

**INNOVATIONS  
RELIABILITY  
MASTERY**

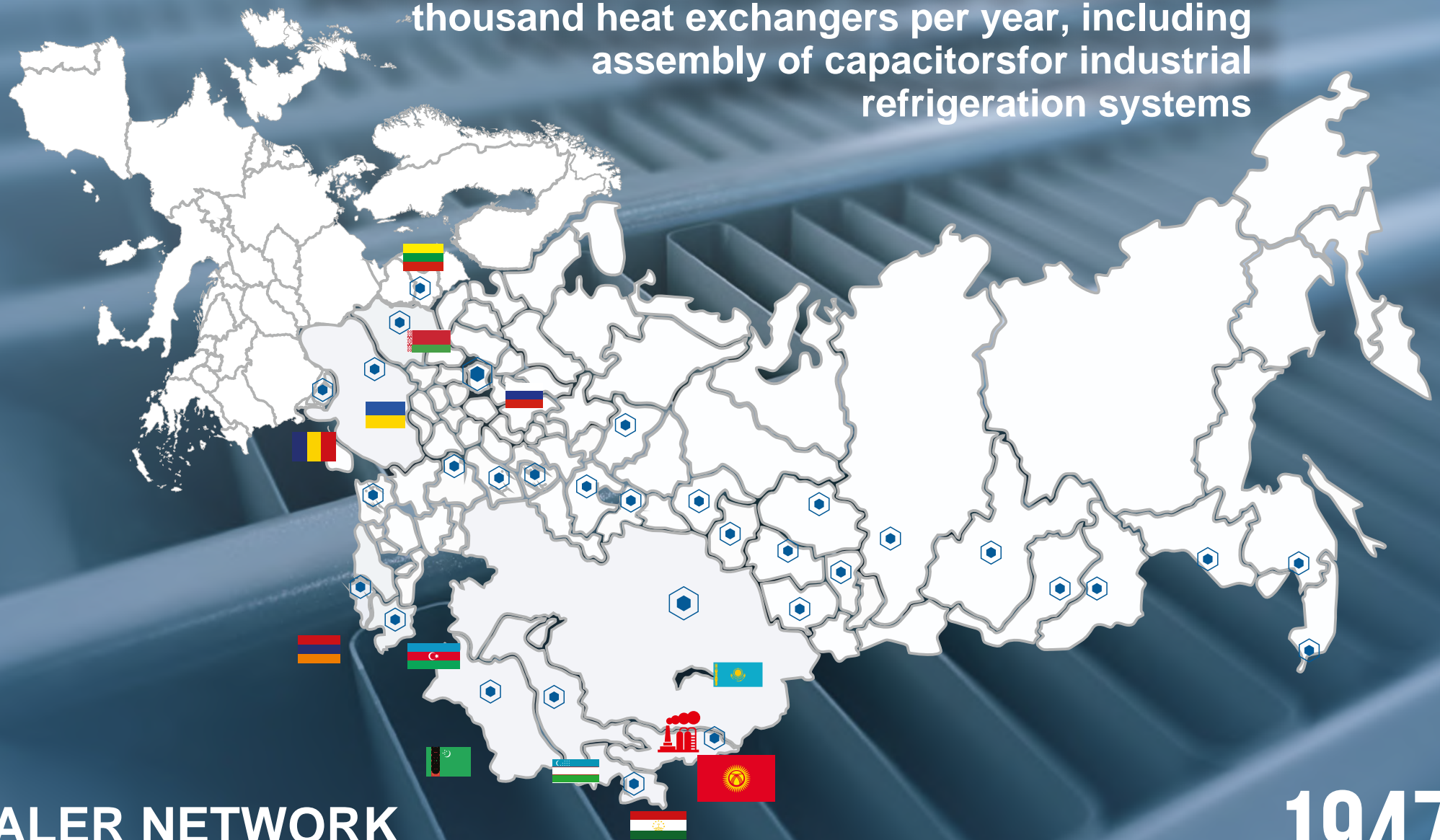


"AVTOMASH-RADIATOR" LLC



# OWN MANUFACTURING

Avtomash-Radiator LLC produces more than 250 thousand heat exchangers per year, including assembly of capacitors for industrial refrigeration systems



## DEALER NETWORK

70 dealerships in Russia, Eastern Europe, Baltic countries, Transcaucasia and Central Asia.

# 1947

Factory founded in

## Types of heat exchangers by appointment:

- Water cooling radiators
- Oil cooling radiators
- Charge air coolers
- Radiator stacks
- Radiator cores
- Cabin heater Radiators
- Complete heaters
- Fuel coolers
- Liquid condensers/evaporators, gas coolers/ heaters
- Microchannel heat exchangers and capacitors

## Heat exchangers types according to the core material:

- Aluminum
- Copper-brass

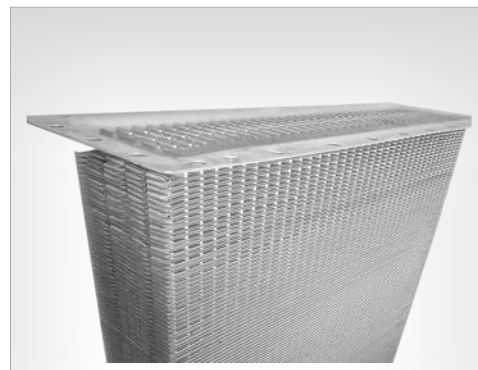
The heat exchangers can be assembled with aluminum, brass, steel or plastic tanks.

# THE HEAT EXCHANGER'S CORE DESIGN

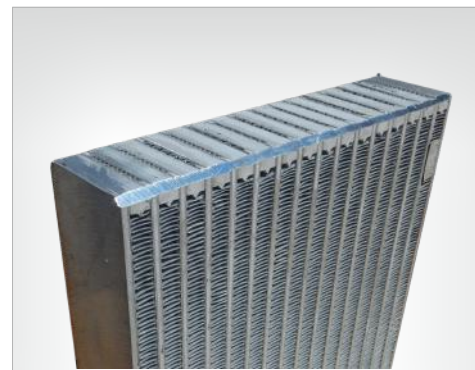
<b>TUBES &amp; FINS</b>	Water cooling radiators "water-air"	Oil cooling radiators "oil-air"	Charge air cooling radiators "air-air"		Cabin heater radiators "water-air"	
<b>TUBES &amp; PLATES</b>	Water cooling radiators "water-air"	Oil cooling radiators "oil-air"				
<b>PLATES &amp; BARS</b>	Water cooling radiators "water-air"	Oil cooling radiators "oil-air"	Charge air cooling radiators "air-air"	Fuel cooling radiators "fuel-air"	Cabin heater radiators "water-air"	Evaporators/condensers of refrigeration units "freon-water", heaters/coolers of gas "gas-water"
<b>MICRO CHANNAL TUBES &amp; FINS</b>						Condensers of refrigerants "freon-air", dry coolers (cooling towers) "water-air"



**TUBES & FINS**



**TUBES & PLATES**



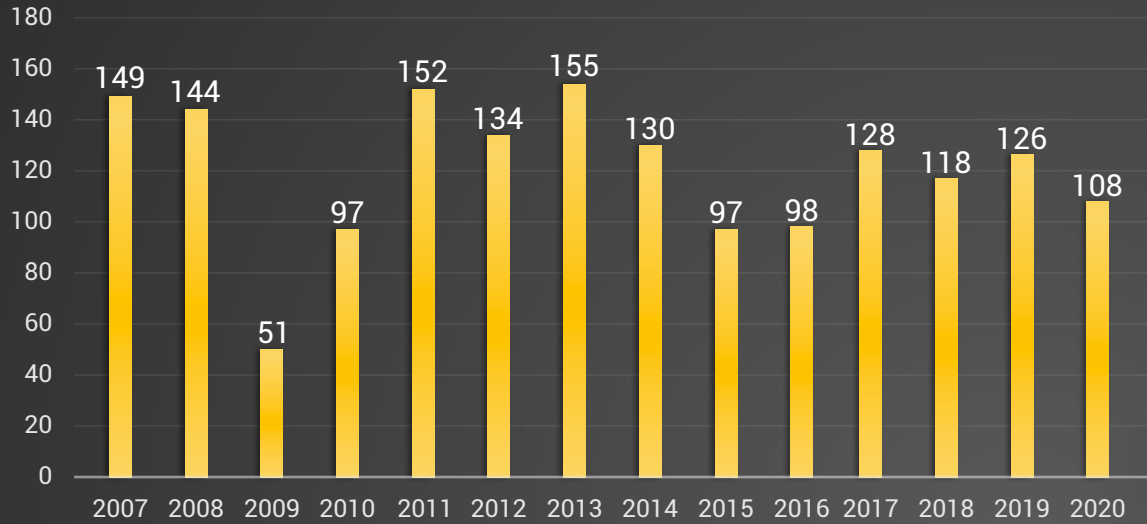
**PLATES & BARS**



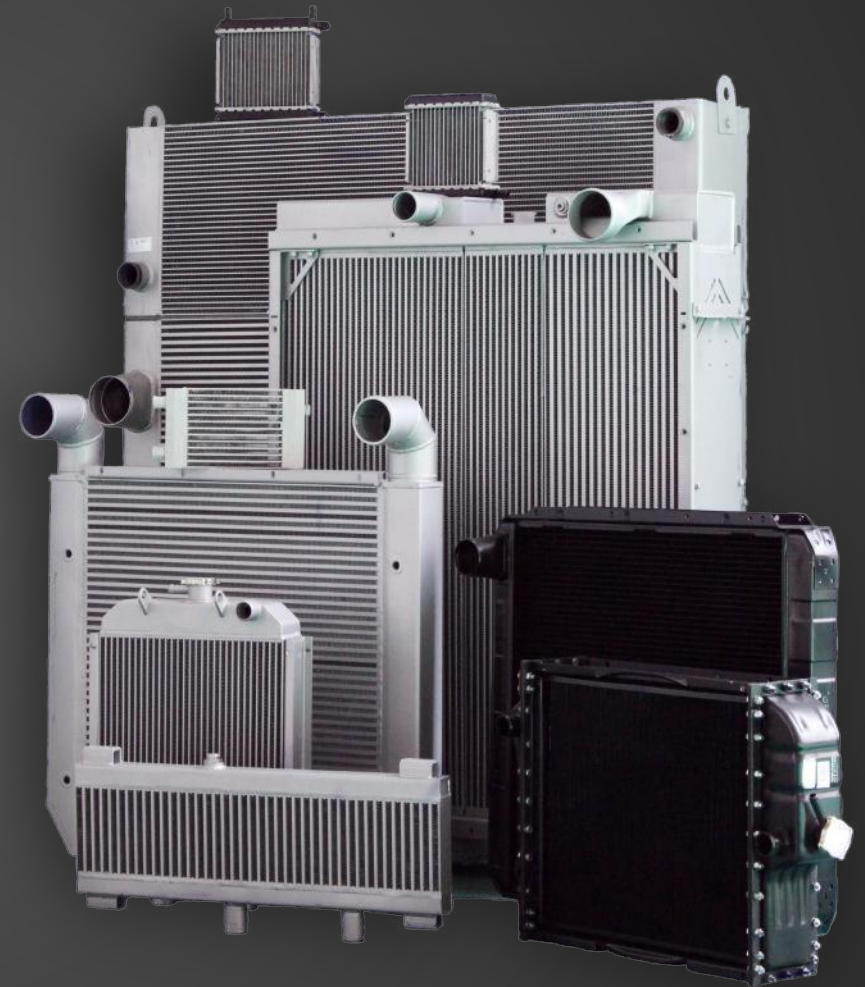
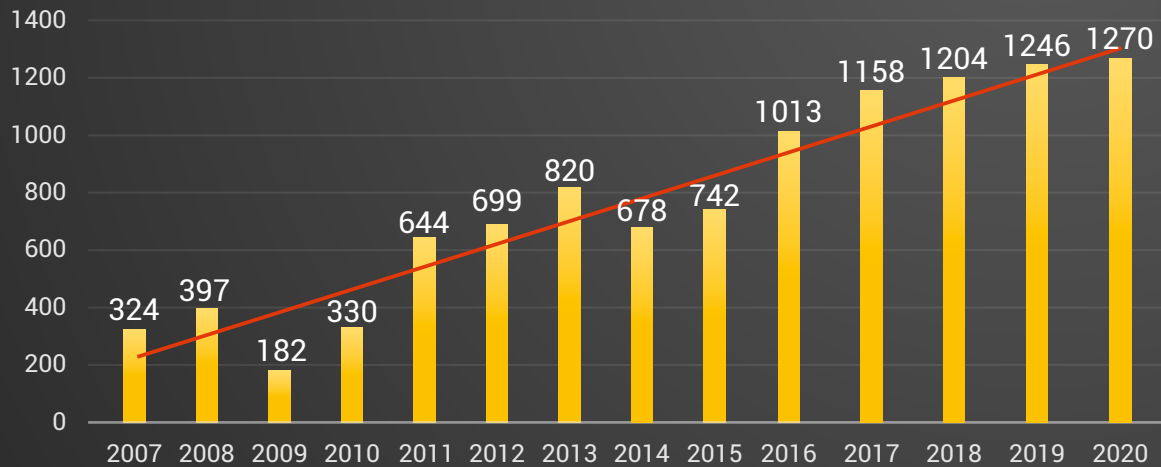
**MICRO CHANNAL TUBES & FINS**

# HEAT EXCHANGER PRODUCTION VOLUME

Production of heat exchangers volume by years, thousand pieces

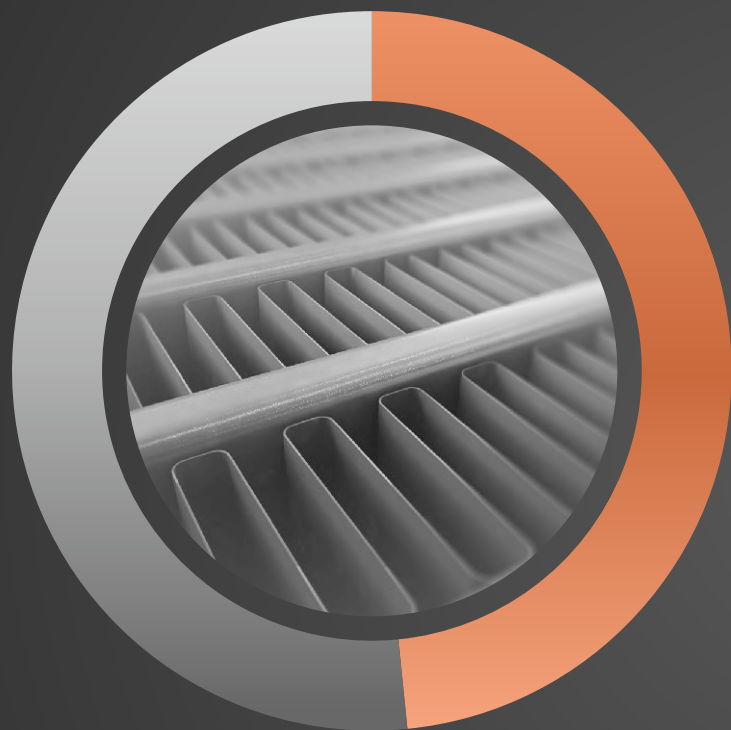



Production of heat exchangers volume by years, milliom som



## STRUCTURE OF HEAT EXCHANGERS PRODUCTION

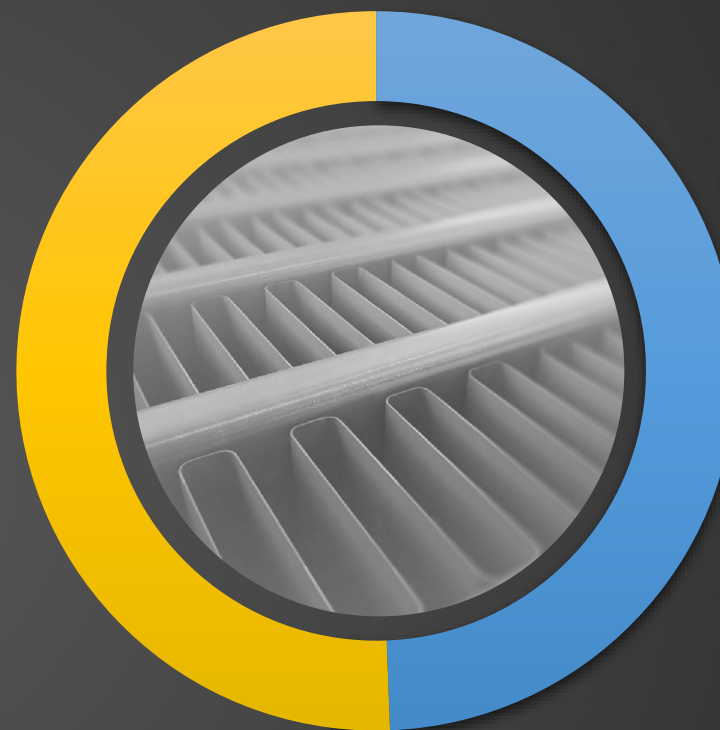
The structure of the heat exchangers production depending on the material of the product in 2020, in thousand soms



**53%**  aluminum heat exchangers

**47%**  copper-brass heat exchangers

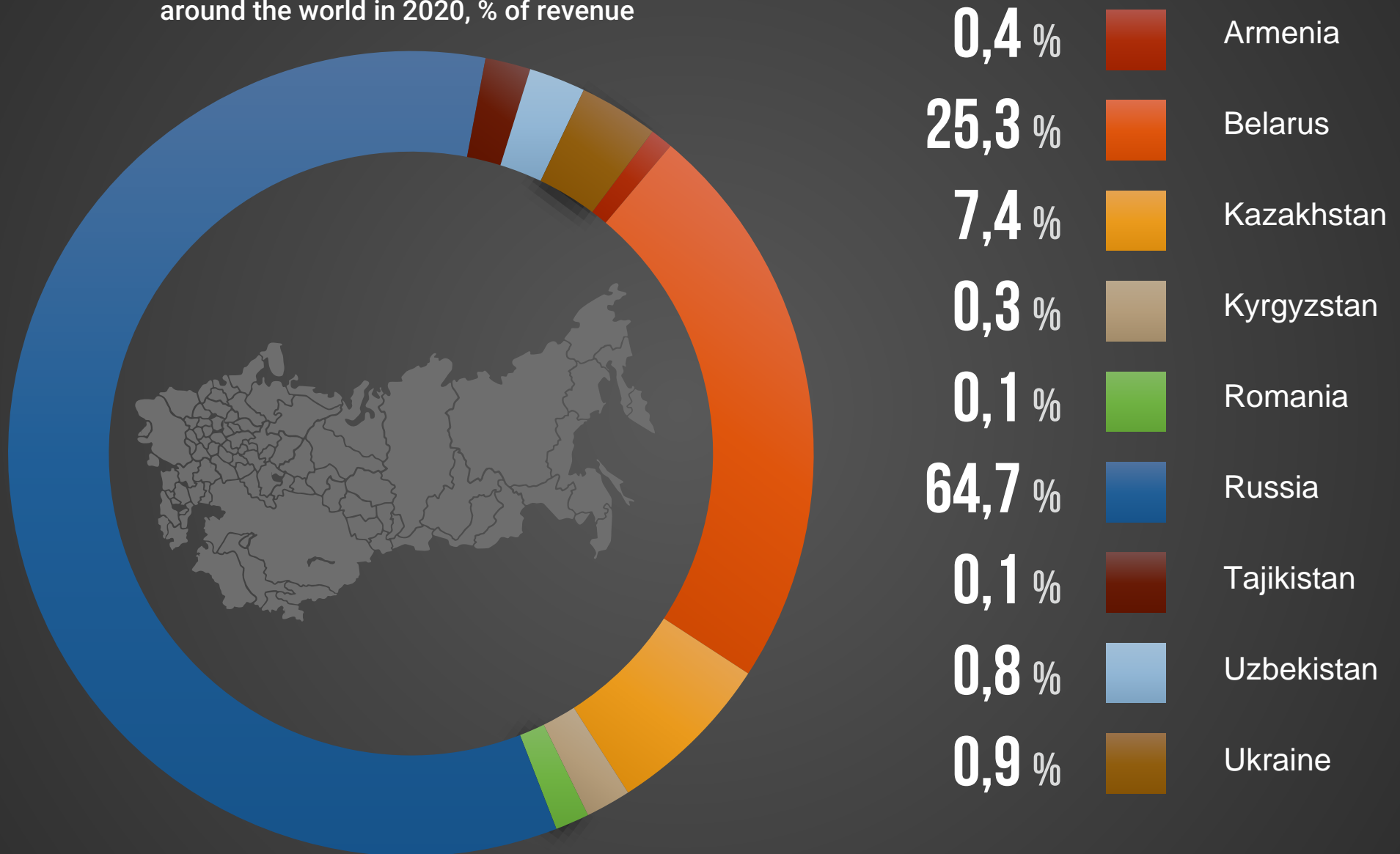
The structure of production of heat exchangers depending on the supply channels in 2020, in thousand soms



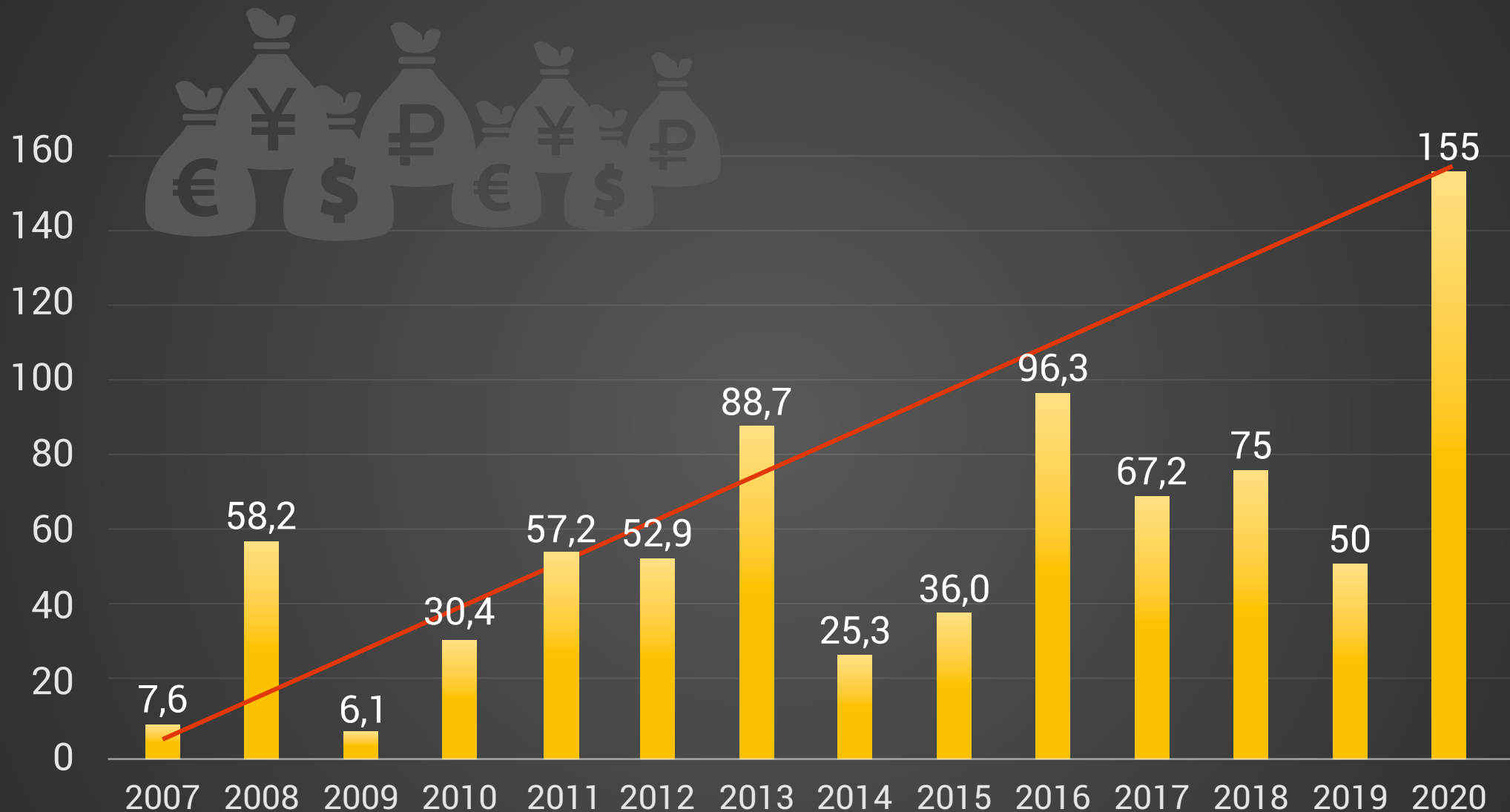
**51%**  conveyors

**49%**  secondary market

Deliveries of Avtomash-Radiator heat exchangers around the world in 2020, % of revenue



Investments in fixed assets of the Avtomash-Radiator plant in 2007-2020, million soms



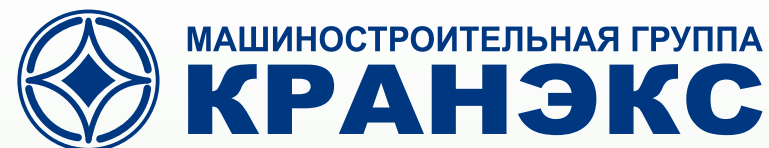


## ROAD CONSTRUCTION AND SPECIAL EQUIPMENT

- front loaders
- excavators
- bulldozers
- rollers
- motor graders
- cranes



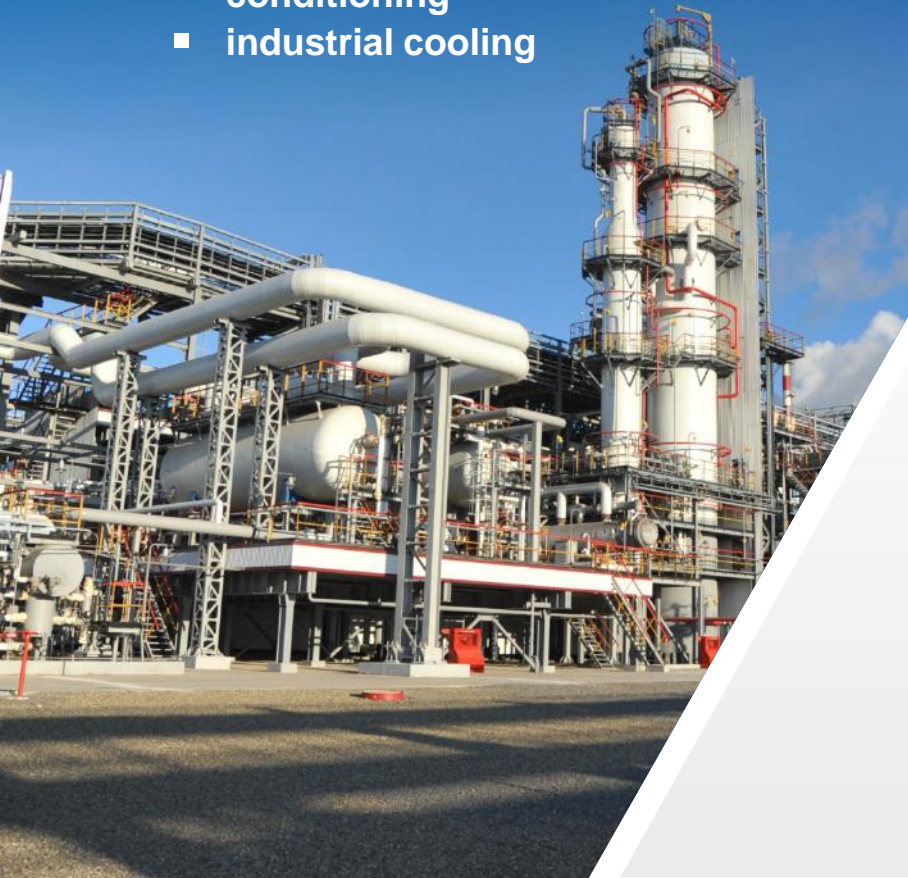
**ЧЕТРА**



**ТВЕРСКОЙ  
ЭКСКАВАТОР**

## INDUSTRIAL EQUIPMENT

- diesel generators
- power plants
- hydro stations
- compressors
- ventilation
- conditioning
- industrial cooling



## WE HAVE 15 YEARS OF EXPERIENCE in aluminum heat exchangers brazing

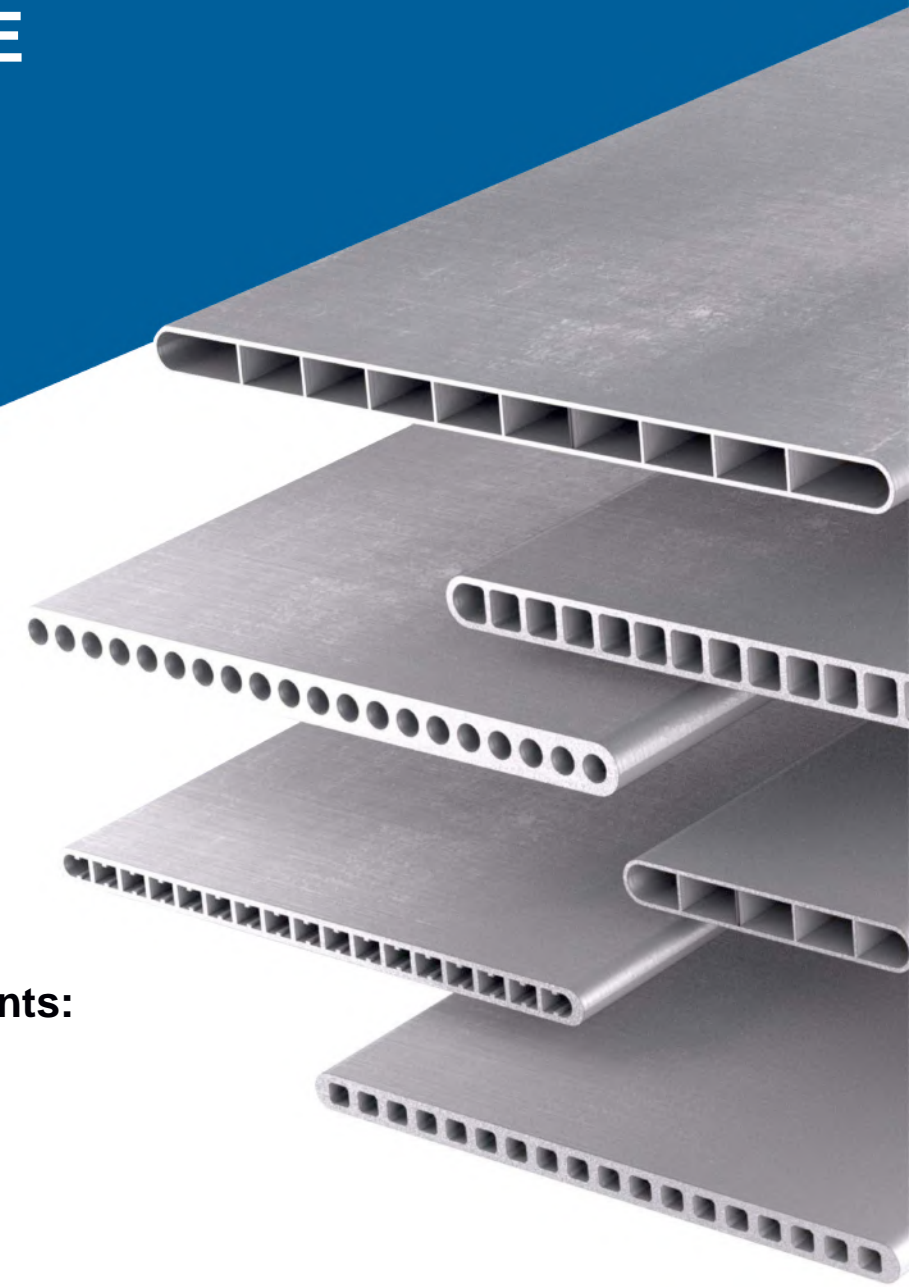
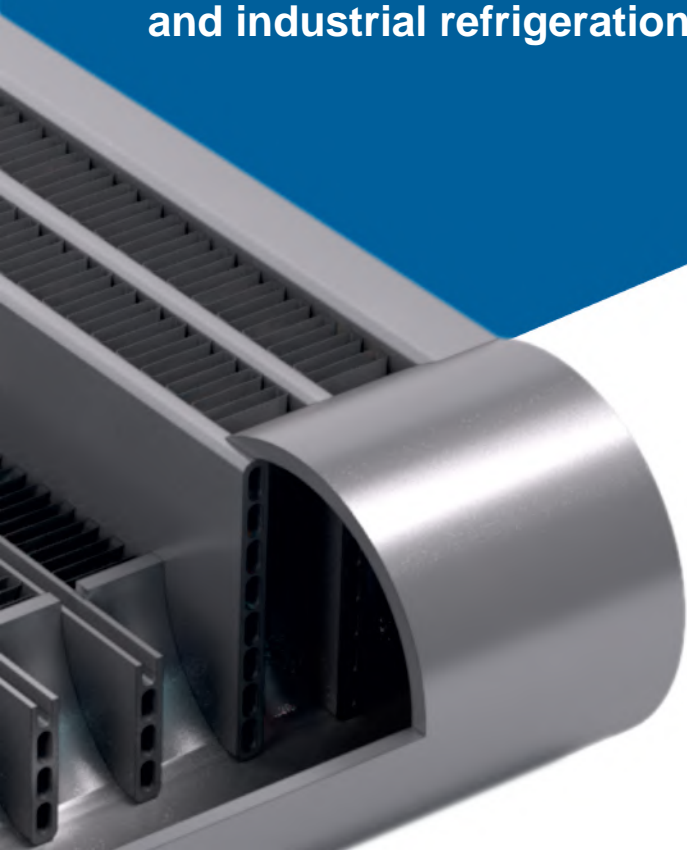
We present to you our new products -  
air cooled condensers  
based on microchannel aluminum heat exchangers  
for air conditioning and ventilation systems  
and industrial refrigeration.

microchannel heat exchangers



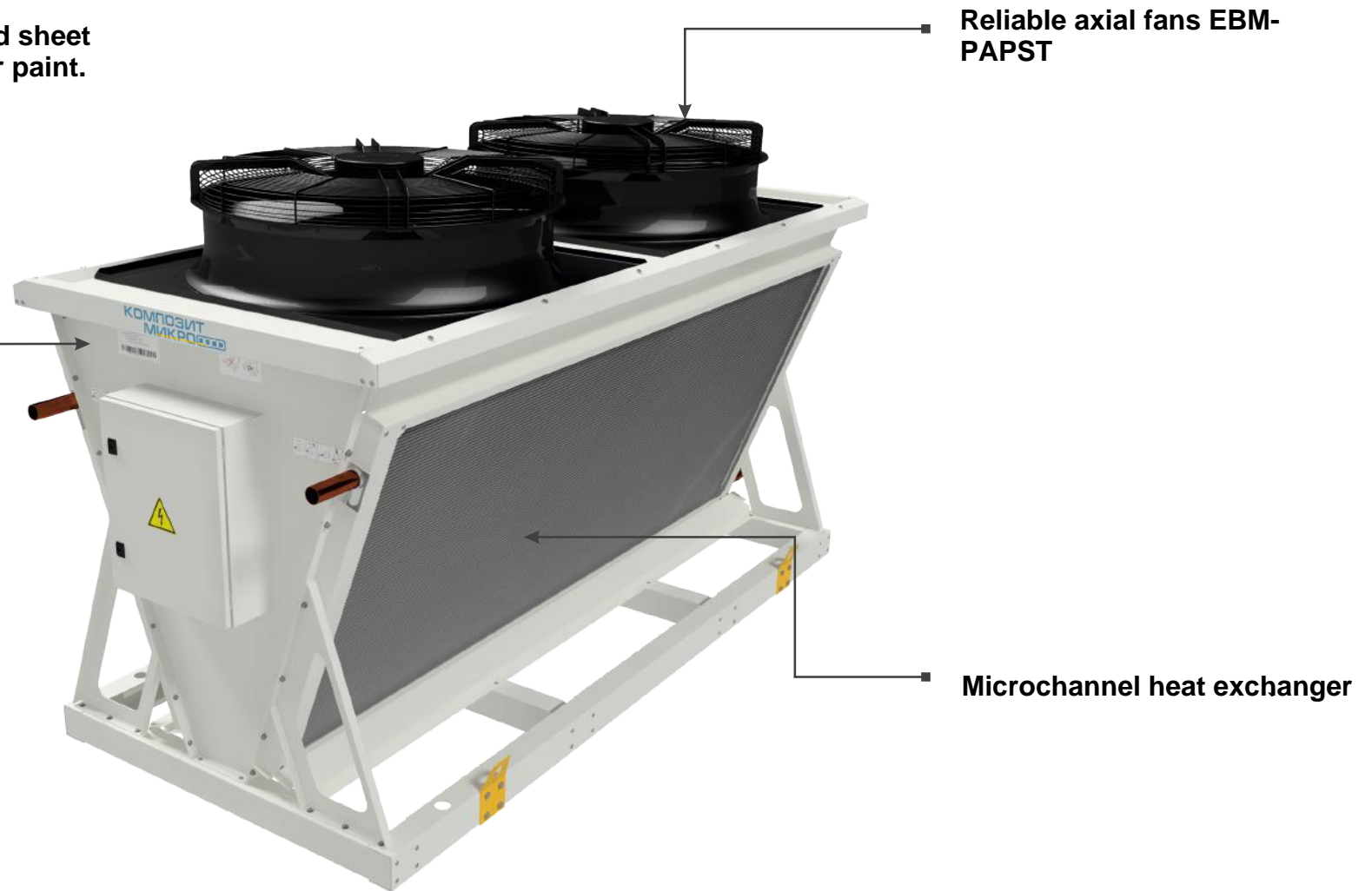
it is a type of heat exchanger  
tubes & fins design,  
consisting of three main elements:

1. Microchannel tubes
2. Louvred cooling plates (fins)
3. Collectors



**AIR-COOLED CONDENSERS BASED ON MICROCHANNEL HEAT EXCHANGERS ARE SPECIALLY DESIGNED FOR INDUSTRIAL AND COMMERCIAL REFRIGERATION SUPPLY. CAPACITORS CAN BE MADE IN HORIZONTAL, VERTICAL OR V-SHAPED.**

The body is made of galvanized sheet steel and coated with polyester paint.



# MODERN MANUFACTURING



CNC EDM, super drill - CHMER (Taiwan))



Machining center - Yamasaki Mazak Corporation (Japan)



Equipment for laser cutting - firm «TRUMPF» (Germany-Switzerland)



CNC bending machine - TRUMPF (Germany-Switzerland)



Automatic lathe RC-42 - Ray Feng Machine (Thailand)



Cooling plate manufacturing line - Voss Manufacturing Inc (USA)

# THE «Nocolok» TECHNOLOGY



Nitrogen producing station - firm «Linde» (Germany)



Installation of thermal degreasing - firm "Sellacan" (Germany)



Flux application units - Sellacan (Germany)



Chamber-type brazing furnaces - Sellacan (Germany)



Robotic complex RRMK-602 for arc welding - firm "IGM" (Austria)



Tactical brazing furnace ACTIVE Only® - SECO/WARWICK (Poland)

# NEW EQUIPMENT 2020-2022 г



CNC vertical milling machines - KNUTH firm (Germany) - 5 pcs.



Fin machine - PARCO (Taiwan) - 3 pcs.



Flux Coating Machine - PARCO (Taiwan)



Machine for stamping parts of the skeleton - PARCO (Taiwan)

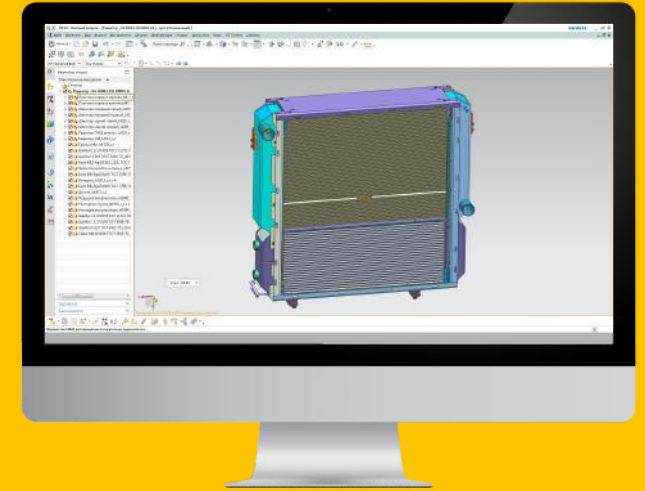
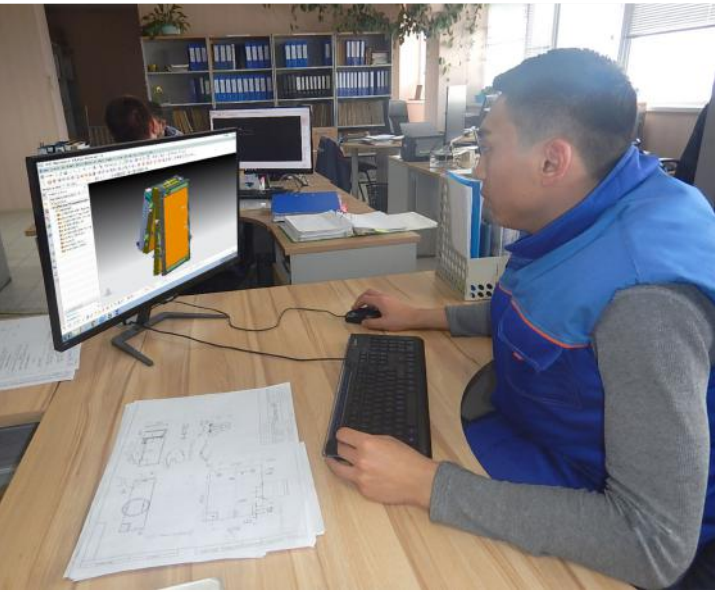


helium heat exchanger testing trend - JDM (China)



Stand for assembling the core of the heat exchanger - PARCO (Taiwan)

# own engineering center - development and implementation of new products



- Design of heat exchangers
- Research work
- Calculations and modeling
- Testing and Verification
- Technical and technological solutions
- Design and manufacture of tooling
- Technical support and cooperation with customers



## RADIATORS TESTS TYPES:

- Aerodynamic tube
- Shock stand
- Bursting tests
- Hardness tests
- Detail measurements (micrometer)
- Rejection (measuring microscope)
- Chemical research of materials

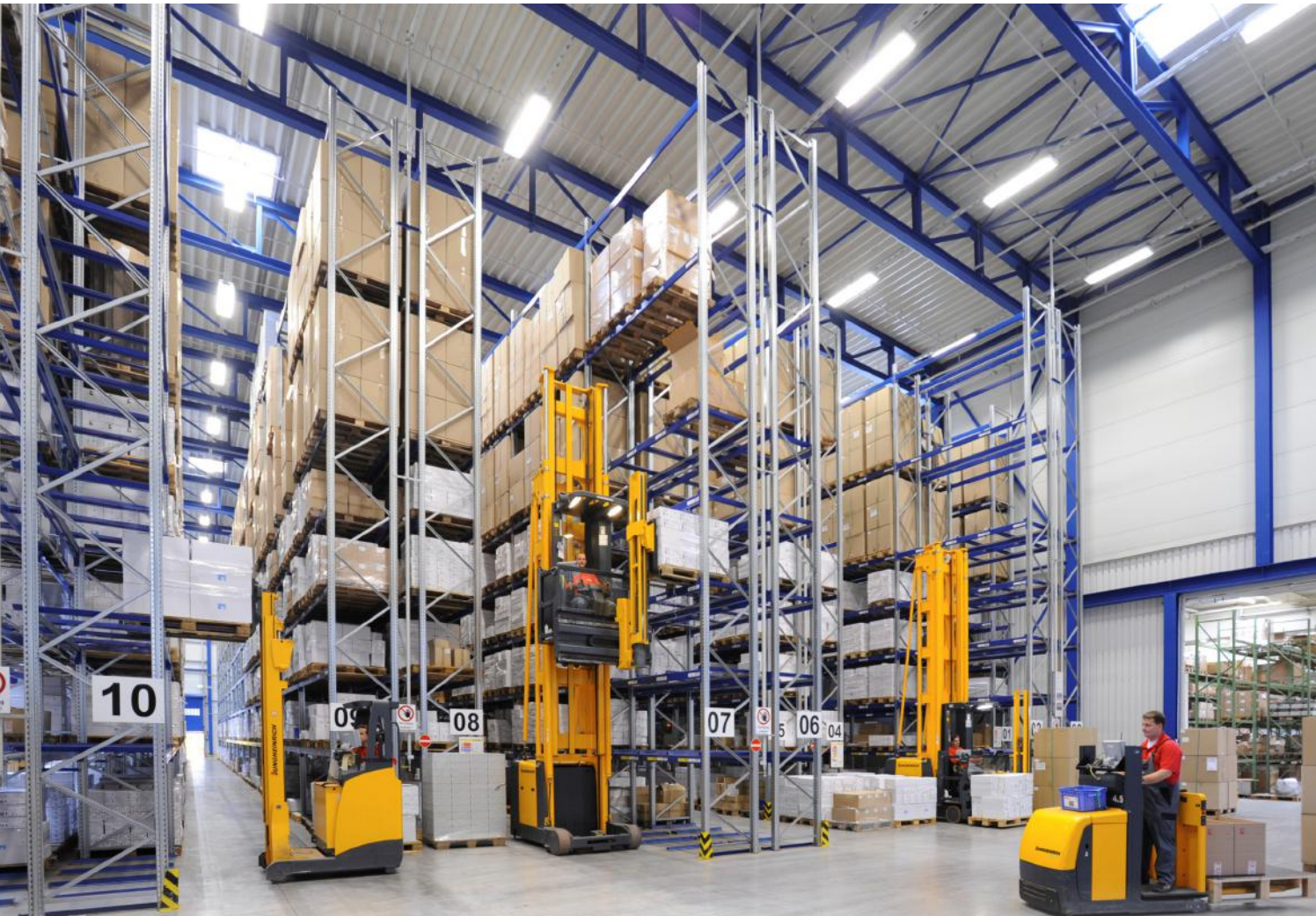






Original engineering solutions are embodied in the design features of HEAT EXCHANGERS and are protected by patents of the KYRGYZ REPUBLIC





FINISHED PRODUCTS WAREHOUSES

3200 M<sup>2</sup>



MATERIALS WAREHOUSES

9100 M<sup>2</sup>

# FACTORY EMPLOYEES



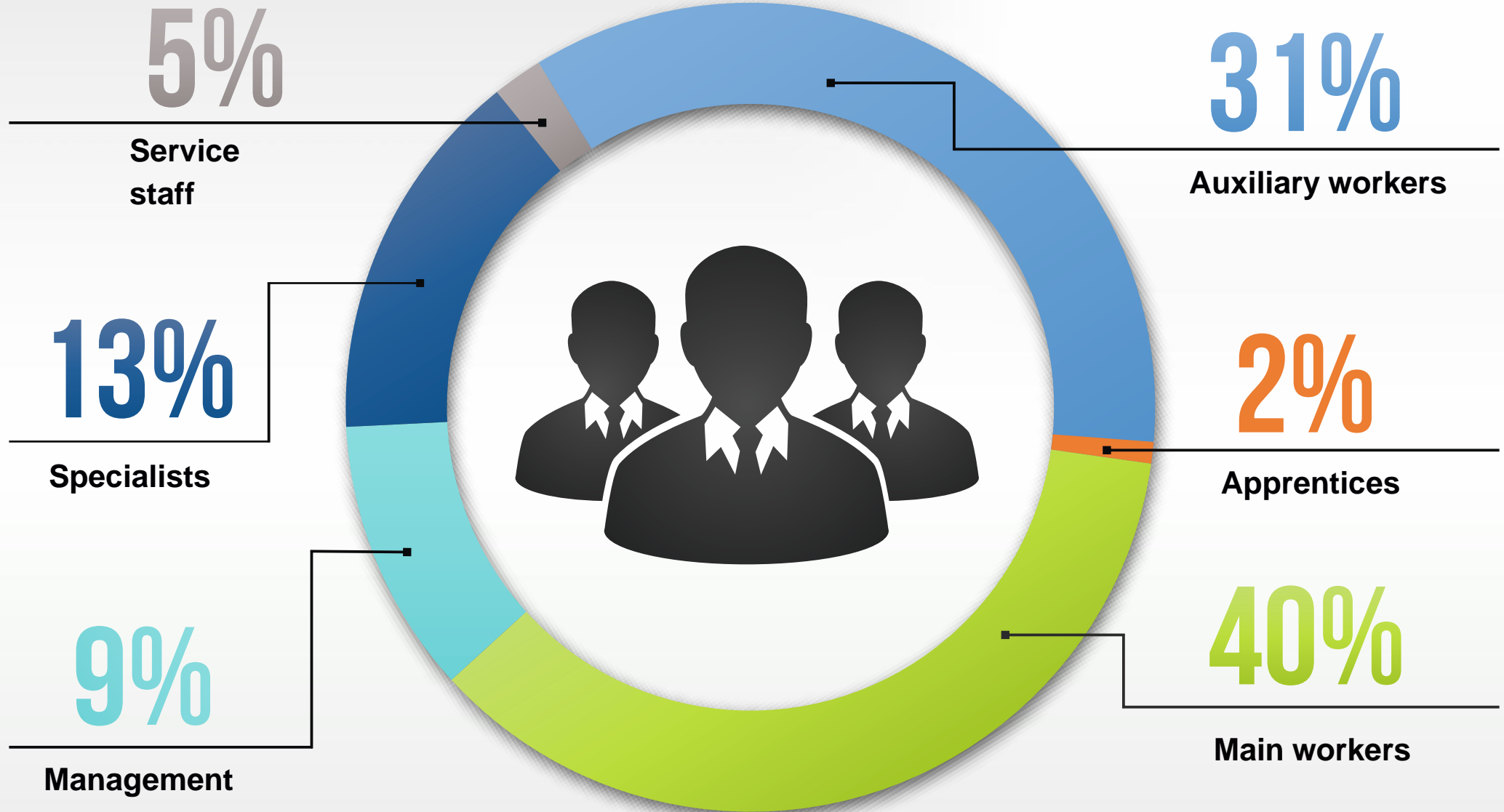
TOTAL  
NUMBER  
OF  
EMPLOYEES –

**600**

PERSONS



## STAFF DISTRIBUTION STRUCTURE OF THE PLANT



# THANK YOU FOR YOUR ATTENTION



«Avtomash-Radiator» LLC

720031, Kyrgyzstan, Bishkek, Matrosova, 1a

Tel./fax: +996 (312) 910-500

E-mail: [info@ar.kg](mailto:info@ar.kg)

[www.ar.kg](http://www.ar.kg)