UNEX®

SINCE 1950



COMPANY PROFILE UNEX A.S.



ABOUT US

The engineering-metallurgical group UNEX is a world-renowned supplier of heavy engineering components and a long-term partner to leading global industrial corporations.

Since 1950, the engineering and metallurgical group UNEX has helped shape the tradition of Czechoslovak heavy engineering.

The experience and expertise of our people, together with modern technologies, robotic and automated workstations, a range of heavy machine tools, and extensive production facilities, that enable us to efficiently manufacture high-quality products for various industrial sectors according to engineering drawings and the requirements of the most demanding customers.

Thanks to its own machine shops, paint shops, foundries, and forge, UNEX is able to supply a wide range of heavy steel structures including assembly, as well as final-machined castings and forgings across its four plants in Uničov, Olomouc, and the Slovak towns of Snina and Trnava.

UNEX exports the majority of its production worldwide.



WE MANUFACTURE PRODUCTS RANGING FROM 50 GRAMS UP TO 120 TONS.

Production of castings from carbon, low-alloy, medium-alloy, and high-alloy steel.

Casting weight: **5 – 18000 kg**
Maximum mold dimensions for machine molding: **900 × 700 × 600 mm**
Maximum mold dimensions for hand molding: **4000 × 4000 mm (or ø 3500 mm)**

Production of manganese steel castings

Casting weight: **5 – 3500 kg**
Maximum mold dimensions for machine molding: **900 × 700 × 600 mm**
Maximum mold dimensions for hand molding: **4000 × 4000 mm (or ø 3500 mm**)

Production of die forgings from carbon, alloy, and structural steel

Forging weight: **2 – 25 kg**
Rotational forgings up to max. diameter **300 mm and max. height 350 mm**
Non-rotational forgings up to max. length **500 mm and max. height 300 mm**

Production of grey iron castings

Casting weight: **0.05 – 3500 kg**
Maximum mold dimensions for automatic molding: **920 × 600 × 120 / 120 mm** (two pattern plates **435 × 600 × 120 / 120 mm**)
Maximum mold dimensions for machine molding: **900 × 700 × 600 mm**
Maximum mold dimensions for hand molding: **4000 × 4000 mm** (**or ø 3500 mm**)

Production of ductile iron castings

Casting weight: **0.05 – 3500 kg**
Maximum mold dimensions for automatic molding: **920 × 600 × 120 / 120 mm** (two pattern plates **435 × 600 × 120 / 120 mm**)
Maximum mold dimensions for machine molding: **900 × 700 × 600 mm**
Maximum mold dimensions for hand molding: **4000 × 4000 mm** (**or ø 3500 mm**)



Rocker arms



Waterworks components



Rocker arm parts



Winch drums



Crane boom



Handling attachments

Steel Structures

We manufacture welded lattice and box-section steel structures up to 40 meters in length and 120 tons in weight. We also provide complete machining and surface treatment. All structures are prepared according to our own design or the customer's documentation.

- Machine and equipment base frames
- Heavy weldments for pressing equipment
- Stationary parts for gas turbines
- Centrifugal compressor frames
- Gas turbine frames
- Water turbine housings / seatings
- Steel structures for transformer tanks
- Power unit frames for drilling rigs
- Crane components
- Road and railway bridges
- And more



TRADITION – QUALITY – FLEXIBILITY

Foundry

Machining Shop

Forge

Metallurgy

UNEX a.s. is a strong engineering-metallurgical partner for the production of heavy weldments, steel structures, and precision machinery assemblies. In our own machine shops, we manufacture welded parts and structures for construction, mining, agricultural, railway, energy, and offshore equipment. We process standard structural steels as well as special materials such as WELDOX and HARDOX.

We supply weldments according to customer documentation, including machining, surface treatment, subgroup assembly, and quality control. We are capable of manufacturing steel structures up to 40 meters in length and 120 tons in weight, and for construction and mining machinery typically frames, booms, undercarriage components, and working attachments up to 60 tons.



CORE COMPANY CERTIFICATIONS

Certificates:

- EN15085-2 CL1
- ČD V95/5
- EN 1090-2 EXC4
- ISO 3834-2
- TPG for Casting, NDT, Welding

- **ISO 9001:2015** – QUALITY MANAGEMENT SYSTEM CERTIFICATE
- **ISO 14001:2015** – ENVIRONMENTAL MANAGEMENT SYSTEM (EMS) CERTIFICATE
- **ISO 45001:2018** – OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT SYSTEM CERTIFICATE
- **ISO 50001:2018** – ENERGY MANAGEMENT SYSTEM CERTIFICATE

PRODUCT CERTIFICATIONS

Product & Qualification Certifications:
AD 2000-Merkblatt W0 (extension according to PED 2014/68/EU or EN 764-5) – Certification for manufacturers of pressure vessels and forgings for pressure applications

Czech Railways
Certificate of supplier capability in accordance with ČD V6/1

All Certifications:


DNV·GL
CERTIFIKÁT SYSTÉMU ŘÍZENÍ
UNEX a.s.
OHSAS 18001:2007


DNV·GL
CERTIFIKÁT SYSTÉMU ŘÍZENÍ
UNEX a.s.


DNV·GL
CERTIFIKÁT SYSTÉMU ŘÍZENÍ
UNEX a.s.
ISO 9001:2015


DNV·GL
CERTIFIKÁT SYSTÉMU ŘÍZENÍ
UNEX a.s.
ISO 14001:2015

Forgings

2kg

3kg

5kg

8kg

10kg

15kg

18kg

20kg

25kg



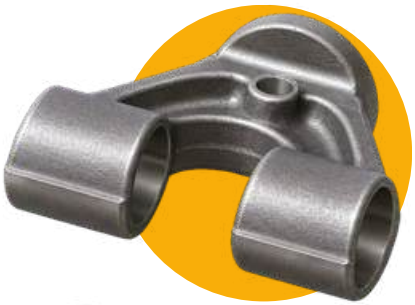
















Grey Iron Castings

0,4kg



Crankshaft
Application: Air conditioning compressor
Material: EN-GJL-250

0,9kg



Lever
Application: Hydraulics for material handling equipment
Material: EN-GJL-250

1,2kg



Front Part
Application: Air conditioning compressor
Material: EN-GJL-250

1,6kg



Compressor Component
Application: Air conditioning compressor
Material: EN-GJL-250

1,8kg



Bottom Carrier
Application: Air conditioning compressor
Material: EN-GJL-250

2,3kg



Knocker
Application: Power plant crushers
Material: EN-GJL-250

2,7kg



Road reflector body
Application: Component of road and highway lane dividers
Material: EN-GJL-250

3,1kg



Flywheel Ring
Application: Passenger car engine
Material: EN-GJL-250

4,7kg



Housing
Application: Air conditioning compressor
Material: EN-GJL-250

Steel Castings

10kg

50kg

250kg

350kg

750kg

2900kg

5200kg

9 500kg

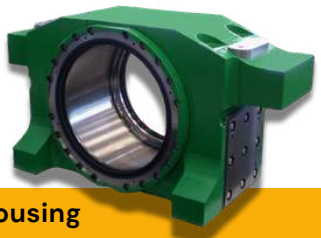
18 000kg



Axle Guard
Application: Wagon bogie
Material: E 230-400-MSC2



Track wheel
Application: Crane
Material: GS 42 CrMo4V



Bearing Housing
Application: Rolling mill
Material: GS 20Mn5



Half-Axle
Application: Dumper
Material: B50E



Double Brake Shoe
Application: Wagon bogie
Material: E 230-450-MSC1



Half-Axle
Application: Truck chassis
Material: GS 24Mn5/6



Bogie Frame
Application: Tram bogie
Material: GS 20Mn6



Wheel Hub
Application: Dumper
Material: B50E54D3



Ladle
Application: Aluminium processing
Material: GS 45

Ductile Iron Castings

0,4kg



Shift Fork
Application: Agricultural machinery gearbox
Material: EN-GJS-400-15

0,8kg



Central Axle Nut
Application: Truck drive system
Material: EN-GJS-500-7

1kg



Shift Arm
Application: Transmission systems
Material: EN-GJS-450-10

1,1kg



Gear Lever Lock
Application: Automotive security
Material: EN-GJS-400-15

1,2kg



Brake Coupling
Application: Wagon brake systems
Material: EN-GJS-400-15

1,7kg



Flywheel
Application: Passenger car engine
Material: EN-GJS-400-15

2,3kg



Base Plate
Application: Handling equipment hydraulics
Material: EN-GJS-400-15

2,5kg



Bearing Strap
Application: Commercial vehicle transmission system
Material: EN-GJS-600-3

6kg



Silentblock Housing
Application: Crushing equipment
Material: EN-GJS-400-15



Transmission, Drive, and Braking System Components
Parts and Steel Structures for Agricultural Machinery

Agricultural Machinery



Drive Shaft, Gearbox, and Truck Chassis Components
Passenger Car Powertrain Components
Towing Equipment Components, Exhaust Housings

Automotive



Steel Structures, Castings, and Forgings for Wagon Bogies
Railway Wheelset Components
Braking System Components
Air Unit Components

Railway



Power Unit Frames for Drilling Rigs or Floating Production Storage and Offloading (FPSO) Facilities
Marine Crane Parts

Offshore



Booms, Frames, Pylons, Crawler Track Carriers
Dump Truck Transmission, Chassis, and Body Parts
Stacker, Loader, Excavator, and Mine Car Components
Long-Distance Belt Conveyor Systems, Stockyard Equipment
Tripper Cars, Belt Wagons, Mobile Hoppers

Mining Industry



Booms, Handles, Pylons, Chassis Frames •
Crane Frames, Travel Wheels, Sheaves
Parts and Steel Structures for Port, Overhead, and Gantry Cranes
Pallet Truck Components

Handling Equipment



Steam Turbine Mounting Frames
Steel Structures for Hydro Turbine Seats
Steel Structures for Transformer Housings
Wind Turbine Frames and Components
Grinding Equipment and Coal Crusher Parts
Transport Frames

Energetika

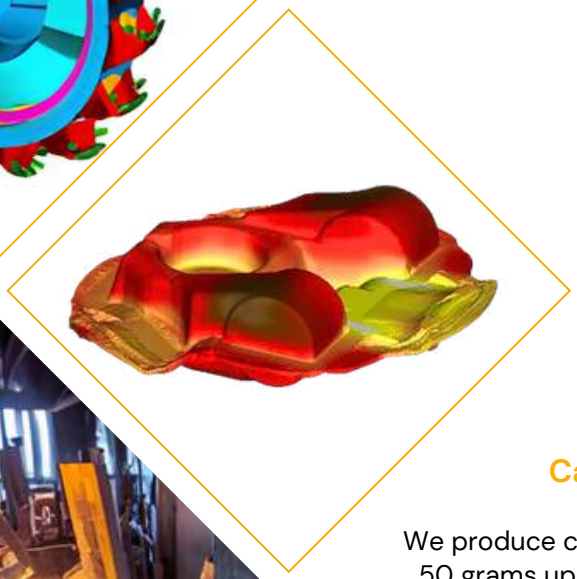


Booms, Handles, Frames, Pylons, Undercarriage Frames and Center Sections
Track Shoes and Teeth
Transmission and Drive Components
Other Construction Machinery Parts

Construction and Earthmoving Machinery

Technical and Manufacturing Capabilities





Metallurgical Technical Support

To streamline production and achieve cost savings, we utilize a range of software tools, including MAGMAsoft, CATIA, and Simufact.forming 13.0.



Casting Production

We produce castings weighing from 50 grams up to 18 tons, depending on the material standard and product dimensions. We offer automatic, semi-automatic, and manual molding..



Die Forging

The forge shop's product range includes drop forgings weighing from 2 to 25 kg. We offer the production of both rotational and non-rotational parts in production batches starting from 100 pieces.



Metal Cutting and Forming

We supply flame and profile cut parts made of standard structural steels as well as special materials. We are also able to secure materials of non-standard grades or unusual dimensions..



Machining

We are capable of efficiently performing both roughing and precision finishing operations on components ranging from a few centimeters to large-scale workpieces. We machine both rotational and non-rotational parts, including components with complex contoured surfaces.



3D Printed form-making

To accelerate prototype production for smaller castings, we offer 3D printed pattern manufacturing. This approach also delivers lower acquisition costs for prototypes, test samples, and production batches up to 1000 pieces..

Spare Parts

We manufacture spare parts not only for our own machinery and equipment. Thanks to our in-house forge, foundry, machine shop, and metallurgical facilities, we control the entire process—from raw material to the finished component.





Surface Treatment and Painting

According to customer requirements, the entire production process concludes with surface treatment and final coating, or anti-corrosion protection..

Quality Control

We monitor the quality of our products throughout the entire manufacturing process. Our laboratories and testing facilities are equipped with all necessary instruments to evaluate the quality of final products.





Heat Treatment

We offer normalizing, quenching and tempering, stress relief annealing, soft annealing, post-weld stress relief annealing, and ferritic annealing..



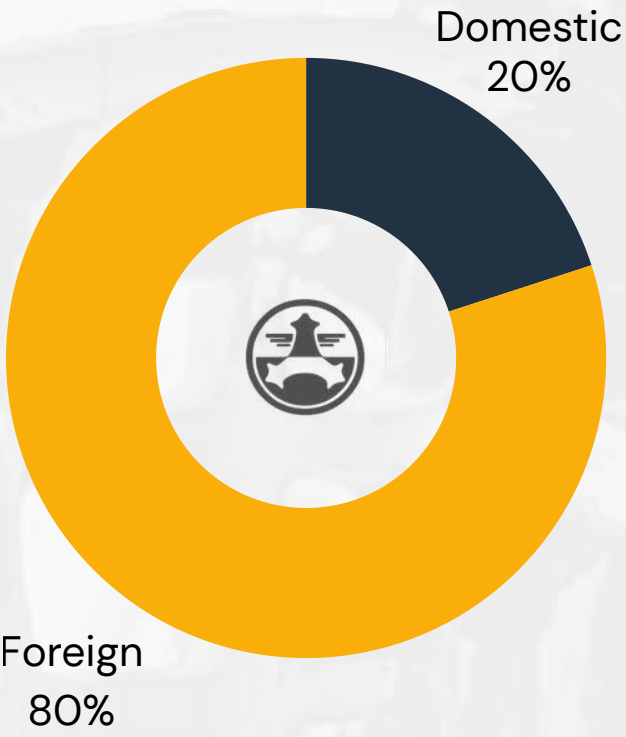
Welding

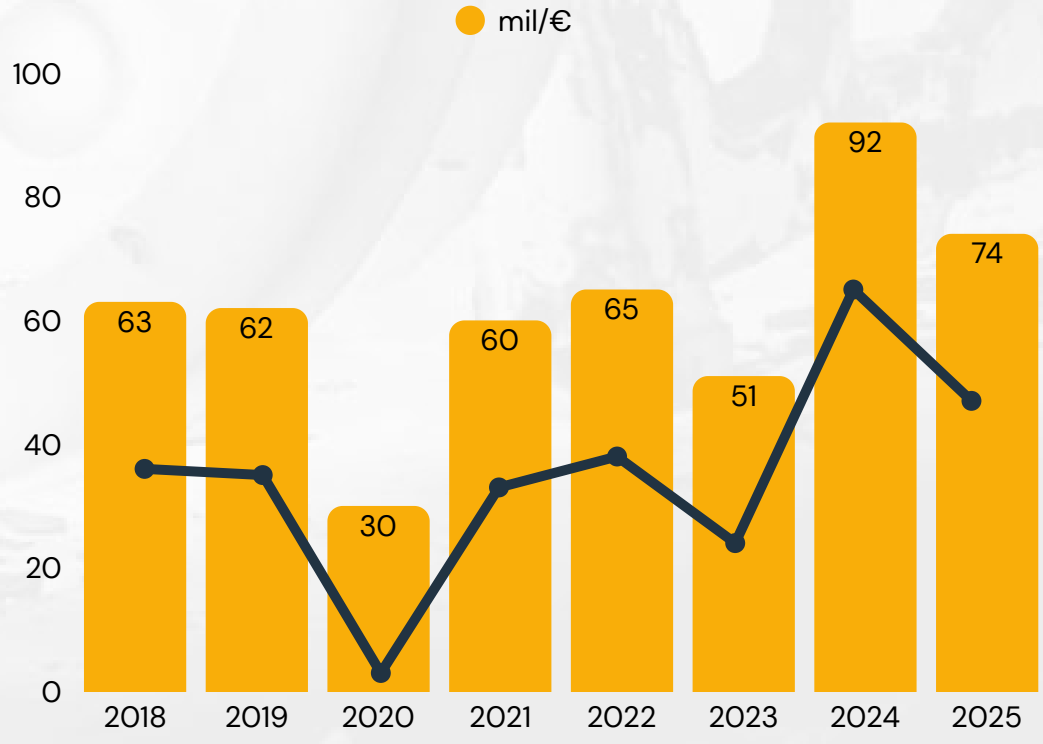
We standardly perform welding of conventional and austenitic steels, as well as non-ferrous metals including aluminum. Weld quality is verified using all established testing methods.

Analysis of Financial Performance and Business Development

UNEX a.s. is a prominent Czech engineering and metallurgical manufacturer. We deliver 20% of our production to the Czech domestic market and export 80% abroad—from European countries to demanding overseas markets, including the USA. We are a reliable global partner committed to top quality.

Export:





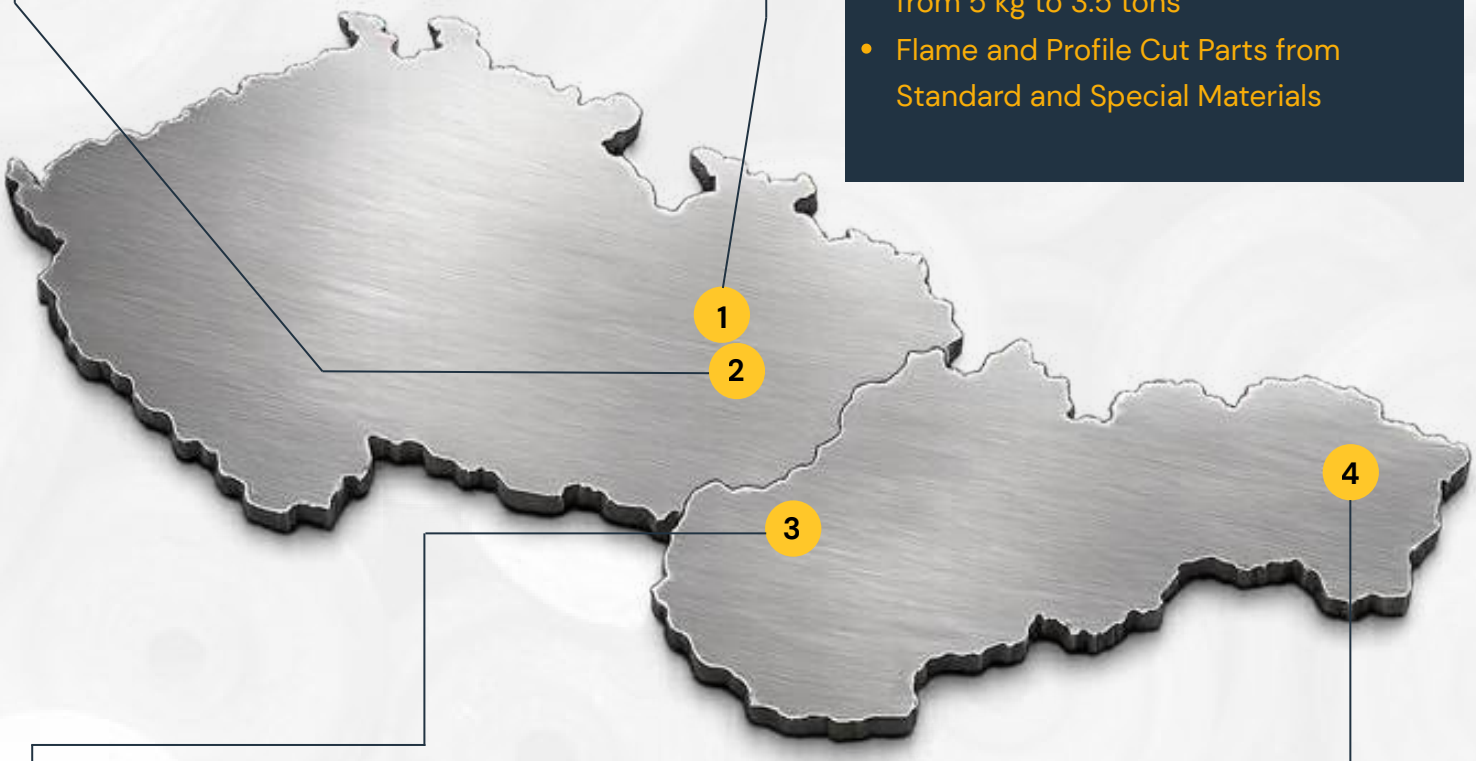
UNEX a.s. Facilities

2 OLOMOUC, Česká republika

- Ductile and Grey Iron Castings from 50 g to 6.5 kg
- Drop Forgings from 2 kg to 25 kg

1 UNIČOV, Česká republika

- Heavy Steel Structures and Assemblies up to 120 tons and 40 meters in length
- Steel Castings from 5 kg to 20 tons, Manganese Steel and Grey Iron Castings from 5 kg to 5 tons, Ductile Iron Castings from 5 kg to 3.5 tons
- Flame and Profile Cut Parts from Standard and Special Materials

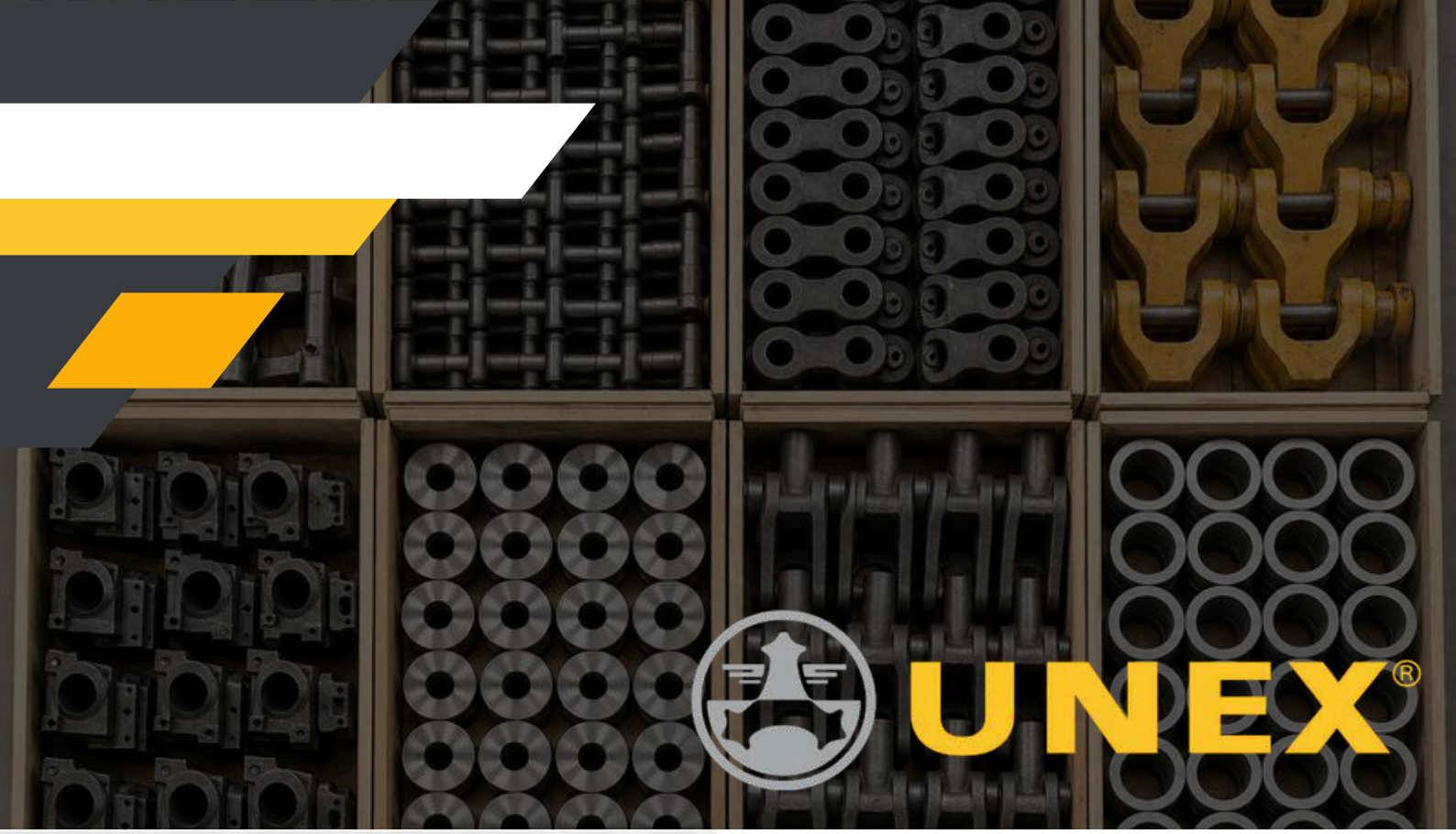


3 TRNAVA, Slovensko

- Ductile and Grey Iron Castings from 1 g to 40 kg
- DISAMATIC Molding Line

4 SNINA, Slovensko

- Welded Steel Components and Heavy Steel Structures and Assemblies up to 64 tons and 45 meters in length



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About us