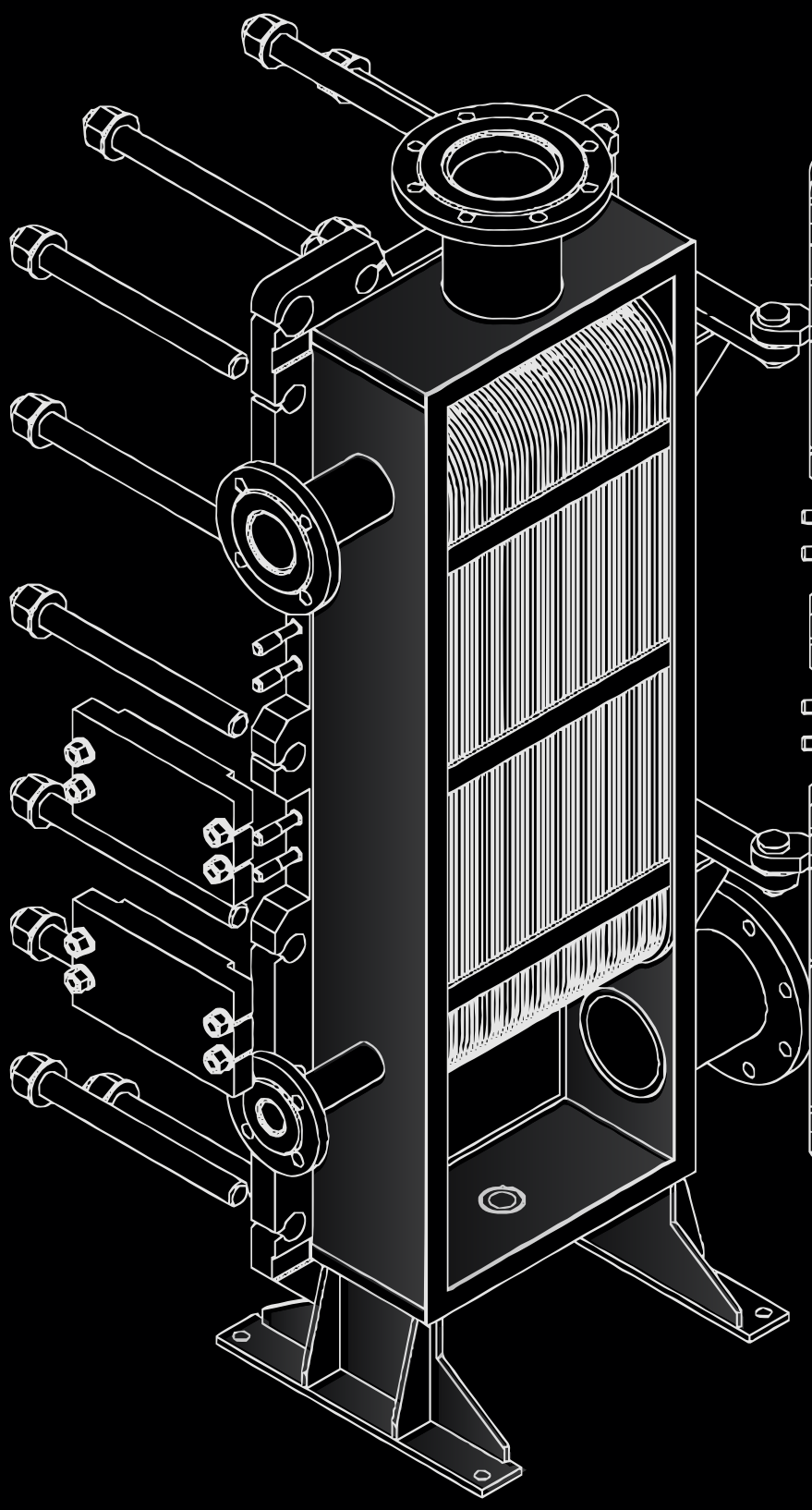
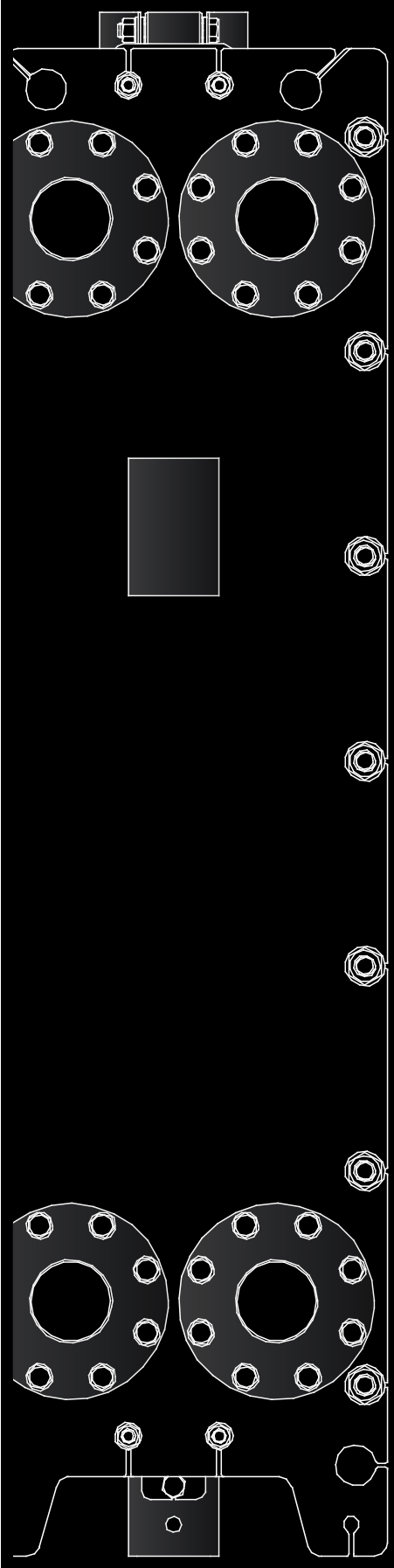
ANKOR
TEPLOENERGO

HEAT EXCHANGERS PRODUCTION



CATALOG



Ankor-Teploenergo - is the company with full production cycle, focused on manufacturing of heat exchangers of any complexity.

The company was founded in early 1991 on the basis of the Kharkov Institute "UKRNDIKHIMMASH" and is one of leading factories in design and manufacture of high-quality heat exchangers in Ukraine, CIS and Eastern Europe.

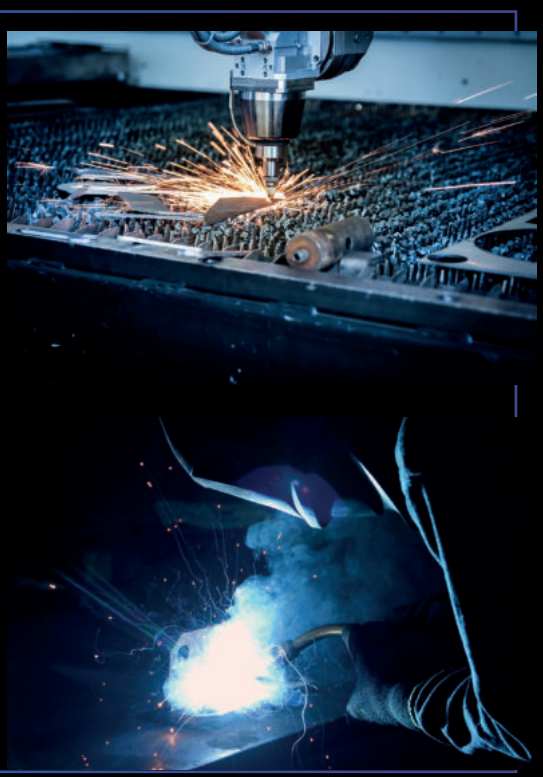
We produce high quality equipment that helps to exchange the heat in various production processes.

Such an equipment is used in almost any factory. Sufficient condition to use it is the necessity to heat or cool various technological mediums.

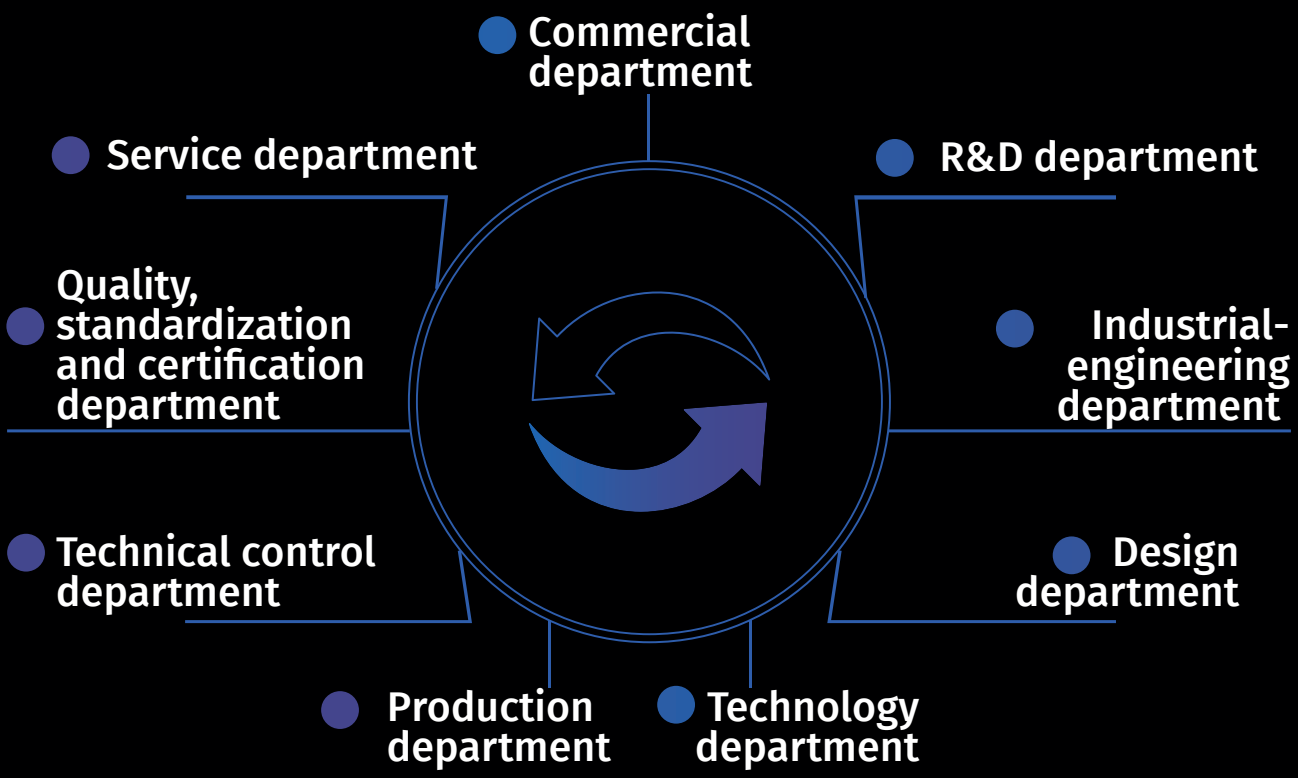
These units are intended, first of all, to save energy resources of the factory, to achieve maximum efficiency and environmental friendliness of the production processes.

WHY CHOOSE US

- Factory prices for heat exchangers and spare parts
- Production of custom heat exchange constructions of own design and according to Customer's technical documentation
- Constant availability of spare parts on stock
- Extended warranty up to 5 years for manufactured equipment
- We produce equipment from qualitative European raw materials
- Own engineering and production capacities
- We are certified according to ISO 9001-2015
- Quality of manufactured production is confirmed by certificates of conformity and with the technical safety regulations of equipment
- 24/7 technical support
- Possibility of service team departure to the equipment operation place
- We are able to provide the energy expertise of customer factories by our engineers anywhere in Ukraine
- Worldwide shipping



FULL CYCLE PRODUCTION COMPANY



ANKOR-TEPROENERGO IN NUMBERS

28 years
successful experience in heat transfer

16 000 over
units taken into operation

30 over
industry branches of heat exchange equipment use

5 000 over
partners trust us

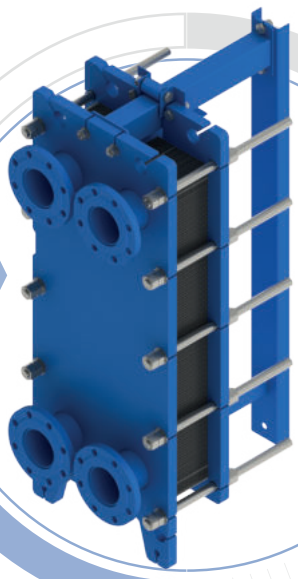
100 over
copyright certificates and patents for the heat exchangers design

1 200 over
competitors' units were restored

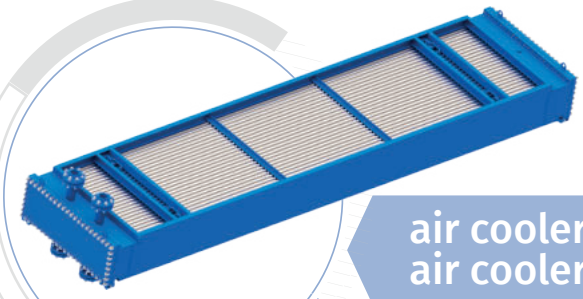
MAIN PRODUCT LINE OF ANKOR-TEPLOENERGO HEAT EXCHANGERS

Heat exchangers manufactured by Ankor-Teploenergo solve any technical tasks for positions of coolers, condensers, heaters and evaporators.

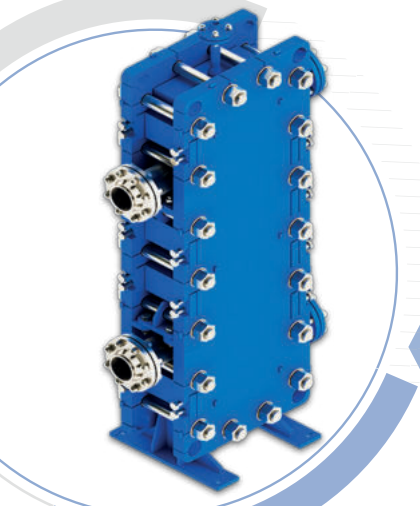
brazed
heat exchangers



gasketed
heat exchangers



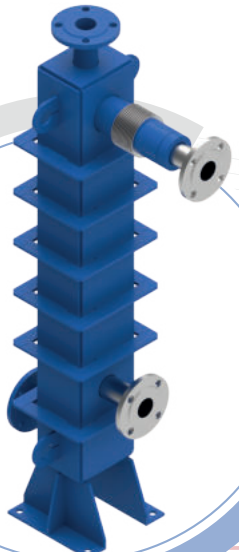
air coolers and
air cooler sections



spiral
heat exchangers

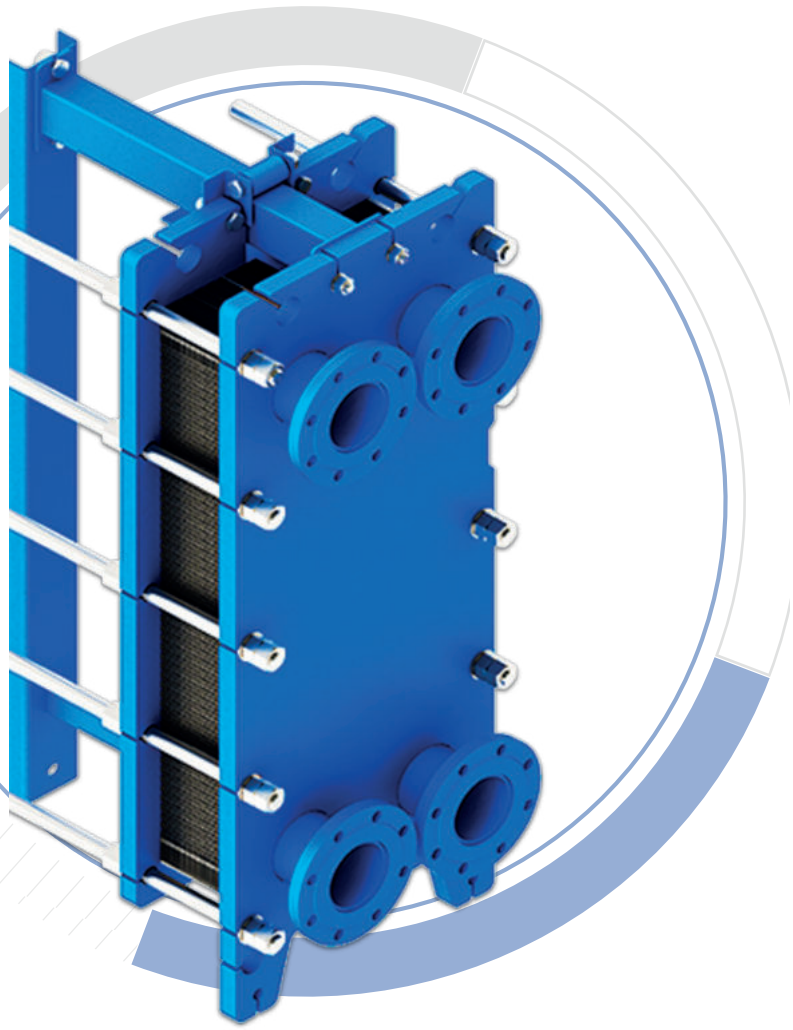
welded
heat exchanger
with removable shell

fully welded
heat exchangers



shell and tube
heat exchangers

GASKETED PLATE HEAT EXCHANGERS



TECHNICAL SPECIFICATION

- temperature range -30...+200 °C
- maximum working pressure 2,5 MPa
- plate surface area 0,016 - 2,1 m²
- unit surface area from 0,18 to 1800 m²
- DN connections 32 - 500 mm
- maximum flow rate 3500 м³/ч
- over 40 standard sizes

ADVANTAGES

1. ergonomics
2. wide range of materials used
3. possibility of capacities increasing
4. replaceability of any structural element (high maintainability)
5. access for mechanical cleaning, revisions, repairs

FUNCTION

- HEATING
- COOLING
- PASTEURIZATION
- RECUPERATION
- CONDENSATION

STRUCTURE OF GASKETED PLATE HEAT EXCHANGERS

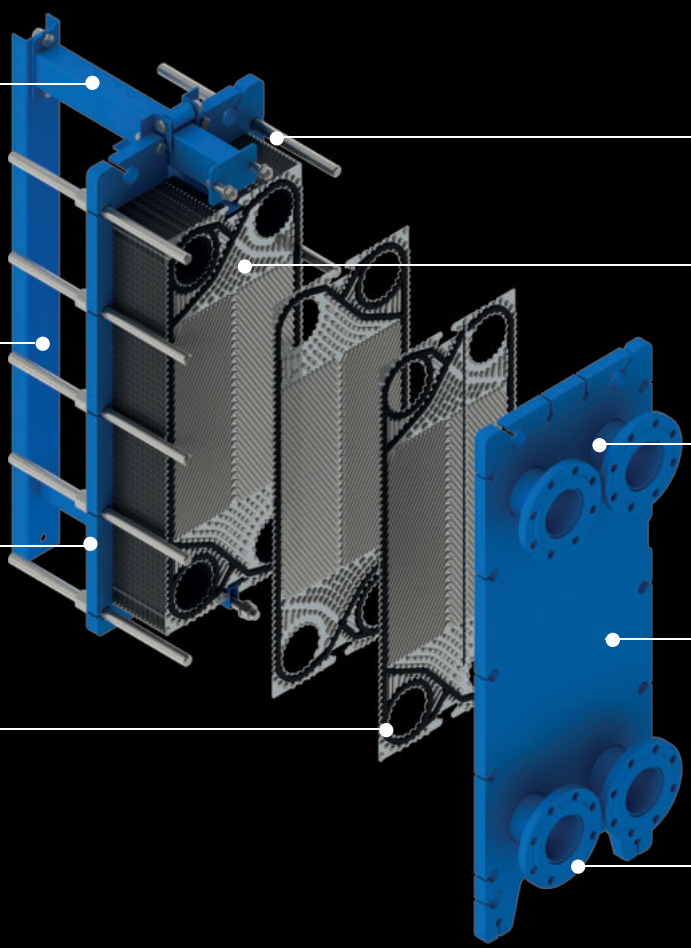


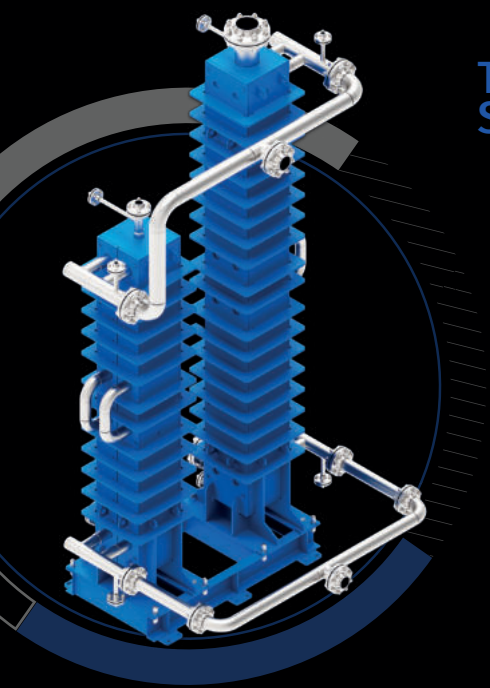
PLATE MATERIALS MODIFICATION

AISI 316	Hastelloy C-276
AISI 316L	Titanium
SMO 254	Nickel 200

GASKET MATERIALS

NBR	oil and fuel resistant <130°C
EPDM	heat resistant <160°C
VITON	acid resistant/heat resistant <200°C

FULLY WELDED PLATE HEAT EXCHANGERS

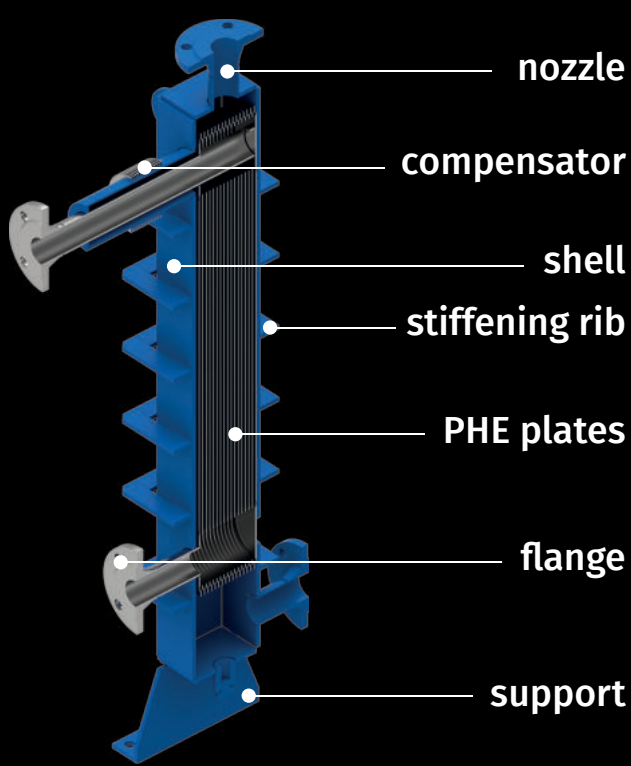


TECHNICAL SPECIFICATION

- temperature range -100...+650 °C
- maximum working pressure 12 MPa
- heat exchanger surface area from 0,1 to 3000 m²
- maximum flow rate 10000 m³/h
- plate surface area 0,033 – 2,5 m²
- DN connections 10 – 1000 mm
- plate number up to 1800 pcs
- plate thickness 1–1,5 mm

FUNCTION

heating	cooling	recuperation	evaporation	condensation
reboiler	utilizer	economizer	calorifier	



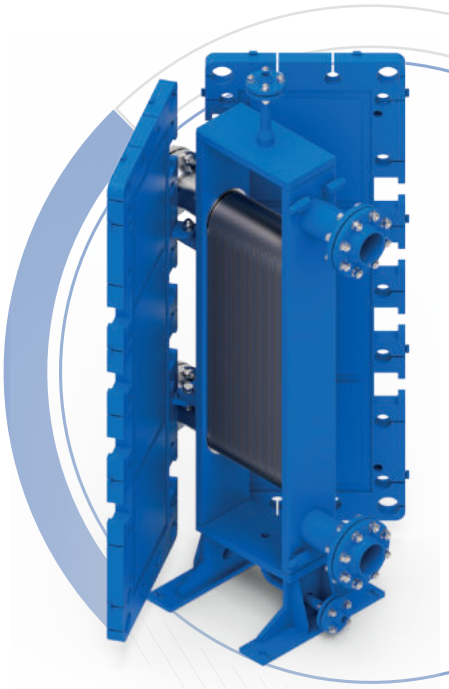
ADVANTAGES

1. high reliability unit
2. absence of rubber gaskets
3. operation in aggressive and hazardous environments
4. ability to vary length and width of PHE plate
5. design life is over 20 years
6. compensation of temperature expansions

WELDED PLATE HEAT EXCHANGER WITH REMOVABLE SHELL

TECHNICAL SPECIFICATION

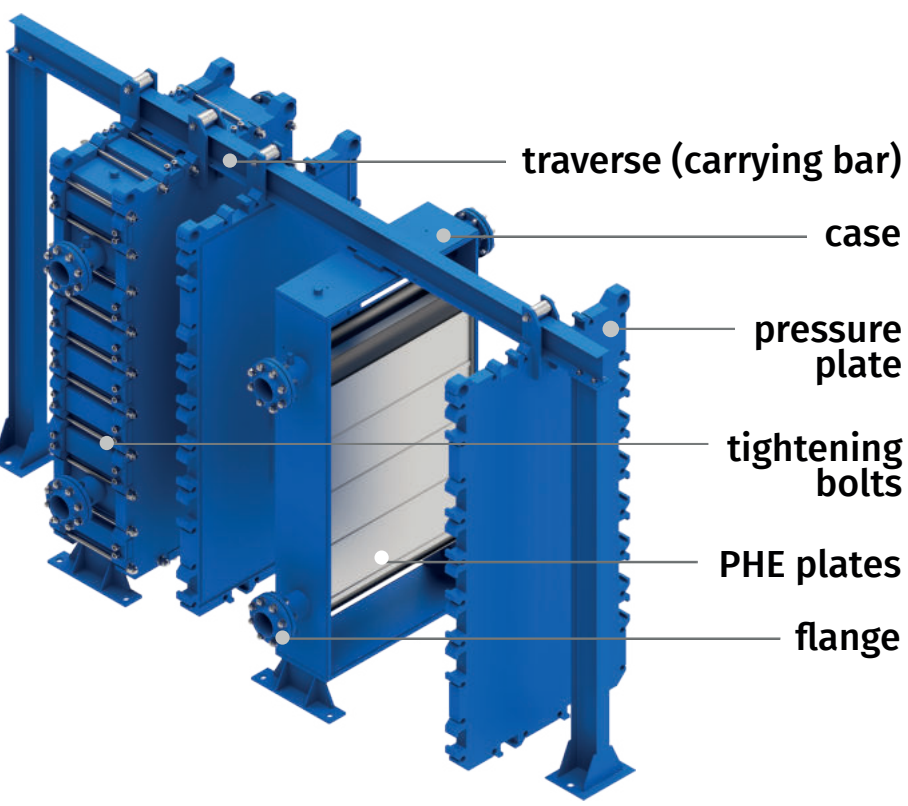
- temperature range -100...+650 °C
- maximum working pressure 10 MPa
- heat exchanger surface area from 0,1 to 3000 m²
- maximum flow rate 10000 m³/h
- plate surface area 0,033 – 2,5 m²
- DN connections 10 – 1000 mm
- plate number up to 1800 pcs
- plate thickness 1–1,5 mm



FUNCTION

heating | cooling | recuperation | evaporation | condensation

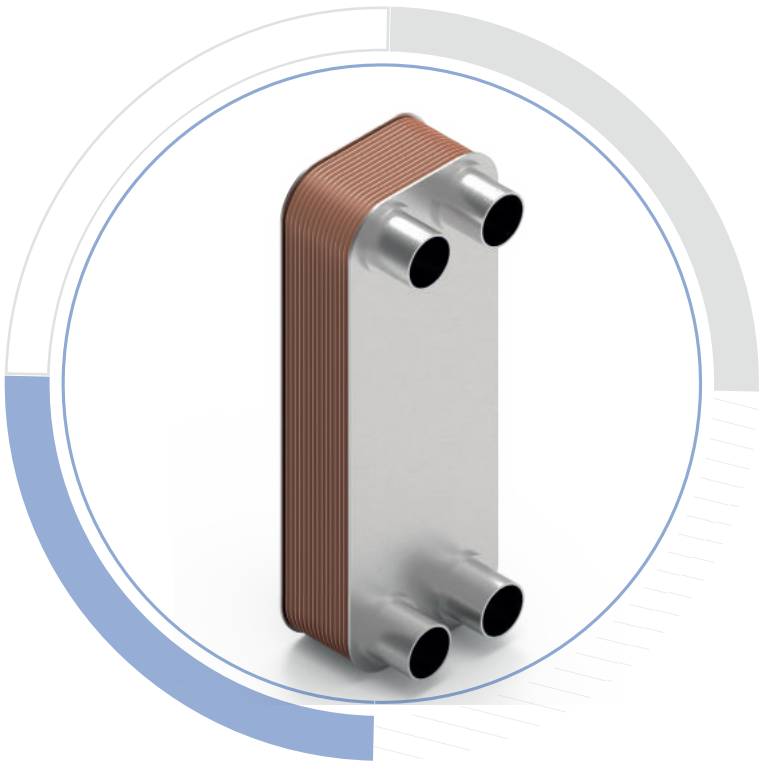
reboiler | utilizer | economizer | calorifier



ADVANTAGES

1. high reliability unit
2. absence of rubber gaskets
3. operation in aggressive and hazardous environments
4. ability to vary length and width of PHE plate
5. design life is over 20 years
6. access to PHE's plate pack for mechanical cleaning, revision, repairs
7. compensation of temperature expansions

BRAZED HEAT EXCHANGERS



ADVANTAGES

1. compact
2. high-performance
3. absence of rubber gaskets
4. delivery time from 2 days

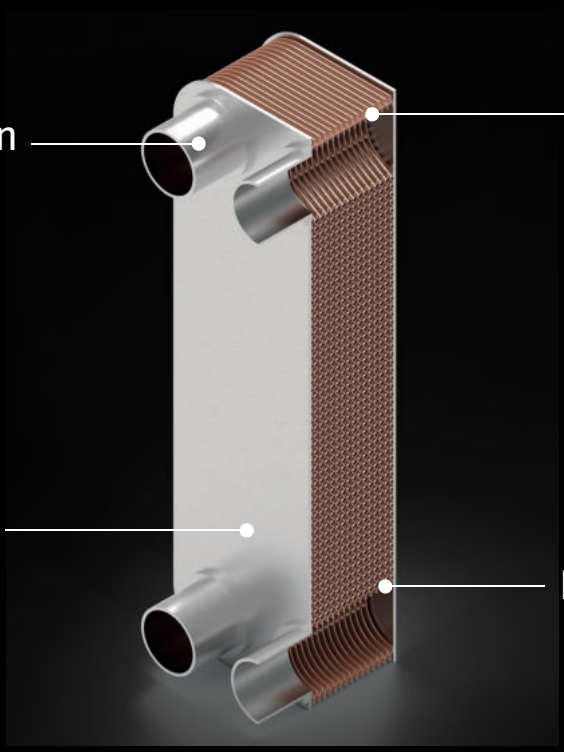
FUNCTION

- HEATING
- COOLING
- PASTEURIZATION
- RECUPERATION
- CONDENSATION

TECHNICAL SPECIFICATION

- temperature range -195... +230 °C
- maximum working pressure up to 4,5 MPa
- unit surface area up to 180 m²
- maximum flow rate 150 m³/h

STRUCTURE OF BRAZED HEAT EXCHANGERS



PLATES MATERIALS

- AISI 304L
- AISI 316L

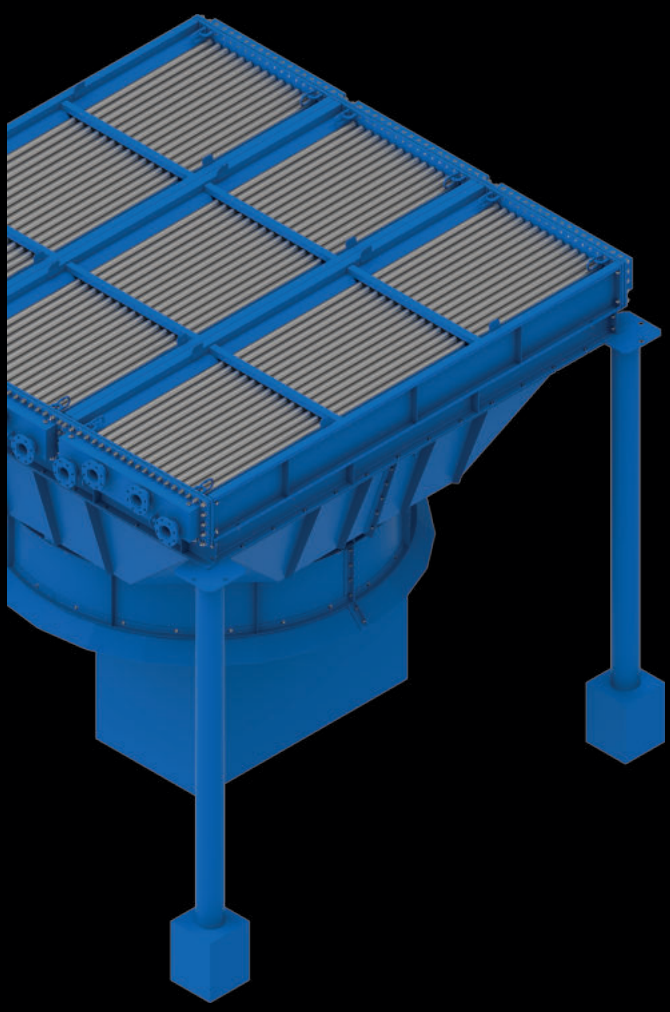
SOLDER MATERIALS

- copper-nickel
- stainless steel

CONNECTIONS TYPES

1. branch pipe for solder/welding
2. external thread
3. flange connection

AIR COOLERS



TECHNICAL SPECIFICATION

- temperature range from ambient temperature to +400 °C
- maximum working pressure 16 MPa
- surface area up to 7500 m²
- DN connections up to 350 mm

FUNCTION

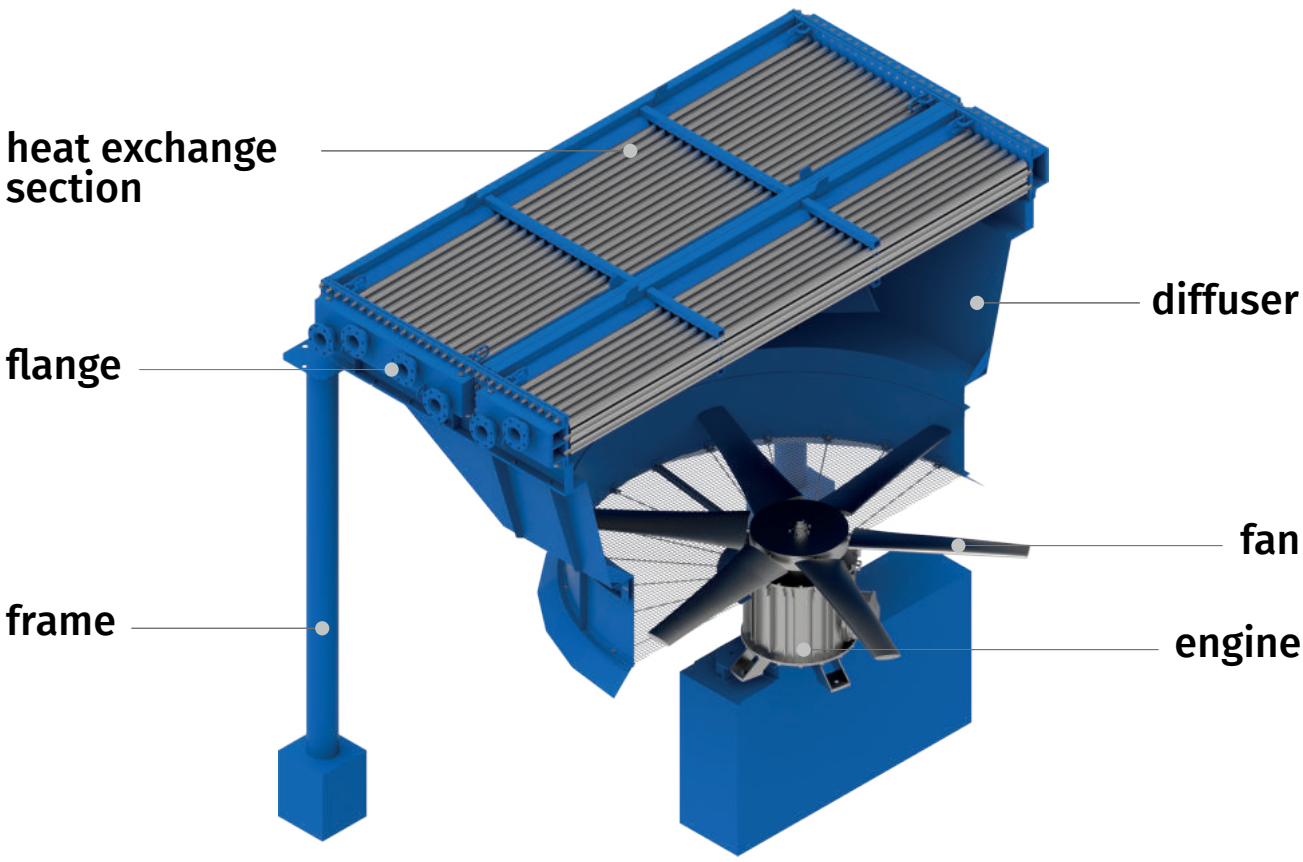
COOLING GASES AND LIQUIDS

CONDENSATION

ADVANTAGES

1. provides cooling far from natural sources of water
2. no problems with corrosion and fouling related with the use of cooling water
3. ability to install in almost any climate and natural areas
4. relatively low operating costs
5. no probability of mixing water with refrigerated mediums
6. environmental friendly equipment (almost no impact on environment)

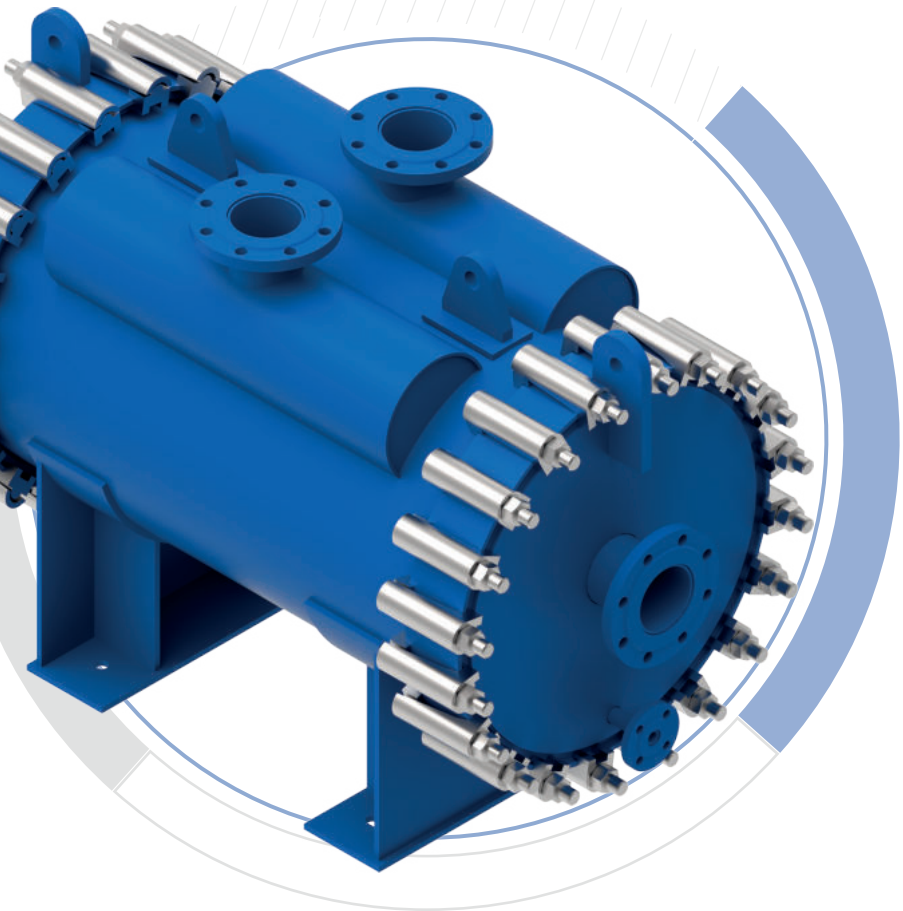
STRUCTURE OF AIR COOLERS



MATERIAL MODIFICATION OF HEAT EXCHANGE TUBES

- CARBON STEELS AND ALLOYS
- LOW-ALLOYED STEELS AND ALLOYS
- STAINLESS STEELS AND ALLOYS
- COPPER
- BRASS
- TITANIUM

SPIRAL HEAT EXCHANGERS



TECHNICAL SPECIFICATION

- temperature range -70... +400 °C
- maximum working pressure up to 4,0 MPa
- spiral width up to 2000 mm
- unit surface area up to 1500 m²
- DN connections up to 400 mm
- maximum flow rate 2000 m³/h

ADVANTAGES

1. used in very viscous mediums
2. works with mediums with large mechanical impurities (up to 20 mm)
3. can be cleaned on both sides

FUNCTION

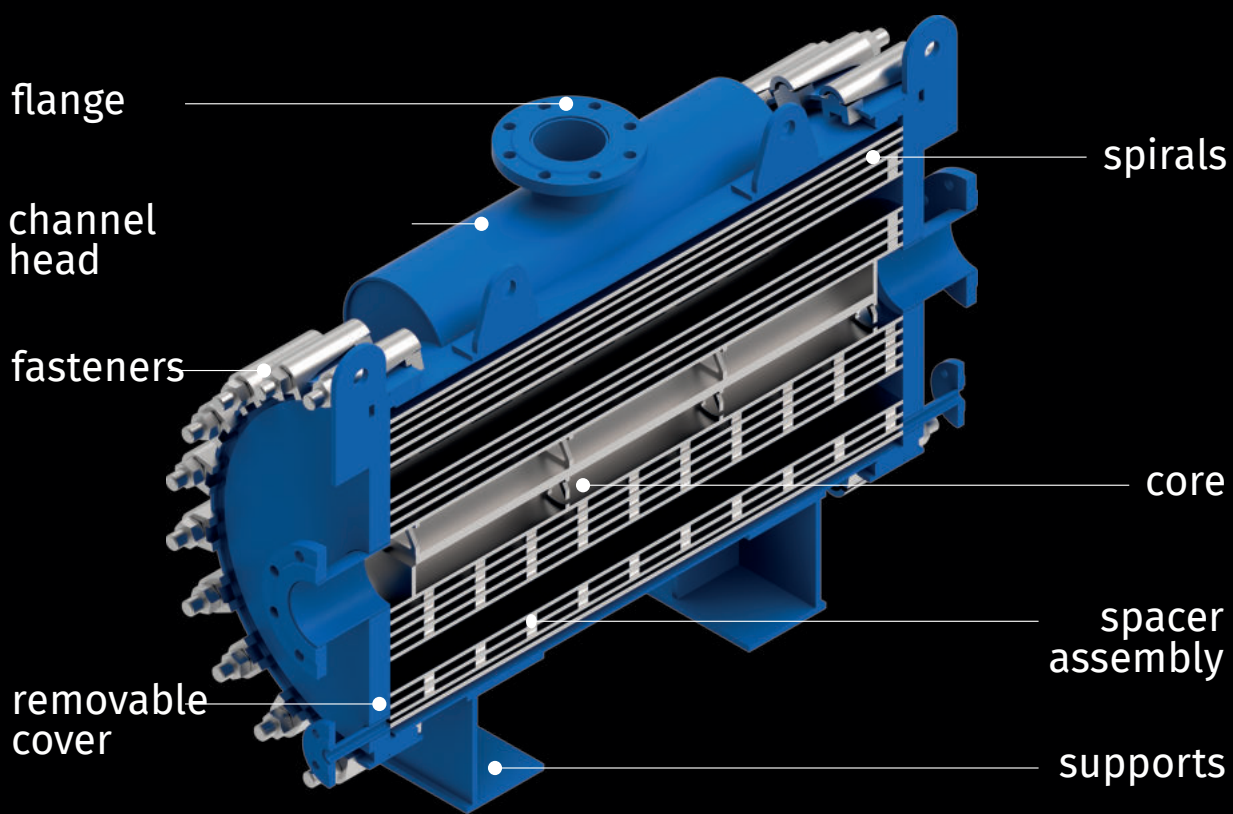
- HEATING
- COOLING
- RECUPERATION

STRUCTURE OF SPIRAL HEAT EXCHANGERS

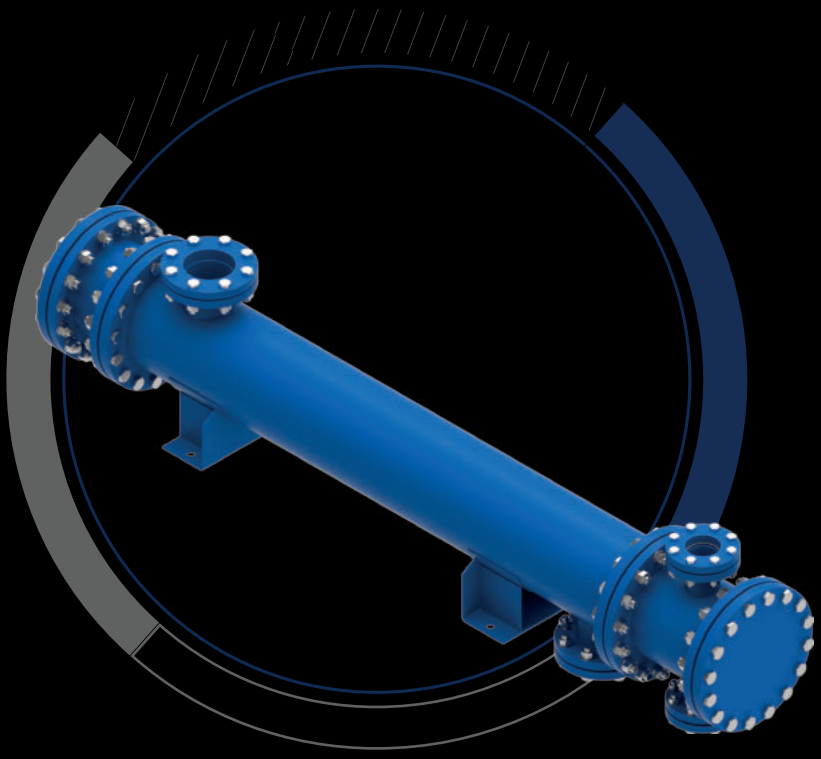
MATERIAL MODIFICATION

- AISI 316
- AISI 316L
- SMO 254

- Hastelloy C-276
- Titanium
- Carbon steel (casing)



SHELL AND TUBE HEAT EXCHANGERS



TECHNICAL SPECIFICATION

- temperature range -100... +700°C
- maximum working pressure up to 21,0 MPa (above – special design)
- Unit surface area up to 6000 m²
- maximum flow rate 4000 m³/h
- DN connections up to 1400 mm

FUNCTION

- HEATING
- COOLING
- RECUPERATION
- EVAPORATION
- CONDENSATION
- UTILIZER

ПРЕИМУЩЕСТВА

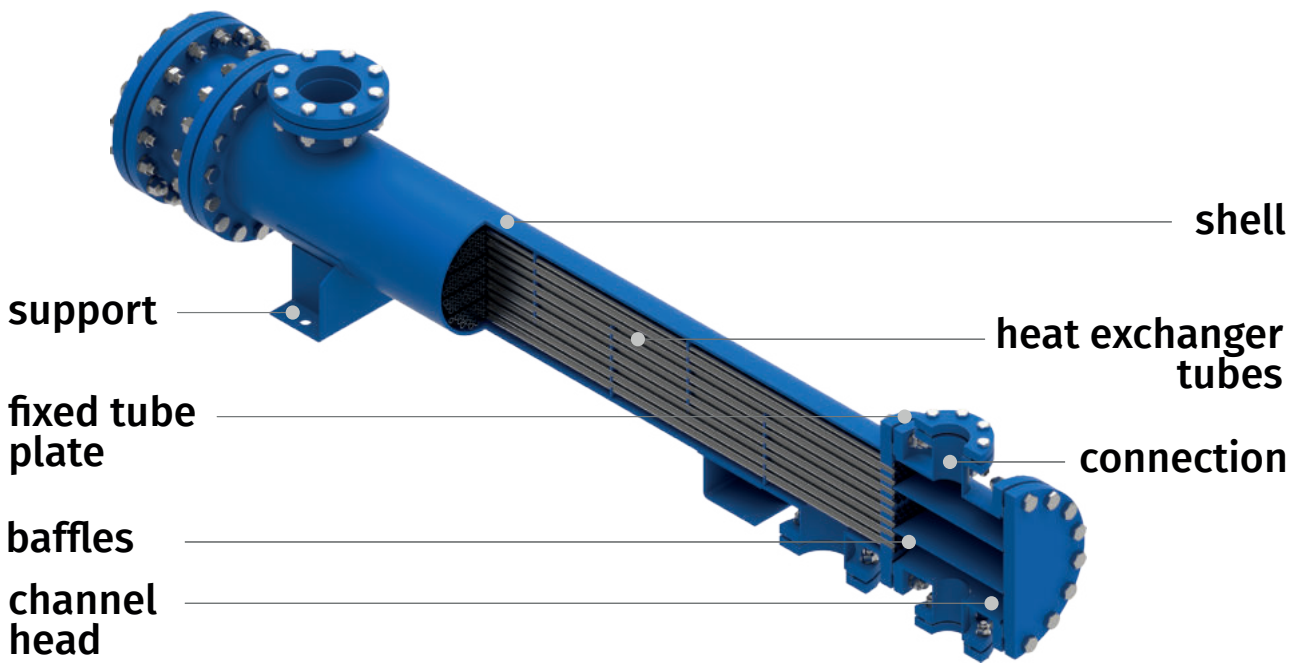
1. resistance to high pressure and temperature
2. compensation of temperature expansions
3. resistance to sudden pressure drops
4. provides low hydraulic resistance
5. durability
6. applying on aggressive and hazardous environments
7. increased reliability
8. mechanical cleaning of pipe side

STRUCTURE OF SHELL AND TUBE HEAT EXCHANGERS

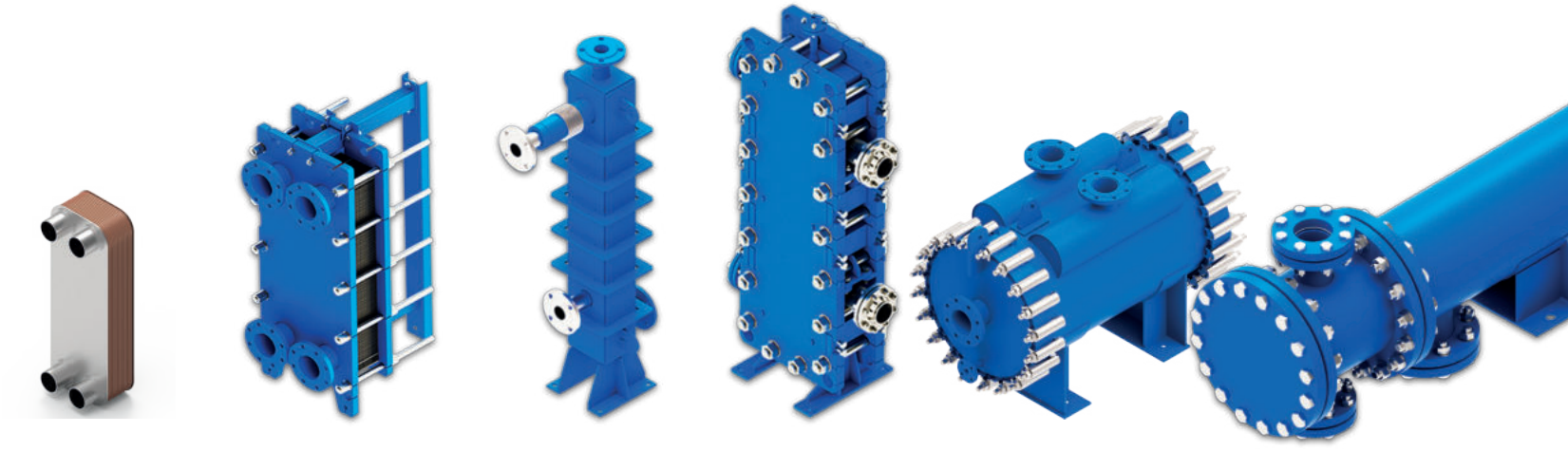
MATERIAL MODIFICATION

- AISI 304
- AISI 316
- Titanium

- copper
- brass
- carbon steel



COMPARISON OF HEAT EXCHANGERS

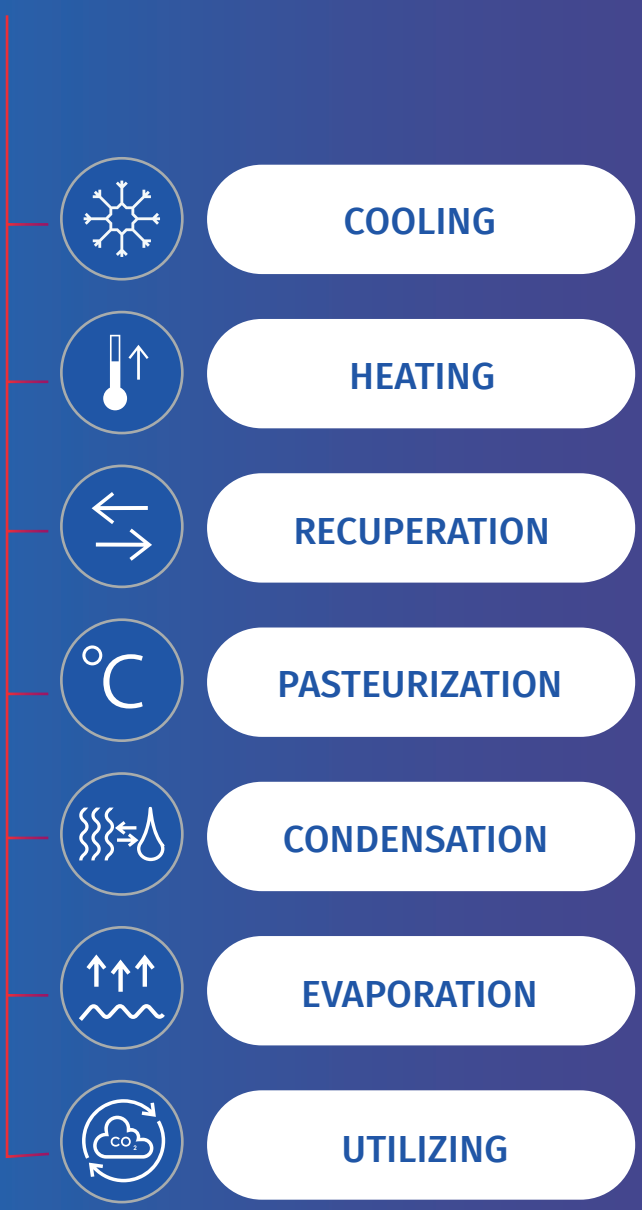


WEIGHT	from 1 kg	from 70 kg	from 80 kg	from 350 kg	from 400 kg	from 150 kg
HEAT EXCHANGE AREA	from 0,1 m²	from 0,16 m²	from 0,33 m²	from 0,33 m²	from 10 m²	from 3 m²
PURCHASE PRICE	from 75€	from 180 €	from 750 €	from 1000 €	from 2000 €	from 1500€
TEMPERATURE DIFFERENCE (POSSIBLE) BETWEEN HOT SIDE AND OUTLET COLD SIDE	0,5-1 °C	1 °C	1-2 °C	1-2 °C	5-10 °C	no less 5-10 °C
DISASSEMBLY TIME	—	from 15 min	—	from 30 min	from 90 min	from 90 min
USE OF LIFTING AND TRANSPORT MECHANISMS DURING SERVICE	not required	not required	not required	not required	not required	1 - 2 units

MEDIUMS TO APPLY «ANKOR-TEPLOENERGO» HEAT EXCHANGERS

1. WATER
2. STEAM
3. HYDROGEN-CONTAINING MEDIUMS
4. NATURAL GAS
5. AIR
6. ACID
7. ALKALI
8. ALCOHOLIC DRINKS
9. NON-ALCOHOLIC DRINKS
10. DAIRY PRODUCTSTAR
11. GASOLINE
12. OIL
13. FUEL OIL
14. TAR
15. BENZENE
16. METHANOL
17. BRINE
18. GASOIL
19. ANTIFREEZE
20. PROPYLENE GLYCOL

PROCESSES TO APPLY «ANKOR-TEPLOENERGO» HEAT EXCHANGERS



SERVICE — TASK FOR PROFESSIONALS

SERVICE MAINTENANCE PREVENTS:

- distortion of heat exchanger operating mode
- leaking or mixing operating mediums, involved in heat transfer (flows between circuits)
- pressure drops increase during the operation
- additional costs for gaskets and plates
- early failure of heat exchanger

SELF-SERVICE RISKS

1. poor gaskets quality and glued fixing can lead to mediums leaks
2. untimely plate damage identification can lead to loss of production and violation of equipment maintenance safety
3. heat exchanger repair according to the principle “we will carry it out ourselves” leads to a partial or complete replacement of the heat exchanger
4. improper use of chemicals can damage the plates

FULL RANGE OF TURNKEY SERVICES

Ankor-Teploenergo provides service for plate heat exchangers of any manufacturer

TECHNICAL SUPPORT

- operation consultation
- compiling a Service Program
- preliminary expert estimate of the heat exchangers performance

MOUNTING

- heat exchanger delivery
- supervising or mounting of heat exchanger and spare parts
- customer's staff training in the operation of our heat exchangers
- emergency on-site response

SERVICE MAINTENANCE

- heat exchanger diagnostics
- chemical (without disassembly) cleaning
- mechanical (with disassembly) cleaning
- leakage detection
- diagnosis of breakdown cause

SPARE PARTS

- original spare parts from any manufacturer
- availability of spare parts of any manufacturer on stock
- delivery from 2 days

REPLACEMENT

- individual engineering solutions for the client
- upgrading/ replacing an existing heat exchanger to increase the efficiency.
- calculation of the payback of upgrade/replacement
- replacement of "old generation" units with modern, compact and efficient solutions

OUR PARTNERS

Ankor-Teploenergo LLC team is ready to fulfill your task for technical calculation and manufacturing of heat exchange equipment with maximal efficiency and in shortest term.

We are glad to meet new business contacts and we will do everything to make our customers happy of choosing Ankor-Teploenergo as a partner.

ЕНЕРГОАТОМ ENERGOATOM

KERNEL GROUP OF COMPANIES

ORLEN

GENCELL

DTEK

METINVEST

ArcelorMittal

SOCAR

KERNEL GROUP OF COMPANIES

Nortran INŽENJERING ZA BOLJU BUDUĆNOST

PGNiG

AB InBev

ANKOR-TEPLOENERGO LLC
61105, Ukraine, Kharkov,
st. Kyrgyzskaya 19, bldg. 1

SALES DEPARTMENT
+38 (068) 477-75-69
+38 (067) 829 29 46
+38 (067) 506 74 28
+38 (067) 571 83 84
e-mail: phe@ankort.com

CUSTOMER SERVICE
+38 (068) 477-75-69
e-mail: service@ankort.com