

Industry 4.0 Innovation Technology Industry 4.0 Experience Smart Grid Performance Safety  
Experience Smart Grid Performance Safety Reliability Innovation Technology Industry 4.0 Experience Smart Grid  
Reliability Innovation Technology Industry 4.0 Experience Smart Grid Performance Safety  
Safety Industry 4.0 Experience Smart Grid Performance Safety Reliability Innovation  
Performance Technology Innovation Industry 4.0 Experience Safety Smart Grid Performance

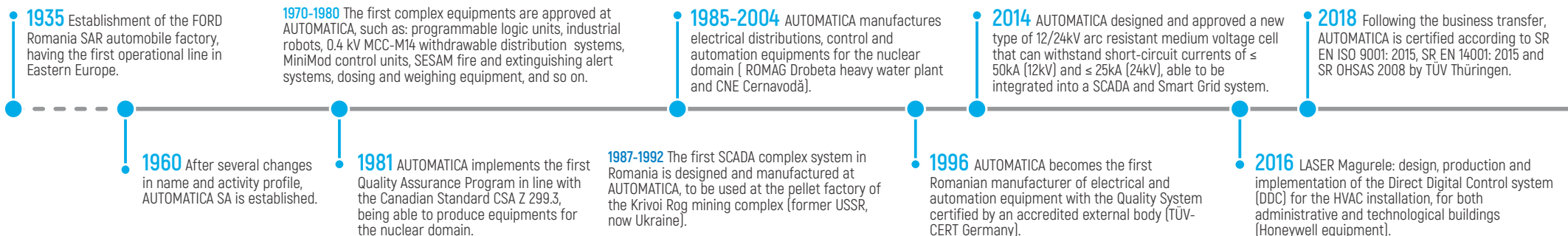






The origins of AUTOMATICA date back to 1935, with the emergence of the FORD Romania SAR automobile factory, having the first operational line in Eastern Europe at that time. After several changes in name and activity profile, AUTOMATICA SA is established in 1960, as a brand that has grown up along with the Romanian industry, acquiring over half a century of experience and local and international fame. Basically, there is no major industrial objective developed in Romania that has not benefited from AUTOMATICA products.

In 2018, the Automatica business was taken over by the CEMS Group. An extensive modernization program is put into play to meet the increasing requirements of customers and the need to develop products and solutions keeping up with the pace of technological change. The foundation of development will maintain the values that have been cultivated for decades: concern for quality, reliability and customer focus.





### PRIORITIES

- › Reliability and safety
- › Technological advantage
- › Quality / cost ratio optimization
- › Integrated route from design to commissioning
- › Support throughout the product life cycle
- › Professional teams

### EXPERTISE

**Design, production and support services:**

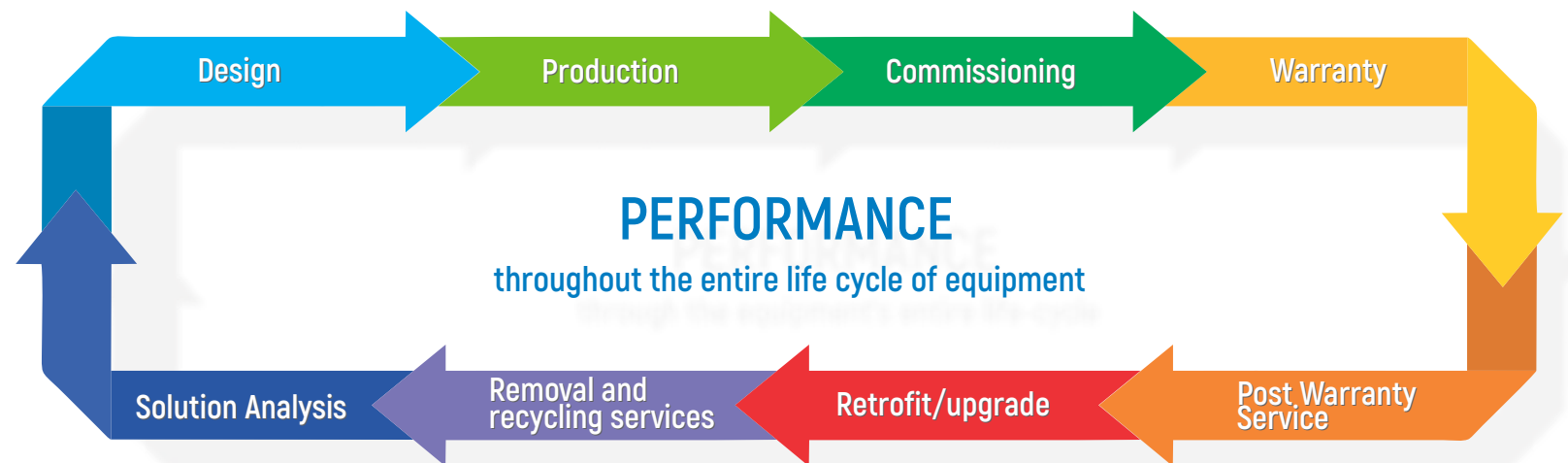
- › Medium voltage electrical equipment
- › Low voltage electrical equipment
- › Complex automation systems
- › Industrial weighing and dosing installations
- › Industrial robots

### FIELDS

- › **Energy production:** thermal, hydro, nuclear
- › **Utilities:** electricity transmission and distribution, water and sewerage networks
- › **Industries:** steel, petrochemical, building materials, machine tool manufacturing, food and so on
- › **Transport:** subway and railways
- › **Agriculture:** farms, irrigation infrastructure and so on
- › **Tertiary:** research centers, civil engineering

Reducing operating costs, increasing operational safety and reliability, process digitization, and not last, a reduced environmental impact, are our customers' concerns and, implicitly, AUTOMATICA's priorities in configuring products and services.

Starting with the correct identification of needs and future developmental hypotheses, continuing with design, production, on site operations, predictive, preventive and reactive maintenance, retrofit and upgrade solutions, to decommissioning - Automatica has concentrated decades of experience in procedures, consolidating itself as a reliable partner in the long run.



The oldest Romanian company in the field, Automatica boasts a team of generations of engineers and technicians, starting with the pioneers of technological successes of the 1980s to young graduates. Holders of inventors' patents, graduates of countless specialization courses in the country and abroad, or young visionaries at the outset, they form together an efficient team of performers.

### Design & software

- › Mechanics
- › Medium voltage
- › Low voltage
- › Automation
- › Industrial equipment

### Production

- › Mechanical processing
- › Dye-works
- › Electrical equipping
- › Testing/Quality control

### On-site operations

- › Initial evaluation
- › Setup, SAT testing and commissioning
- › Retrofit
- › Maintenance



## MEDIUM VOLTAGE ELECTRICAL EQUIPMENTS

- › Primary distribution Medium Voltage switchgear
- › Air-insulated switchgear, with vacuum or SF6 switching equipment
- › 6, 12, 24 kV single busbar system switchgear with rated current  $\leq 4000$  A
- › 6, 12, 24 kV double busbar system switchgear with rated current  $\leq 2500$  A
- › 6, 12, 24 kV Retrofit solution with fully enclosed cradle with circuit breaker, secondary circuits, two doors and frames for rated current  $\leq 2500$  A
- › Power capacitor banks, automated, for 6, 12, 24kV,  $\leq 2,4$ MVar
- › Custom-made MV indoor or outdoor Switchgear



Exterior medium voltage equalization battery with 3 adjustments steps used to compensate reactive energy.  
2,4 MVar - Electrica Transilvania Sud - Romania.



Medium voltage equalization capacitors coils and batteries with 6 adjustments steps used to compensate reactive energy (including harmonics filters).  
52,4 MVar - Feral Tulcea - Romania.



## MEDIUM VOLTAGE ELECTRICAL EQUIPMENTS

- › Switchgear panels for:
  - transformer
  - feeder
  - special applications
  - measurements,
  - bus-coupler, bus-riser
  - disconnecter
  - motor
- › Power Generator Switchgear for 6...12kV, rated power up to 50MW
- › Switchgear for 6kV induction furnace
- › 6, 12, 24 kV Power Bus Systems with rated currents up to 4000A
- › Automated MV Switchgear, integrable into SCADA, Smart Grid
- › Automated MV Switchgear with motor actuated truck, disconnectors and earth switch



Automatica medium voltage cells for 24kV electrical stations.  
Transelectrica - Romania.



24kV, 1250A, 25kA automated  
MV cell, SCADA and  
Smart-Grid integrable.



Medium Voltage equipment  
12 kV electrical station.  
CET Dalkia Petrobrazi -Romania.



## LOW VOLTAGE ELECTRICAL EQUIPMENTS

- › Low voltage power distribution boards, I<sub>max</sub> 7200 A designed and produced by Automatica under Siemens "8PT" and "S8" licence, in fixed assembly, withdrawable and "plug in" type
- › Control switchboards for SCADA type industrial processes
- › Control switchboard for machine-tools
- › Protection and measurement boards
- › DC and AC power supply boards
- › Automation equipment for reactive power control
- › Automated Transfer Switch (ATS) boards, marshalling boards and boards with PLC
- › TDRI boards for power supply and distribution
- › LV Power Bus Systems with rated currents up to 4000A



Low voltage DC and AC distribution panel (400/220/110kV).  
Transelectrica's Braşov station - Romania.

Industrial process command and control PLC boards.  
Cooperation with Yokogawa, Siemens and Foster Wheeler.



## SIVACON Technology Partner



### SIVACON® S8

The SIVACON® S8 low-voltage power distribution board sets new standards as a power distribution board or Motor Control Center (MCC) for industrial applications or in infrastructure.

The power distribution board system up to 7,000 A for the simple and consistent distribution of power offers a wide range of possible uses.



### TESTED SAFETY

The low-voltage power distribution board is a design-tested power switchgear and controlgear assembly with a design verification based on testing.

Evidence of its physical properties has been provided in the product testing department under both operating and fault conditions.

An arcing-resistant locking system also ensures maximum personal safety.



### FLEXIBLE SOLUTIONS

The section, either single or double-fronted, can be installed together with a main busbar system or back-to-back with a separate main busbar system.

Different installation designs can be combined in one section with ease.

The flexible, modular technology allows for the simple exchange or addition of functional units.



## AUTOMATION AND SCADA COMPLEX SYSTEMS

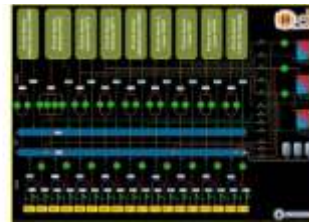
- › Distribution and automation equipment for electric power plants
- › Electrical panels, including for nuclear power plants
- › Sequential process control equipment
- › Machine-tool electrical equipment
- › SCADA systems



Twelve 2MW groups automation (including SCADA).  
LUXTEN – Valea Doftanei - Romania.



Temperature monitoring labs.  
ELI-NP LASER Măgurele - Romania.



DDC "Clean Room" system.  
ELI-NP LASER Măgurele - Romania.



- › Electronic beltweigher, from 10 up to 9000 tons/hour
- › Automatic belt weigh-feeders, from 0,25 up to 1000 tons/hour
- › Complex dosing and process control systems
- › Discontinuous batching installation with one or up to 32 components
- › Various bag sizes bagging installation
- › Strength measurement systems from 100 N up to 4000 kN



Design, fulfilment, fitting, calibration - Bauxite dosing and weighing system  
ALUM Tulcea - Romania

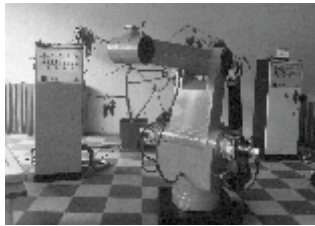


Design, fulfilment, delivery, mounting, calibration - Large bags weighing and bagging system. Capacity from 500 up to 1500kg, accuracy 0,1%.  
ALUM Tulcea; BCG Ploiești; Fertil Plant Constanța - Romania



**Arc welding cells** with a synchronized external axis and two non-synchronized external axes, with arc tracking. The cell incorporates two work areas to weld various subassemblies in size and shape. Automatic robotic applications incorporate the latest ABB technologies and benefit from full service throughout the lifecycle:

- › Design, execution and project management solutions
- › Supply of auxiliary mechanical equipment
- › Providing automation cabinets for complex applications
- › Integrate robots on a flexible manufacturing line
- › Assemble and instalation of the robotic cell
- › Programming and commissioning
- › Complete training for operating staff
- › Service in warranty and post-warranty period
- › Technical support for operation and further development



In the 1980s, the first robot (model RIP63) was manufactured at Automatica Bucharest, the first industrial application with this electric arc welding robot was made in 1982 at the Autobuzul Bucharest (a bus chassis component).



-  MEDIUM VOLTAGE
-  LOW VOLTAGE
-  AUTOMATIONS / SCADA
-  WEIGHING / BATCHING
-  METALLIC FABRICATIONS
-  SERVICES

### ALBANIA

 Oil refinery in Balsh: design, production and delivery of control room automation equipment, Automatica DISTRIBLOC switchboards

### BOSNIA

 Metalo Svornik: design, production and delivery of industrial weighing and batching equipment

### CZECH REPUBLIC

 Cement factory in Trmice: design and production of MCC switchgears, Programmable Logic Controlelers (PLC) AP 201  
 Cement factory in Vrandy: design and production of automation equipment, control switchboards, weighing equipment

### FRANCE

 AREVA T&D FRANCE: spare parts;  
 AIR Liquide: technological design, production and delivery of thin metal sheet metallic fabrications (thickness <3mm)  
 CFD Bagners: technological design, production and delivery of thin metal sheet metallic fabrications (thickness <3mm)  
 Soreel: technological design, production and delivery of thin metal sheet metallic fabrications (thickness <3mm)

### GERMANY

 Hot water plant (1000Gkal/h) in Dresden Halle: design, production and delivery automation equipments  
 L.E.N.K.E.R Industrie Handels GmbH: technological design, production and delivery of protection and command panels, medium and low voltage cells

### ITALY

 SIPA in Veneto: technological design, production and delivery of electric distribution panels  
 Honeywell: technological design, production and delivery of thin metal sheet metallic fabrications (thickness <3mm)

### KOSOVO

 NTSH Mont Electro: design, production and delivery of electric switchgear - 0,4 kV SIVACON S8

### POLAND

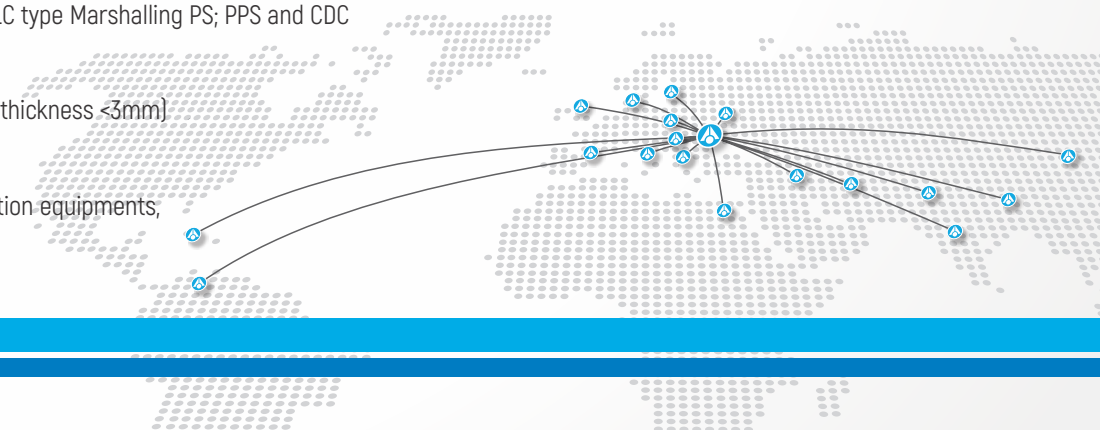
 YOKOGAWA: technological design, production and delivery of automations equipments with PLC type Marshalling PS; PPS and CDC

### SLOVAKIA

 WOS: technological design, production and delivery of thin metal sheet metallic fabrications (thickness <3mm)

### UKRAINE

 Fabrica de pelete de la combinatul minier Krivoi Rog: design, production and delivery automation equipments, electric panels MCC, batching equipment, software development for the SCADA system



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### AFRICA

#### EGYPT

-  3.700tons/day cement factory in Assiut: design, production and delivery of MCC switchboards automation equipment for the control room, PLC's, weighing and batching equipment, including commissioning
-  Power transformation station in Dekheila: design, production and delivery of switchboards automation equipment for the control room, including commissioning
-  Hydroelectric powerplant in New-Esna: design, production and delivery of switchboards automation equipment for the control room, including commissioning

#### SUDAN

-  Oil tanks and storage in Khartoum: design, production and delivery of automation equipment for the control room, including commissioning

#### ZIMBABWE

-  Glass factory in Kadoma: design, production and delivery of automation equipment, control panels, DD-16 batching equipment, including commissioning

### AMERICA

#### COLOMBIA

-  Rio Grande power plant: design, production and delivery of automation equipment for the control room, Automatica DISTRIBLOC switchboards, including commissioning

#### CUBA

-  Nickel Processing plant in Camariocas: design, production and delivery of automation equipment for the control room, Automatica DISTRIBLOC switchboards



### BANGLADESH

   Karnaphuli Fertilizer Co.: design, production and delivery of automation equipment, MCC (SIVACON 8PT) switchgears, including commissioning

### CHINA

    2x1.500tons/day cement factory in Hwai-Hai: design, production and delivery of belt weighers, switchboards, automation equipment for the control room, including commissioning

   Heating power plant in Pucheng: design, production and delivery of distribution, feeding and automation equipments, including commissioning

   Cement factory in Henan: design, production and delivery of Automatica MCC M14 feeding and automation equipments, switchgears with PLC, including commissioning

   Cement factory in Jiaozuo: design, production and delivery of Automatica MCC M14 feeding and automation equipments, switchgears with PLC, including commissioning

    Factory for construction materials in Harbin: design, production and delivery of Automatica MCC M14 feeding and automation equipments, switchgears with PLC, DD-116 batching equipments, including commissioning

### INDIA

   Pelet factory in Mangalore: design, production and delivery of Automatica MCC M14 feeding and automation equipments, switchgears with PLC, AP201 programmable logic controllers, including commissioning

### IRAN

   Chemicals plant in Siraz: design, production and delivery of Automatica MCC M14 feeding and automation equipments, switchgears with PLC, AP201 programmable logic controllers, including commissioning

### IRAQ

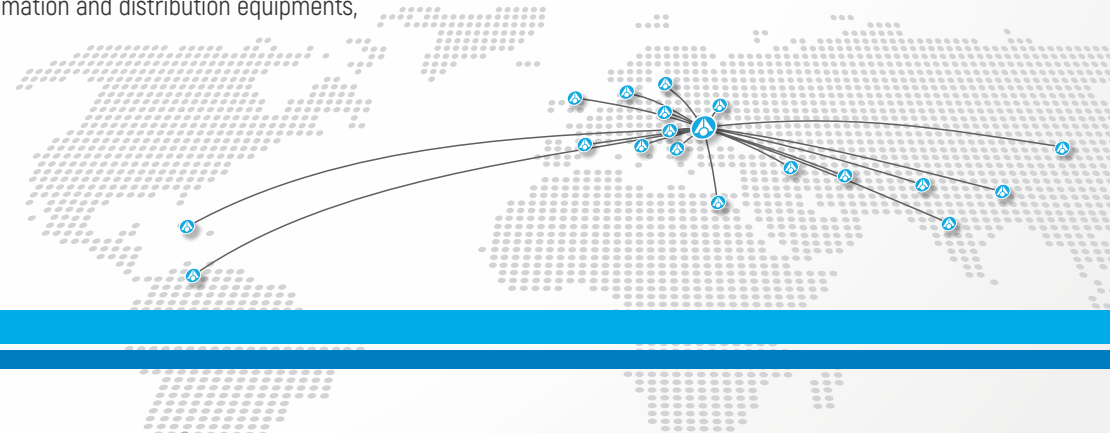
    2x1.500tons/day cement factory in AlQaim: design, production and delivery of belt weighers, switchboards, automation equipment for the control room, including commissioning

    2x1.500tons/day cement factory in Sinjar: design, production and delivery of belt weighers, switchboards, automation equipment for the control room, including commissioning

   Irrigation station in Kirkuk: design, production and delivery of electrical distribution equipments, feeding and automation, including commissioning

   Special equipments factory in Saad: design, production and delivery of electrical feeding, automation and distribution equipments, including commissioning

   Lafarge Irak – Cement factory in Karbal: design, production and delivery of MCC (SIVACON 8PT) switchgears (182 pieces)



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### SIRYA

-  Oil refinery in Banias: design, production and delivery of control room automation equipment, Automatica DISTRIBLOC switchboards, electric conductors, including commissioning
-  Drinkable Water Supply Station in Barzeh: automation equipment for pumps and water treatment stations, TSP-HOMS: DISTRIBLOC switchboards, batching equipment BD10type, including commissioning
-  Cement factory in Sheikh Said: design, production and delivery of automation electric equipment, including commissioning
-  Drinkable Water Supply Station in Aleppo: design, production and delivery of automation equipment for pumps and water treatment stations, including commissioning
-  Water Pumps Stations in Damascus: design, production and delivery of automation equipments, including commissioning
-  Oil extraction in Jbissa: design, production and delivery of electric equipment for oil well drilling
-  Petro chemistry in Roumellan: design, production and delivery of Oil Pumps Actuating and Protection Equipment 55kW
-  Hidro project in Balikh, General Co: design, production and delivery of low and medium voltage equipment, including commissioning
-  Euphrate deir Ezzor: design, production and delivery of equipment for 66/20kV station, proiectare, design, development and integration of an SCADA system(PACiS type), including commissioning

### PAKISTAN

-  Oil refinery in Karachi: design, production and delivery of automation equipment for the control room, Automatica DISTRIBLOC switchboards, including commissioning
-  2x1.500tons/day cement factory in Attok: design, production and delivery of Automatica MCC M14 distribution switchboards, automation equipment for the control room, programmable logic controllers, weighing and batching equipment, including commissioning

### TURKEY

-  Hydroelectric power plant in Camligoze: design, production and delivery of Automatica MCC M14 distribution switchboards, including commissioning
-  Hydroelectric power plant in Catalan: design, production and delivery of automation equipments, including commissioning
-  Hydroelectric power plant in Gezende: design, production and delivery of Automatica MCC M14 distribution switchboards and automation equipment, including commissioning
-  Pelet factory in Karabuk: design, production and delivery of Automatica MCC M14 distribution switchboards and Programable Logic Controlelers (PLC) AP 201, including commissioning
-  Hydroelectric power plant in Kapulakaia: design, production and delivery of Automatica MCC M14 distribution switchboards, automation equipment, including commissioning
-  Hydroelectric power plant in Dicle: design, production and delivery of : medium voltage switchboards, Automatica MCC M14 distribution switchboards, automation equipment, including commissioning

### TANZANIA

-  VEGA International Services: Procurement and deliveryof ERZEN blower equipments and ATLAS Copco drier



**Nuclear power plants** – Unit 1 and Unit 2 control rooms - Cernavoda power plant, Romag Drobeta Turnu Severin

**Energy industry** – Centrale termoelectrice Progresul, Sud, Bacău, Brăila, Constanța, Craiova, Pitești, Ploiești, Rovinari, Suceava, Centrale hidroelectrice Vidraru, Bistrița, Portile de Fier

**Mining industry** - Oltenia Lignite National Company

**Steel industry**- ArcelorMittal, CS Hunedoara, Tepro, Artrom, BBG Alum, Zimtub

**Chemical industry** - Danubiana, Gelcap, Policolor, Borzești, Romcarbon, Nitramonia, UPSOM, Carbid Fox

**Petrochemicals industry** - Petrom, Shell, Energopetrol, Petrotel

**Transportation** - Henry Coandă International Airport, Metrorex, RATB, Petrotrans, ROCAR, Romtrans

**Automotive industry** - Automobile Dacia, UNIQ, WTS, Subex Bacău

**Machinery industry** - Faur, Griro, Metav, Upetrolam, Industria Sârmei, Daewoo shipyard, Upetrom, Compa Sibiu

**Agriculture** - Avicola Brașov, Silotrans Constanța, Sirexim Slatina

**Construction equipments** - Arcom, Carpați Trust, County police, SRI, Presidential administration

**Food industry** - Gourmet, Salcom, Ulvex, Ardealul Carei, European Drinks, Ultex

**Construction materials** – Cedru & Melon, Lafarge Romcim, Elpreco, Holcim, Procema







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