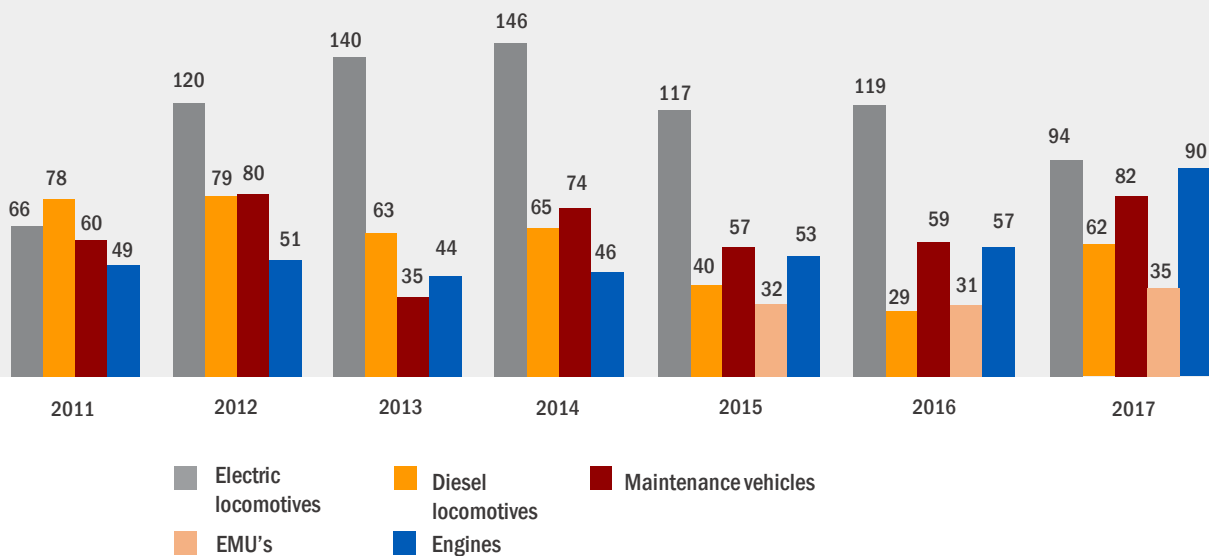


# STM Profile

Dynamics of STM Holding Revenue, mln.rub.



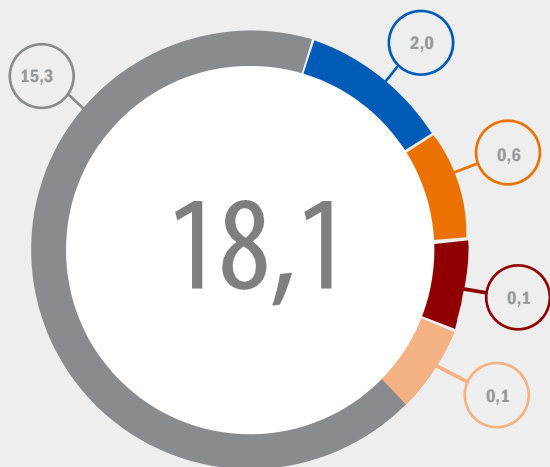
Dynamics of production rate, units





## STM Profile

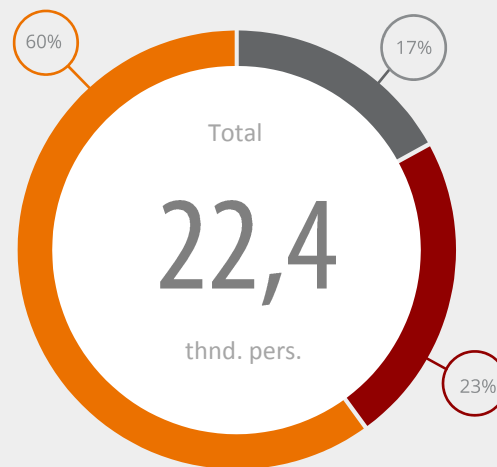
Volume of investment in development of production, billion rubles.



Ural Locomotives  
LTZ  
STM-Service

UDMZ  
KPM

Personnel structure



Production personnel  
Top-management

Engineers

*Personnel of JV Siemens  
AG Ural Locomotives, not included*



# STM Structure

## Sinara - Transport Machines



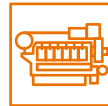
**Mainline and shunting diesel locomotives**

Lyudinosky Diesel Locomotive Plant



**Electric Locomotives and Trains**

Ural Locomotives



**Diesels and Diesel Generators**

Ural Diesel Motor Work

ZVEZDA Research and Production Concern



**Service**

STM-Service

SinaraPromTrans

Novosibirsk Electric Locomotive Building Plant

## STM Trading House



**Sales office**

Headquarters in Moscow

Representative Office in Ekaterinburg



**Engineering**

STM Center of Innovative Development



**Maintenance vehicles**

Kaluga Maintenance Vehicles and Hydraulic Drives Plant



## Key stages of STM development

2007



- New shunting electric locomotive TEM7A is developed in compliance with all requirements of the “Russian Railways”.
- Incorporation of “Lyudinovsky Diesel Locomotive Plant” in the Holding.

2008



- STM started foreign markets.
- Commercial TEM9 Electric Locomotive was developed.
- “UDMW” was incorporated in the Holding to launch own production of diesel engines.

2009



- Establishment of Engineering Center “CID STM”
- Skolkovo Grant for development of electric locomotives of new generation is received.

2010



- Joint Venture “Ural Locomotives” is established by JSC “Sinara Group” and Siemens AG.
- Partnership with AVL List (Austria) is launched for development of diesel engine manufacturing.
- Production of 2ES10 electric locomotive with asynchronous traction drive.

2011



- Subsidiary Company STM Service is established. Service Agreement with the Russian Railway is signed for Electric Locomotives 2ES6.
- Production of modern dual diesel locomotive TEM14.

2012



- Presentation of the shunting diesel locomotive TEM9H with hybrid power system.
- Government contract for development of new generation DM-185 diesel engines
- Signing strategic Agreement with FEV GmbH (Germany)





# Key stages of STM development

2013



- Production of single-unit diesel electric locomotive TE8 for commodity sector.
- Presentation of the Mainline Gas Turbine Locomotive GT1h 8500 kW power.
- Presentation of new locomotives: Mainline Electric Locomotive 2ES7 and EMU "Lastochka".
- Strategic agreement with BelAz on application of DM-185 in dump-trucks 180-240t.

2014



- Presentation of TG16M on Sakhalin.
- Incorporation of the JSC "Kalugaputmash" to the Holding.
- 27 locomotive depot and two service-centers were incorporated in STM-Service.

2015



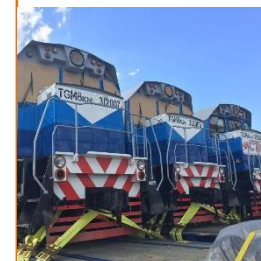
- **Memorandum of Cooperation is signed between "Russian Railways International" and JSC "STM".**
- Cooperative Agreement with the Union of Railway of the Republic of Cuba is signed.
- Certificates of compliance of TG16M with Railway Certification Registry are obtained.
- MTM45 Module and complex UZKP produced by KPM are presented at EXPO-2015.

2016



- Sinara Group, Russian Railways and Gazprom signed an Agreement on Cooperation in the Field of Application of the Gas Fuel for Railway Transport.
- Agreement to ship 60 TGM8km Diesel Locomotives and 15 TGM4 Locomotives in 2017-2021 was signed with the Union of Railway of the Republic of Cuba.
- LTZ obtained approval to launch production of the pilot batch of Gas Turbine Locomotives.
- UDMW Facility for manufacturing of new generation motors DM-185 was launched.

2017



- 15 Locomotives TGM8km were shipped for the Union of Railways of the Republic of Cuba.
- Novosibirsk Electric Locomotive Building Plant (NERZ) was incorporated in STM.
- Establishment of the Joint Venture between UDMW and "Zvezda" for manufacturing of high-speed motors ("NPK Zvezda).

2018



- STM and St.Petersburg State Transport University signed an Agreement for exchange of experience and cooperative development of new approaches and technologies in training of experts for the railways.
- Russian Railways, Gazprom, Sinara Group and Transmashholding outlined further steps to use natural gas as the engine fuel.





## STM Products

STM covers full scope of work: from production to sales of locomotives, track equipment, diesel motors and diesel generators and spare parts.

The company provides full service and warranty maintenance of the products.



Detailed description of products is available at [www.sinaratm.ru](http://www.sinaratm.ru)



STM Products



# Electric Locomotive Building



### ES2G "Lastochka"

DC Electric multiple unit train with asynchronous traction motors



### 2ES7

AC electric freight locomotive with asynchronous traction drive 23C7



### 2ES10 "Granit"

DC electric Freight double-unit Locomotive



### 2ES6

DC electric Freight double-unit Locomotive



STM Products

# Diesel Locomotive Building



LYUDINOVO DIESEL  
LOCOMOTIVES PLANT



**TGM8km**  
Removing Switcher with Hydraulic Drive



**GT1h**  
Mainline Gas Turbine Locomotive



**TG16M**  
Main-line double-unit Diesel Locomotive with Hydraulic Drive



**TE8**  
Single Freight Mainline Locomotive



**TEM14**  
Dual Diesel Shunting-removing Locomotive with electric transmission



**TEM9N**  
Diesel Shunting-removing Locomotive with Hybrid System



**TEM7A**  
Diesel Shunting-removing Locomotive with electric transmission



**TEM9**  
Diesel Shunting-removing Locomotive with electric transmission



**TGM6D**  
Shunting Locomotive with Hydraulic Drive



**TGM4B**  
Shunting Locomotive with Hydraulic Drive



**EU-500**  
Booster Power Station



**FRES2**  
Snow clinner unit

STM Products



# Maintenance vehicles




KALUGAPUTMASH

New




**MTM-45**  
Multi-purpose Shunting Module

New



**KPU-1**  
Universal Track Maintenance Unit



**YK-25/25**  
Track Crane



**YK-25/28C1**  
Track Crane



**YK-25/9-18**  
Track Crane



**PRCM-6**  
Rail Welding Mechanic Machine



**PRCM-5**  
Rail Welding Mechanic Machine



**PRCM-4**  
Rail Welding Mechanic Machine



**MNRP**  
Machine for heating rail lashes



STM Products

# Maintenance vehicles



КАЛУГАПУТЬМАШ



**RB**  
Ballast Distributor



**PB-01**  
Ballast Planner



**RPB-01**  
Ballast leveling and regulating machine



**ADE-1**  
Defectoscopic electric railway motor car



**PPK-2B/3B**  
Mechanic platform



**PR**  
Roller platform



**VPRS-10**  
Track Renewal Train



**VPR-02M**  
Track Renewal Train

STM Products



# Diesel Manufacturing



**DM-185**  
Diesel Engines  
from 750 to 4500  
kW



**DM-21**  
Diesel Engines  
from 500 to 1600  
kW



## Application of UDMW Diesel Engines



Diesel Generators for  
Shipbuilding Industry



Diesels and Diesel Generators for  
Locomotives



Diesels for Quarry Machinery



Diesel Power Plants



# STM Diesel Locomotives Supply Chart





# STM Maintenance Vehicles Supply Chart







## STM Holding Enterprises

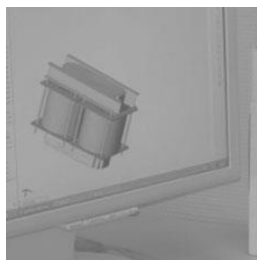


STM Holding Enterprises



## STM Center of Innovative Development

- STM Center of Innovative Development, established in December 2010 by holding JSC “Sinara-Transport Machines”.
- Scientific and Technical Cooperation: STM Center of Innovative Development cooperates with the leading Russian and foreign scientific and educational research institutes (Russian Railways Research Institutes (VNIIZhT, VNIKTI, MIIT, BITM, UgGUPS, etc)
- STM Center of Innovative Development completed development of diesel locomotives TEM9, TEM9TA, TEM14, TE8 and TG16M. Development of the Moving-up Switcher TEM10 is in progress along with GTEM1 Locomotive with two gas turbine units, Gas Locomotive TEMG1 and Mainline Diesel Locomotive 2TE35.
- Number of personnel in the STM Center for Innovative Development is more than 80 contractors.
- Company branches are located in Ekaterinburg and Lyudinovo.



STM Holding Enterprises



## Lyudinovo Diesel Locomotive Building Plant



- LTZ - leading company in Russia in production of shunting and mainline diesel locomotives. Incorporated in JSC “STM” in 2007.
- LTZ specialized on building of shunting locomotives, moving-up switches and mainline locomotives.
- SC “LTZ” launched the program of production upgrade. Total investments - 0.6 bln.rubles.
- Production capacity - 100 locomotives per year.
- Number of personnel - 1444 persons.
- Located in Lyudinovo, Kaluga Region.

**LYUDINOVO DIESEL  
LOCOMOTIVES PLANT**

STM Holding Enterprises



## Ural Locomotives

- Ural Locomotives LLC is a modern production facility of Sinara Group where locomotives and electric trains are produced.
- The company was established in 2010 by Sinara Group and international Concern Siemens AG for the purposes of partnership in railway machinery.
- The Company runs over 500 units of advanced process equipment, instrumentation, machines and working centers from leading international manufacturers.
- Scope of investment in railway equipment was equal to 15.3 bln. rubles.
- Number of personnel - 3392 persons.
- The Company is located in Verkhnyaya Pyshma. Sverdlovsk Region





Ural Locomotives

## Quality from the Heart of Russia



Production capacity of the Ural Locomotives is 150 locomotive sections and 250 EMU's per year.

The company produces certified products: wheel pairs and components.

Production of bogies was launched since October 2014.

STM Holding Enterprises



## Kalugaputmash



- JSC “Kalugaputmash” is one of the leading companies railway track maintenance veichels machinery. The plant was founded 130 years ago. In 2014 the company was incorporated in STM Holding.
- The company in involved in production of railway track repair and maintenance equipment along with hydraulic drives and transmissions to shunting and track machines.
- The company runs different types of production: casting, forging, heating, metal processing, testing and repair.
- The volume of investment was 0.1 bln.rubles.
- Number of personnel - 1925 persons.
- The company is located in Kaluga, Kaluga Region.

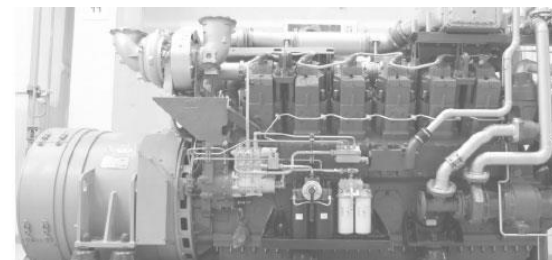
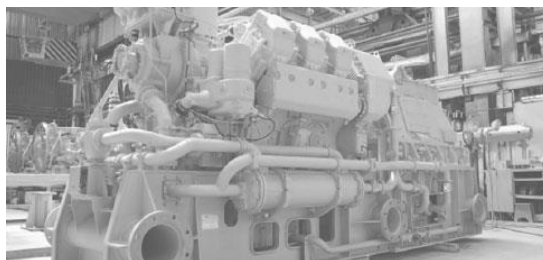
**KALUGAPUTMASH**

STM Holding Enterprises

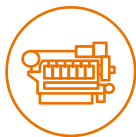


## Ural Diesel-Motor Works

- Ural Diesel-Motor Works, LLC is a leading company in Russian diesel engines manufacturing. The company produces diesel engines from 500 to 4500 kW for ship building, small-scale power generators, locomotives, and quarry equipment.
- The plant is certified in compliance with ISO 9001:2000 Quality Management System and has a certificate of the Marine Military Registry.
- Advanced products - new V-shape and L-shape high-speed diesel motors DM-185 with capacity 750-4500 kW (Federal Program “RF National Technology”).
- Project partners - RF Ministry of Trade, RSCL.
- Production capacity - 150 diesels and diesel-generators. Number of personnel - 1925 persons. The volume of investments was 2.0 bln.rubles.
- The company is located in Ekaterinburg, Sverdlovsk Region.

**URAL DIESEL-  
MOTOR WORKS**

STM Holding Enterprises



## ZVEZDA Research and Production Concern

- ZVEZDA is the leading manufacturer of engines and assemblies for high-speed navy and civil passenger fleet, railway transport, ship reduction and reverse reduction gears, ship diesel generators, diesel generator units and electric power plants for emergency and standby power supply.
- ZVEZDA Research and Production Concern was created in December 2017 by ZVEZDA PJSC and Ural Diesel Motor Plant LLC (part of CTM Holding) for partnership in creation of a national leader in piston-type engine building.
- Two manufacturing venues will be located in Saint Petersburg and Ekaterinburg.
- The total investment amount will reach approximately 19 billion rubles by 2025.
- Up to 770 diesel engines of various capacity and versions will be produced by 2022.
- The project is supported by the Ministry of Industry and Trade of the Russian Federation.







## STM Holding Enterprises

# STM-Service

- STM-Service, LLC - is a leading Russian company engaged in maintenance and service of tractive rolling stock of the Russian Railways and commercial market. Subsidiary company of JSC "STM" for service maintenance of different types of locomotives: freight electric AC and DC locomotives, passenger electric locomotives, shunting and mainline diesel locomotives and passenger diesel locomotives of the Russian Railways and market needs.
- Year of foundation - 2011. Number of personnel - about 11 800 persons. Subsidiaries - 27 service locomotive depots and 2 service centers.
- STM-Service provides services to:
  - over 6150 mainline electric locomotives of the RZD;
  - over 1750 mainline diesel locomotives of the RZD.





## STM Service Centers



STM Holding Enterprises



## SinaraPromTrans

- SinaraPromTrans is a subsidiary company of Sinara Group involved in service maintenance of different types of locomotives, rolling stock and track maintenance equipment. SinaraPromTrans specializes in the management of in-house rail transportations, the provision of rental services for locomotives, track machinery, wagons and the maintenance of railways.
- Production subdivisions are located in Polevskoy, Volzhskiy, Taganrog, Nizhniy Tagil.
- Production capacity - over 110 repair procedures per year.
- Investment in renewal manufacturing in 2017-2018 - over 50 mln.rubles.
- Number of personnel - 1925 persons.
- Owns for - 40 locomotives, 30 self-propelled rolling stock, 650 rail cars of different types.



STM Holding Enterprises



## Novosibirsk Electric Locomotive Repair Plant

- Novosibirsk Electric Locomotive Repair Plant - leading company in Western Siberia involved in electric locomotive maintenance and repairs. Since July 1, 2017 the Plant in Novosibirsk became the part of Sinara Transport Machines holding.
- Products and Services
  - Maintenance and overhaul for electric locomotives series VL-10, VL11, VL-80, CS-4t, CS-8, EP-1, EP2K, OPE1, 2ES6, 2ES10;
  - Manufacturing of spare parts and repair kits;
  - Line equipment maintenance;
  - Production of cast and non-ferrous castings, dies and forging.
- Number of personnel - about 1730 persons.
- Plant is located in Novosibirsk, Novosibirsk Region.

**NERZ**Novosibirsk  
Electric Locomotive Repair  
Plant



## Financial support of customers

**Purpose:** funding of STM railway equipment supplies.

**Products:** leasing, loans, factoring, guaranties

**Terms:** long-term funding (from two years and more) and short-term funding (less than 2 years)

**Support:** standard with consideration of risks

**Additional parameters:** full or partial loans on contracts for STM equipment supplies, loans for insurance incentives

### Support in





## STM Partners

Alliance strategy and partnership with the world leading companies.

**SIEMENS**

**CAF**

Transfer of engineering and technology solutions.



**FEV**



**UNIMATIC**

**ВНИКТИ**

Supply of components and spare parts from international leading machinery manufacturers.

**VOITH**



**ABB**

**MOTORPAL**

Strategy of loyalty to customers' and market demand.

**РЖД**  
Russian Railways



**M** JOINT STOCK COMPANY  
MAGNITOGORSK  
IRON & STEEL WORKS



**NOVATEK**



**Severstal**

**УГМК**  
UMMC

**MECHEL**

**SUEK**

**EVRAZ**



## Contact Information

### JSC “Sinara - Transport Machines”

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fax +7 (343) 229-33-16

e-mail : [CTM@sinaragroup.com](mailto:CTM@sinaragroup.com)

[www.sinaratm.com](http://www.sinaratm.com)

### Directorate for Diesel Locomotive Sales to RZD

Address: 9/1 Chaplygin str., Moscow, 105062

tel.: +7 (495) 258-71-64, fax: +7 (495) 258-71-64

### Directorate for Diesel Locomotive

#### Commercial Market Sales

Address: 51 Rose Luxembourg str., Ekaterinburg, 620026

tel.: +7 (343) 310-33-00, 310-33-55, fax: +7 (343) 229-33-16

### Department of Maintenance Vehicles Sales

Address: 9/1 Chaplygin str., Moscow, 105062

tel.: +7 (495) 258-71-64, fax: +7 (495) 258-71-64

### Diesel Engines Sales Division

Address: 18 Frontovyykh Brigad, Ekaterinburg, 620026

tel.: +7 (343) 311-09-50, fax +7 (343) 311-09-61

### Department for Export Sales

Address: 9/1 Chaplygin str., Moscow, 105062

Tel.: +7 (495) 258-71-64, fax: +7 (495) 258-71-64

