



ELSACO®



A strong team
united by a single vision

Content

Title	Page
First word	03
About us	05
Integrated Management System	06
Partners & Clients	07
Elsaco Group of companies	09
Elsaco Electronic	10 - 11
Vestra Industry	12
Elsaco Esco	13 - 14
Elsaco Solutions	15
Smart Eco Plus	16
Elsaco Engineering & Elsaco Power	17
Reference projects	18
Cogeneration	19
Heating systems	20 - 21
Capture, treatment and distribution of drinking water	22
Water and sewerage networks	23
Irrigations	24
Automation & SCADA	25 - 26

First word



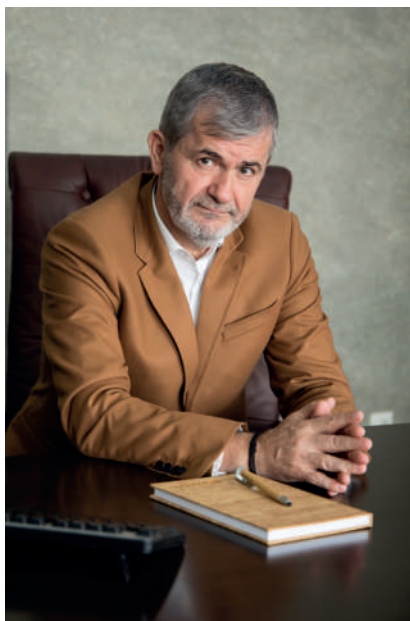
Ovidiu Jitaru
Vice President



Doru Popa
Vice President



Petru Parfenov
Vice President



The Elsaco group of companies is the aggregate result of the efforts and ideas from hundreds of people with whom I had the pleasure to work for more than two decades.

Beyond the actual endeavors, Elsaco took a piece of our souls. We aimed to provide everybody with the ideal framework for further development in a dynamic company, with continuously innovative products and activities. Our colleagues' sense of belonging to one large family is one of our biggest satisfactions.

We have managed, for more than twenty-nine years, to earn our clients' trust all over the country, offering them quality products and services. We wanted all our collaborators to grow the feeling that they have a stable partner alongside. Thus, we have built solid partnerships by offering cost-efficient products using advanced, clean and safe technologies.

How could I synthesize the fundamental creed of the Elsaco Group?

We are defined by the desire to offer energy efficiency solutions to the community we live in. Improving the quality of life is the goal which attracts all our efforts.

Valeriu Iftime
President



About us

We excel in what we do because we always focus on our clients' needs.

Elsaco is a group of Romanian companies mainly present in the domains of energy, water and utilities, its main objective being to increase energy efficiency. The group consists of 8 companies covering areas such as: EPC projects, distribution and sale of measurement and control equipment, energy efficiency solutions, process and business software, IT & C solutions, residential smart metering.

For more than two decades, Elsaco has implemented projects that have changed the lives of local communities, and the project beneficiaries have streamlined their costs, developed new and efficient power generation sources to support a higher production rate, provided clients with a quality and performant water/hot water/heat supply service, and managed and reduced network losses.

We have implemented projects both at national and international level, covering areas such as: Republic of Moldova, Belgium, Poland, Mali, Egypt, Qatar, Dubai, Mauritius and Turkey.

We continuously develop our performance to match our customers' needs. Our solutions contribute to better living and working conditions for people and to the sustainable development of our society.

Key figures



29 years of experience



20+ international projects



8 Elsaco companies



20+ strategic partners



600 employees



198 million (€) 2023 turnover

Integrated Management System

We are guided by quality,
by the care for people and the environment,
regardless of the project.



Elsaco Electronic has adopted and implemented an integrated management system compliant with the reference standards and the legal requirements and regulations.

The implemented system, certified by SRAC/IQNET, allows the company to achieve and maintain a high level of competitiveness. In order to meet our clients' expectations, in a highly competitive market, we constantly try to meet all the requirements in terms of quality, environment, pollution prevention, occupational safety and health, information security and energy management, social responsibility.

Standard Implementat	Description
ISO 9001	Quality Management
ISO 14001	Environmental Management
ISO/EC 27001	Information Security Management System
ISO 45001	Occupational Health and Safety Management
ISO 50001	Energy Management
SA 8000	Social Responsibility
ISO 3834-2	Quality management in the field of welding

Partners

We evolve together with our partners.

The collaboration with many worldwide-known companies, offered our team, constantly, the technical support and necessary consultancy to adopt the optimal solutions. The know-how transfer within these partnerships lead to the creation of some advanced solutions like the automated management of the urban water and heating supply systems. Thus, we are now able to produce and develop our own products and accessories essential for such solutions.

LOGSTOR

blejkan

isOplus®

Itron

Danfoss

**Schneider
Electric**

Kawasaki
Powering your potential

DIEHL
Metering

GRUNDFOS

AVR

wilo

SIEMENS

**RA Rockwell
Automation**

kamstrup

Hoval

VIESMANN

Clients

We form a team together with those we are working for.



UTILITIES

- heating and water companies;
- municipalities;



INDUSTRY

- private companies;



ENERGY

- electricity producers;
- investors in new energy sources;



RESIDENTIAL

- individuals (apartments/houses);
- residential developers;



RETAIL

- distributors;
- partners;



CONSTRUCTION

- contractors;
- subcontractors;
- designers.



Elsaco group of companies

ELSACO ELECTRONIC

- energy projects
- hydro projects
- automation & SCADA projects

- equipment and products for the utility industry automation systems and equipment
- Smart City, Cybersecurity & IT solutions consultancy

VESTRA

ELSACO ESCo

- energy audit
- complex analysis
- technical Due Diligence
- ESCo projects

- solar PV plants
- battery energy storage systems
- JINKO SOLAR distribution: solar panels and energy storage
- energy storage solutions (ESS) batteries/hydrogen
- energy production and trading forecast
- ARH distribution: ANPR cameras, ID readers
- LoRa and NB-IoT modules
- smart metering solutions
- electric car charging stations

ELSACO SOLUTIONS

SMART ECO PLUS

- residential smart metering
- installations and cost breakdown services

- cogeneration projects
- hydro projects
- civil and industrial construction

ELSACO ENGINEERING

ELSACO Power

- design, assembly, execution: installations, connections and electrical networks, substations and transformer stations, public lighting networks.

- software applications for metering data management: EMMSYS, RMS, MbusNetwork, BVM
- software applications for organizational management: ELITIS, ACE, REP-ET

SIMETRIX BUSINESS SOFTWARE

* The Elsaco group also includes two companies active in the field of tourism: Zăicești Manor

Elsaco Electronic

Elsaco Electronic, the largest company in the group, established in 1994, acts as a system integrator and engineering services provider for municipal utilities (energy, water, automation and SCADA). For each assignment, we are able to assemble a team of highly qualified specialists, with complementary skills and extensive professional experience, capable to deliver to the customer's highest requirements.

The company successfully performs activities in the following fields:



Energy projects

- cogeneration plants for the efficient production of electricity and heat;
- automated central and individual thermal modules;
- high energy efficiency pumping systems;
- heat transport and distribution networks;
- depollution installations of flue gases evacuated by the combustion plants;
- recovery technologies for the residual heat resulting from the industrial technological processes.



Hydro projects

- water supply and sewerage systems;
- water and wastewater treatment plants;
- pumping stations;
- irrigation systems;
- civil and industrial constructions, including related facilities.



Automation and SCADA projects

- automation and control systems;
- AMR / AMI systems for collecting and managing meter data;
- SCADA / DCS / Process control systems for control rooms / dispatchers (RTU & PLC panels, servers, PC stations, communications networks, software).

Works and services

Efficient integrated solutions for production, storage, transport and distribution of water and energy

DEVELOPMENT OF INVESTMENT PROJECTS

- technical consultancy and assistance
- elaboration of conceptual studies and optimal technological solution
- elaboration of development strategies, opportunity and feasibility studies
- elaboration of planning documentation, obtaining authorizations and approvals

ENGINEERING AND DESIGN OF INVESTMENT OBJECTS

- concept and process engineering
- technical design and elaboration of execution details
- project specialties coordination (civil, mechanical, electric, automation)

TURNKEY PROJECTS IMPLEMENTATION

- project management and organization of works execution
- technical design and elaboration of execution details
- procurement of equipment and materials
- execution of construction, fitting and installation works
- performing inspection, testing and commissioning services
- operation and maintenance staff training
- performance tests and guarantees

OPERATION AND MAINTENANCE OF INVESTMENT OBJECTS

- warranty and technical assistance
- process monitoring and optimization
- industrial equipment maintenance
- operation of the systems of production-transport-distribution of water and energy

Elsaco Electronic

41A Pacea Street, Botoșani

T +40 231 507 060

F +40 231 532 905

E elsaco@elsaco.com

W www.elsaco.com

The first specialized cluster in the utilities and automation equipment industry. Vestra was born from the desire of Elsaco - an integrated group that has been operating in Romania for over 29 years - to offer performance and specialization at a higher level in the segment of providing equipment and services in the utilities and automation industry. Divided into three Divisions, Vestra welcomes customers with the following range of products:

- measurement and control equipment for the utility industry (water, heat, gas);
- valves and fittings;
- faucets and connections;
- special equipment for urban cleaning;
- automation systems and equipment;
- Smart City, Cybersecurity & IT solutions consultancy.

Because the relationship with the client is a priority in all Vestra's actions, the company also provides a series of services such as:

- consultancy and guidance for the most suitable solutions;
- basic design for the proposed equipment;
- assistance and technical support;
- metrological inspections, repairs, warranty insurance.

Over the years Vestra has consolidated partnerships with world-known leaders in the domains in which it operates and currently brings on the Romanian market the best equipment from manufacturers such as: Itron, Diehl, Rockwell Automation, Sainte Lizaigine, AVK, Kamstrup, Orbinox, Baroclean, ENZ, Musthane, ECA Robotics, Panduit, ProSoft, PTC, etc.



Vestra Industry

Iride Business Park
9-9A Dimitrie Pompeiu Blvd.
20 Building, District 2, Bucharest

T +40 231 507 060
F +40 231 532 905
E contact@vestra.ro
W www.vestra.ro

Elsaco EScO is a company dedicated to energy services consultancy, focused on the needs of customers. The stability of the company comes from an innovative way of working, always close to the client and to his needs. Working as a team we deliver intelligent and efficient solutions.

We offer complex services and solutions which allow efficient consumption of energy and resources, within the activity of clients in the industrial field and not only.

SERVICES

Energy audit

Energy audit is the main tool by which a company can identify its energy consumption and evolution over time, related to the production of the analyzed subunits. It is the main document that any energy company must have in order to establish a measure plan to increase energy efficiency.

The success, proved by the large number of performed audits and balances, places Elsaco EScO on an honorary position of market leader in this segment of activity. Among the clients who trusted us there are: ALRO Slatina, ALUM Tulcea, Agrana, Compa Sibiu, Smithfield, VALEO, Yazaki, Damen Galați, Damen Mangalia, Perla Harghitei, FORD Romania, Brenntag, EXTRUSION Slatina, Betty Ice, Kandia Dulce, Pancevo Serbia Refinery, Romgaz, Deutek, Chimcomplex Borzești, Timken, Cugir II Mechanical Plant, Vrancart, Apavital Iași, Oradea Thermal Power Plants, West Gate Business Park Bucharest Complex, Galleria Malls, Rose Garden Bucharest Residential Complex, FelyCity Bucharest Residential Complex and others.

Complex analysis

We work with a large number of industries and deliver complete analysis, development strategies as well as various feasibility studies.

We have over 5 years' experience in the field:

- balance for drinking water supply systems;
- balance centralized heat supply systems;
- feasibility studies;
- strategies for supplying thermal energy to towns.

Technical Due Diligence

In the case of a technical Due Diligence, the assistance we provide specifically includes the following activities:

- analysis of the technical and financial situation;
- technological and operational evaluation of the investment;
- analysis of sales revenues and margins according to the sectors in which the company operates;
- checking the quality of integrated planning;
- determining the technological and market situations which prevent the conclusion of a transaction;
- analysis of material and energy flows in order to identify the essential value generators, the determinants of success as well as the risk factors;
- business evaluation;
- assistance in establishing and negotiating the transaction price.

ESCO projects

Based on energy audits we identify situations in which we are directly involved as medium and long term energy suppliers. Our guarantees cover the stability of energy prices, market and climate risks, regardless of whether the energy is produced in our own or in customer's installations.



Elsaco ESCo

41A Pacea Street, Botoșani

- T** +40 231 507 060
- F** +40 231 532 905
- E** esco@elsaco.com
- W** www.elsaco-esco.ro

Elsaco Solutions

The IT&C solutions division started its activity in 1996 within the Elsaco Electronic company, and since 2013 it has been operating through Elsaco Solutions. The production of PC stations started in 1996, together with the launch of the first computer under the "Elsaco" brand.

In recent years, Elsaco Solutions has offered complete solutions for the field of renewable energy, among which we mention: design, installation and commissioning of photovoltaic PV plants and battery energy storage systems (BESS).

Elsaco Solutions' mission is to permanently promote the latest technologies and innovative services, for a better and greener world, open towards people's needs, in harmony with the environment.

Elsaco Solutions provides:

- turnkey PV photovoltaic plants: design, installation, commissioning, maintenance, service;
- battery energy storage systems (BESS);
- JINKO SOLAR distribution - photovoltaic panels and energy storage;
- energy storage solutions (ESS) batteries/Hydrogen;
- production forecast and energy trading;
- ARH distribution: ANPR cameras, ID readers;
- LoRa and NB-IoT modules for water and gas meters;
- smart metering solutions;
- electric car charging stations.

Since 2019, we design, install and commission PV photovoltaic plants for commercial and industrial customers interested in reducing their CO₂ footprint, as well as for beneficiaries interested in the production of electricity for the sale purpose.

Our 30 years of experience in energy efficiency helped us to always come up with innovative ideas so that our beneficiaries have the best solutions at their disposal.

Why choose us?

Elsaco Solutions establishes itself as the obvious choice for customers looking for cutting-edge technology solutions and sustainable partnerships. With extensive experience and a solid reputation, we are committed to deliver innovation and excellence in every project.

Over 30 years of experience

ELSACO marked the development of local communities through the implementation of innovative projects. The beneficiaries of these initiatives have been able to optimize costs, develop modern and efficient sources of energy production, thus contributing to support a higher production rate.

We work in line with our customers

We continuously develop to meet the demands and needs of our customers. Our solutions are designed to improve the quality of life and working conditions, while contributing to the sustainable development of our society.

We comply with the standards

We constantly monitor compliance with the conditions of quality assurance, environmental protection, occupational and health safety, information security and energy management. Our integrated management system complies with the requirements of the ISO 9001, ISO 27001, ISO 14001 standards.



Elsaco Solutions

85 Mihai Eminescu Street
Cătămărești Village
Mihai Eminescu commune, Botoșani

T +40 231 507 060 Ext. 2120

F +40 231 532 905

E biz@elsaco.com

Smart Eco Plus

Smart Eco Plus is a company specialized in smart metering solutions which help customers to make their cold water, hot water or heat consumption more efficient with the help of radio equipment (cold water or hot water meters and individual thermal energy meters respectively or, after case, heat cost allocators).

The company dedicated to residential metering equipment and services, with national coverage through 12 subsidiaries and with an over 500.000 customers portfolio in the residential field, offers useful services to Owners' Associations and is aligned with the legislation in force through special authorizations for the field of activity issued by ANRE, ANRSC and BRML.

Smart Eco Plus offers solutions that help customers save resources, using professional, modern, efficient equipment aimed at improving the customers quality of life.

Water consumption efficiency

The efficiency of water consumption by correctly measuring the consumption of cold and hot water, using the equipment installed in the apartments, which allow the concrete identification of the losses that may occur in the internal water installations.

Efficiency of heating consumption

The installation of modern and efficient heat energy meters or electronic cost allocators, with radio reading, which ensure solid and constant benefits to families in condominiums.

Services and equipment

Smart metering of residential utilities by installing cold and hot water smart meters with remote reading for proper monitoring and optimization of water consumption.

Business history

- Smart Eco Plus is the residential smart metering division of the Elsaco group of companies;
- The core business consists of residential metering, through the installation and invoicing of costs for thermal energy and hot and cold water meters in apartments;
- In 2009, the residential metering division separated from Elsaco Electronic and became a new company - Elsaco Brunata, since 2018 - Smart Eco Plus.



Smart Eco Plus

39 Ritmului Street,
2nd District, Bucharest

T +40 21 250 15 30
E clienti@smartecoplus.ro
W www.smarecoplus.ro

Elsaco Engineering

The company was founded in 2013 having the purpose of managing the implementation of heat and electric energy cogeneration projects for heating companies and private companies which need modern production sources of energy based on turbines or gas engines.

Elsaco Engineering provides project management, partners / subcontractors, engineering and design services coordination by working with its own specialists or with outsourced resources.

The first large project, in progress between 2014-2016, was the construction of a new heat-electric power plant in cogeneration for Oradea Municipality with an installed capacity of approx. 45MWe and 283 MWt.

In the period 2024-2026 Elsaco Engineering implements, as an associate, two cogeneration projects: "Source of thermal and electrical energy production through high-efficiency cogeneration at CET Hidrocarburi ARAD" and "Source of useful thermal and electrical energy production through cogeneration of high efficiency in the city of Constanța".



Elsaco Engineering

41A Pacea Street, Botoșani

T +40 231 507 060
F +40 231 532 905
E engineering@elsaco.com
W www.elsaco.com

Elsaco Power

The company has been active in the energy market since 2000, offering a full range of electrical installation services, from design to fitting and execution for:

- electrical installations;
- electrical connections;
- electrical networks 0.4-11-kV;
- 20/0.4kV transformer stations (PTA, PTAB);
- transformation stations;
- public lighting networks.



Elsaco Power

3B Războieni Street, Botoșani

T +40 231 535 240
E office@elsacopower.ro
W www.elsacopower.ro

REFERENCE PROJECTS



COGENERATION



Source of energy production through cogeneration - CET Hidrocarburi ARAD

Beneficiary: Arad Municipality

Period: 2024-2026

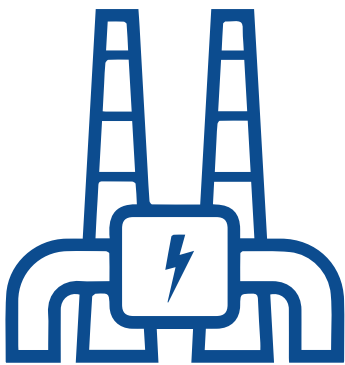
Activities:

- project management;
- engineering and design;
- works execution;
- tests and commissioning.

Key elements:

- total capacity: approx. 138 MWt + 31.5 MWe;
- cogeneration plant: 3 CHP units, operating on natural gas mixed with green hydrogen, with an individual capacity of approx. 10.2 MWt + 10.5 MWe;
- 4 hot water boilers with an individual capacity of 25 MWt;
- steam boiler with a capacity of 12 t/h, operating on natural gas mixed with green hydrogen;
- thermal degassing station and injection of additional water into the thermal network, with a maximum capacity of 50 m³/h;
- heat accumulator with useful hot water storage capacity of approx. 8,500 m³;
- heating agent pumping station with a maximum capacity of 4,000 m³/h.

HEATING SYSTEMS

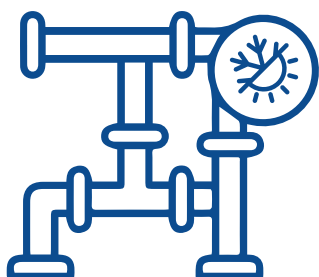


Geothermal energy recovery in association with heat pumps in Nufărul neighborhood – Oradea

Beneficiary: Oradea Municipality
Period: 2022-2024

Activities:

- obtaining approvals and authorizations;
- construction of the heating agent and geothermal water transport network, over a length of approx. 22 km;
- building a geothermal thermal station + 2 reinjection stations;
- construction of a new borehole for the production of geothermal water with a depth of approx. 2800-2900 m, equipped with an extraction pump;
- 277 mini-thermal points.



Rehabilitation of secondary thermal networks, stage IV – Constanța

Beneficiary: Constanța Municipality

Period: 2024-2026

Activities:

- design;
- materials and equipment acquisition;
- works execution;
- commissioning the installations;

Key elements:

- rehabilitation of 23,255 km of thermal distribution/secondary network route, related to 12 thermal points.

Rehabilitation of the heating system Lot 1 – Bucharest

Beneficiary: Bucharest Municipality

Period: 2023-2026

Activities:

Design and execution for the rehabilitation of the primary heating network related to Lot 1 Magistrala II SUD:

- decommissioning existing pipes and cleaning the thermal gallery;
- rehabilitation of the thermal gallery and tanks;
- installation of isolation valves in existing tanks;
- execution of electric connection fireplaces;
- execution and installation of fixed and mobile supports, installation of pre-insulated pipes;
- welding works, sleeves, insulation works, fitting fittings;
- pressure tests;
- installation and commissioning of the breakdown monitoring system;
- installation of data transmission cable and line units.

CAPTURE, TREATMENT AND DISTRIBUTION OF DRINKING WATER



Equipping the drinking water treatment plants of Slatina Municipality with filters for drinking water

Beneficiary: Compania de Apă Olt
Period: 2021-2024

Activities:

- rehabilitation and extension of Nicolae Bălcescu and Salcia treatment plants: endowment with high-performance equipment for treatment and monitoring of drinking water quality.

Key elements:

- maximum daily flow of 540 m³/h – Nicolae Bălcescu treatment and pumping station;
- maximum daily flow of 490 m³/h – Salcia treatment plant.

Water supply – treatment - Călărași

Beneficiary: ECOAQUA S.A. CĂLĂRAȘI
Period: 2024-2027

Activities:

- design;
- construction works (rehabilitation of water intakes, chlorination stations; construction of pre-oxidation station, treatment stations, chlorination stations, establishment of water management, sludge management, water supply tanks, replacement of pumps, furnaces, transport pipes, pumping group, etc.);
- supply and installation of machinery and technological equipment;
- automation and data transmission works in local SCADA and regional SCADA;
- testing and commissioning.

WATER AND SEWERAGE NETWORKS



WATER INFRASTRUCTURE

Rehabilitation of chlorination station and arrangement of Izvarna capture enclosure; rehabilitation and extension of the supply pipe Izvarna – Craiova Section II Thread I

Beneficiary: Compania de Apă Oltenia

Period: 2020-2023

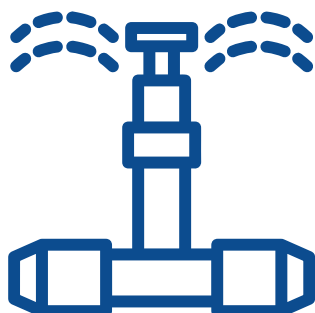
Activities:

- Technical Project, documentation, authorizations and approvals;
- thread II adduction pipe extension works and existing adduction pipe rehabilitation works;
- rehabilitation of chlorination station and administrative building;
- testing, commissioning, staff training.

Key elements:

- adduction pipe extension works, length: 1.587 m;
- adduction pipe rehabilitation works, length: 18.858 m.

IRRIGATION WORKS



Rehabilitation of the South Razelm irrigation system - Tulcea county

Beneficiary: National Agency for Land Improvements – ANIF

Perioada: 2023-2024

Activities:

- rehabilitation and retrofit of pumping stations and repumping stations;
- rehabilitation of water supply and distribution channels;
- rehabilitation of hydrotechnical constructions.

Rehabilitation of the main irrigation infrastructure B.H. Călmățui - Brăila county

Beneficiary: National Agency for Land Improvements – ANIF

Period: 2020-2024

Activities:

- modernization of the irrigation infrastructure;
- construction works and hydromechanical installations;
- electrical installation rehabilitation works.

Key elements:

- flow rate pumping station SRPA 1+3: 59.400 m³/h;
- flow rate pumping station SRP 4: 44.280 m³/h.

AUTOMATION & SCADA



Automation, electrical installations and SCADA system development/implementation – Galați

Beneficiary: Apă Canal S.A. Galați

Period: 2018-2024

Activities:

- designing and executing works for automation, electrical installations;
- SCADA Regional Water System development / implementation in the Galați county operating area;
- SCADA Regional Sewerage System development / implementation in the Galați county operating area;

Key elements:

- the project aims at carrying out works in water and wastewater infrastructure in 22 territorial administrative units in Galați county, including the municipalities of Galați and Tecuci and the town of Berești.



SCADA System Implementation - Oradea

Beneficiary: Xella Oradea

Period: 2023-2024

Activities:

- drawing up a Technical Expertise Report;
- design, implementation and testing.

Key elements:

- implementation of PlantPAx DCS, Rockwell Automation;
- Rockwell automations, FactoryTalk View SCADA.



Elsaco Headquarters

Botoșani

41A Pacea Street

T +4 0231 507 060

F +4 0231 532 905

E elsaco@elsaco.com



Elsaco Subsidiaries

Iași

33A Regele Ferdinand I al României Bldv.

T +4 0231 507 060

București

500 Mihai Bravu Blvd., District 3

T +4 0231 507 060

Târgu-Mureș

2 Sinaia Street

T +4 0231 507 060

