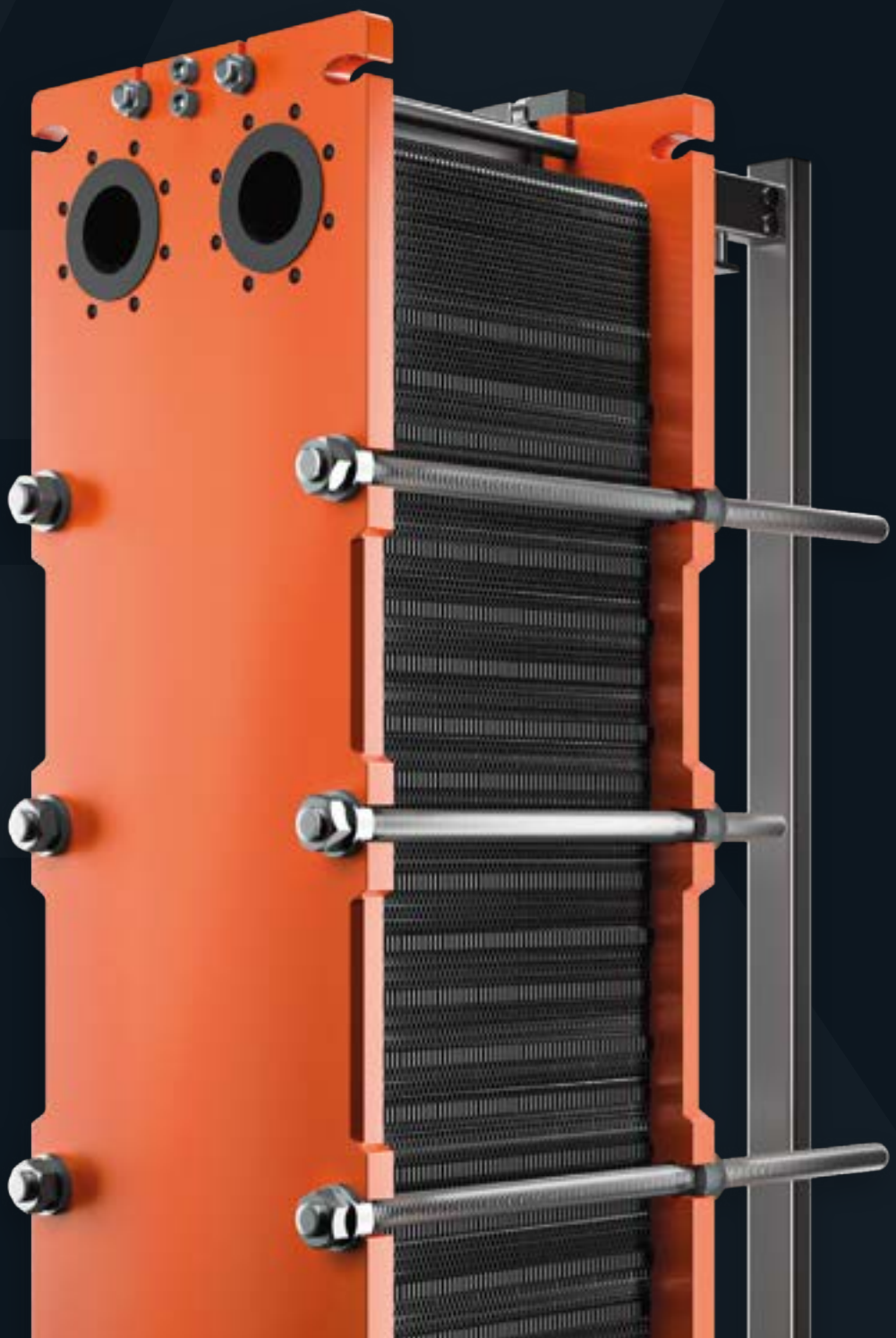
HEXONIC | HEAT EXCHANGERS

JAG

PLATE HEAT EXCHANGERS



JAG

NEW PLATE HEAT EXCHANGER

Driven by a passion for innovation, Hexonic has provided effective heat transfer solutions for most applications. Working closely with our customers, our team of experienced engineers focuses on inventing new products and solutions in search of the most efficient ways of heat transfer. Our team of experienced engineers driven by passion for innovation gained knowledge across diverse market segments.

From that passion a new product has been born – JAG Plate Heat Exchanger with inventive jagged pattern of a heating plate.

Breaking new ground solution brings not only enhanced flow turbulence but also increased heat exchange area. Together it gives more compact, lighter but most of all more efficient device which can be customized to your individual requirements. Highly efficient JAG Plate Heat Exchanger will become a long-life dependable solution for your applications.

APPLICATIONS

CHEMICAL INDUSTRY

FOOD & BEV INDUSTRY

HVAC-R

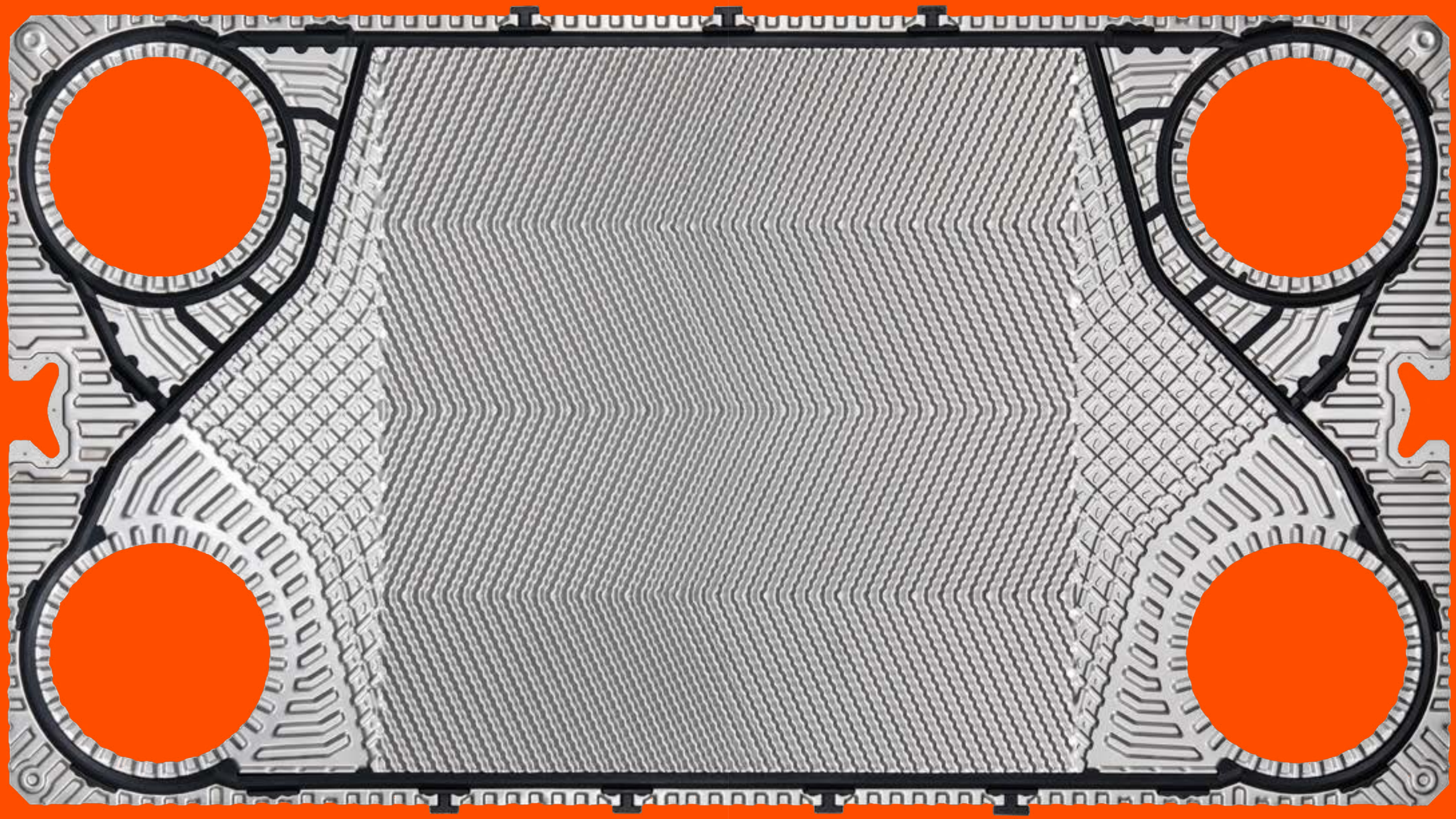
IRON AND STEEL INDUSTRY

PULP & PAPER INDUSTRY

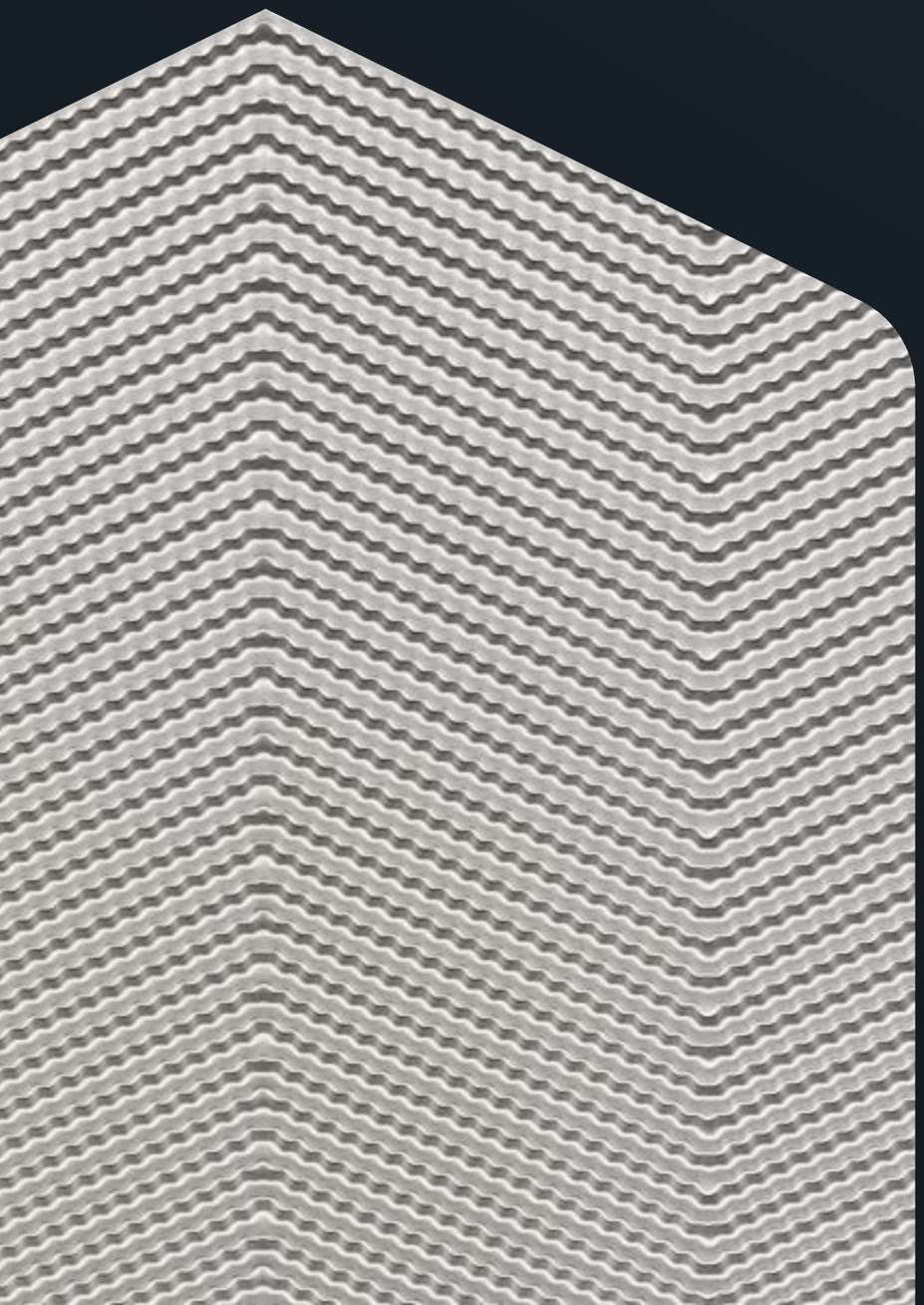
MARINE INDUSTRY

POWER

PHARMACEUTICAL INDUSTRY



INGENIOUS PATTERN



JAGGED
/ˈdʒɑgɪd/
WITH ROUGH, SHARP POINTS PROTRUDING

THE INNOVATIVE JAG HEATING PLATE CORRUGATION PATTERN, DEVELOPED THROUGH EXTENSIVE PRODUCT RESEARCH, ENABLES A MORE COMPACT, LIGHTER AND, ABOVE ALL, MORE EFFICIENT EXCHANGER.

In search of optimal strength and thermal characteristics of the JAG geometry, a series of computational fluid dynamic analyses were performed. Together with other calculations and tests of prototypes they allowed to determine the precise channel performance in a plate heat exchanger.

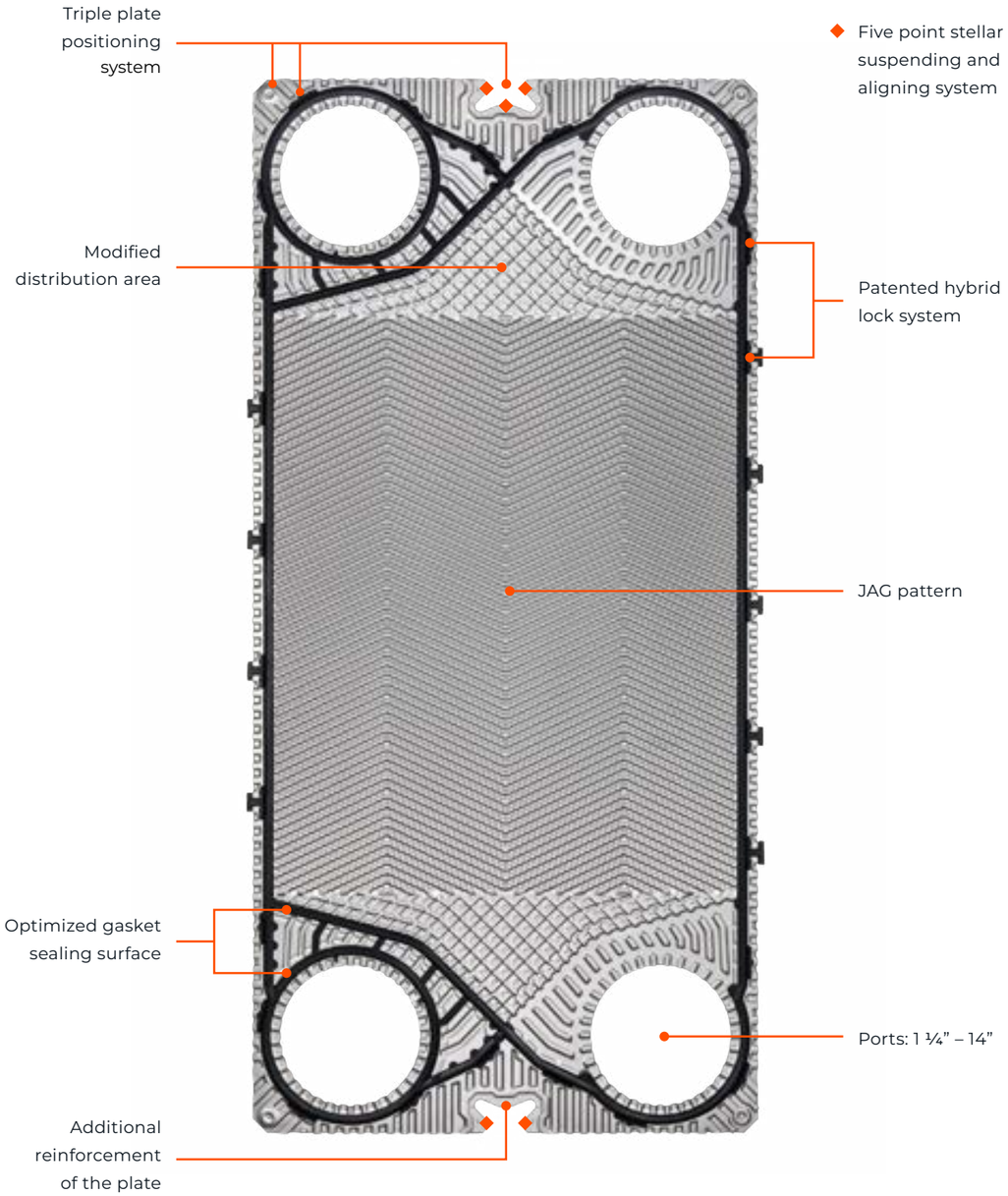
Final tests confirmed that designed by Hexonic innovative corrugation JAG pattern combined with specially modelled plate geometry delivers up to 10% higher efficiency than the standard one. It is designed to substantially increase heat exchange as the “jagged” channels boost flow turbulence which enhances heat transfer, and reduces fouling. Furthermore, the design brings a bigger exchange area and general pressure drop levels are reduced.

Ingenious JAG technology brings you cutting-edge solutions within one plate.

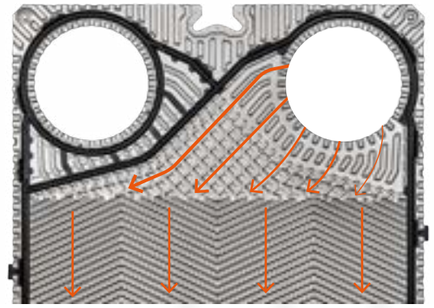
- INNOVATIVE CORRUGATION DESIGN
- 10% UP TO 10% HIGHER HEAT TRANSFER EFFICIENCY
- ENHANCED FLOW TURBULENCE
- 10% UP TO 10% LOWER PRESSURE DROP FOR HIGH FLOW PATTERN
- DECREASED FOULING
- INCREASED HEAT EXCHANGE AREA
- INCREASED PLATE DURABILITY

JAG PLATE

REINVENTED



SPECIAL PLATE FEATURES



MODIFIED DISTRIBUTION AREA

Additionally corrugated distribution area is designed to enhance turbulent flow in the entrance part of the plate. It also allows even flow through the plate which increases heat transfer by optimal use of its surface area.

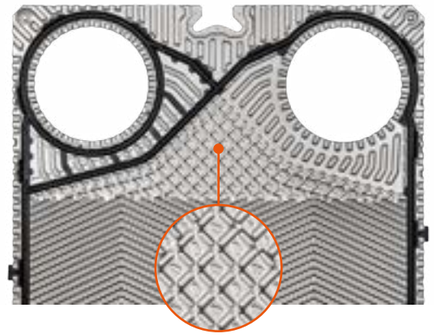
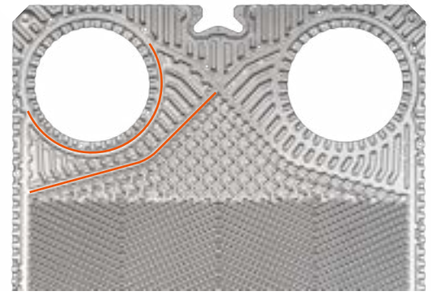


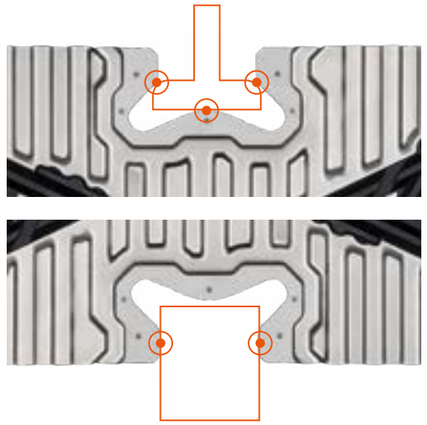
PLATE REINFORCEMENT

Specifically corrugated distribution area strengthens the plate and increases the stability of the whole construction.



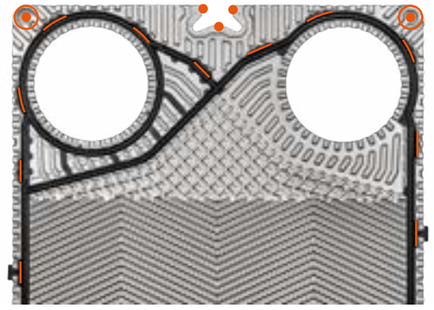
OPTIMIZED GASKET SEALING SURFACE

Carefully designed groove together with specially modelled gasket makes the exchanger withstand high pressure.



FIVE POINT STELLAR SUSPENDING AND ALIGNING SYSTEM

Five point suspending and aligning system ensures excellent alignment of the plates packet and guarantees correct sealing of the exchanger.



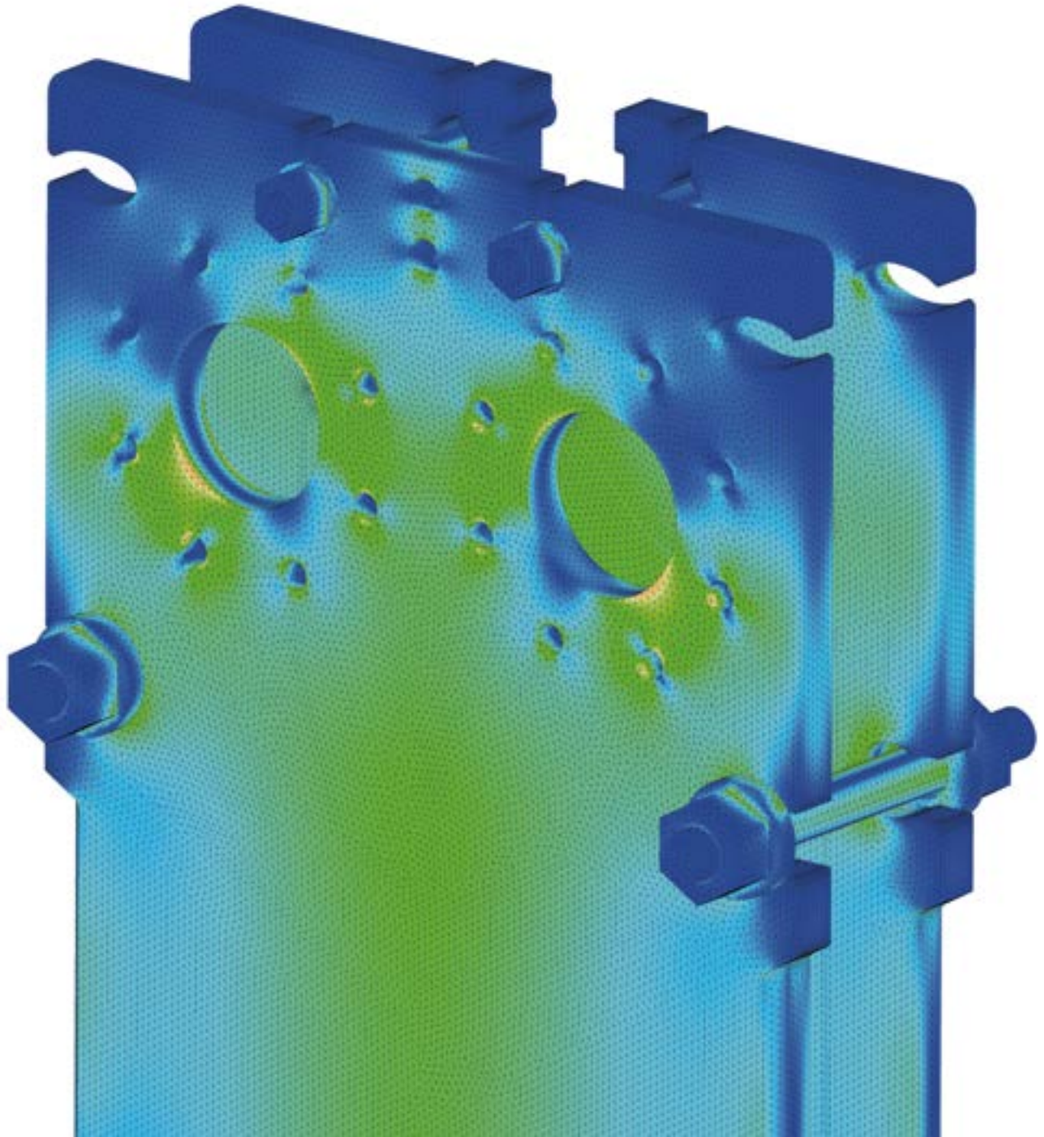
TRIPLE PLATE POSITIONING SYSTEM

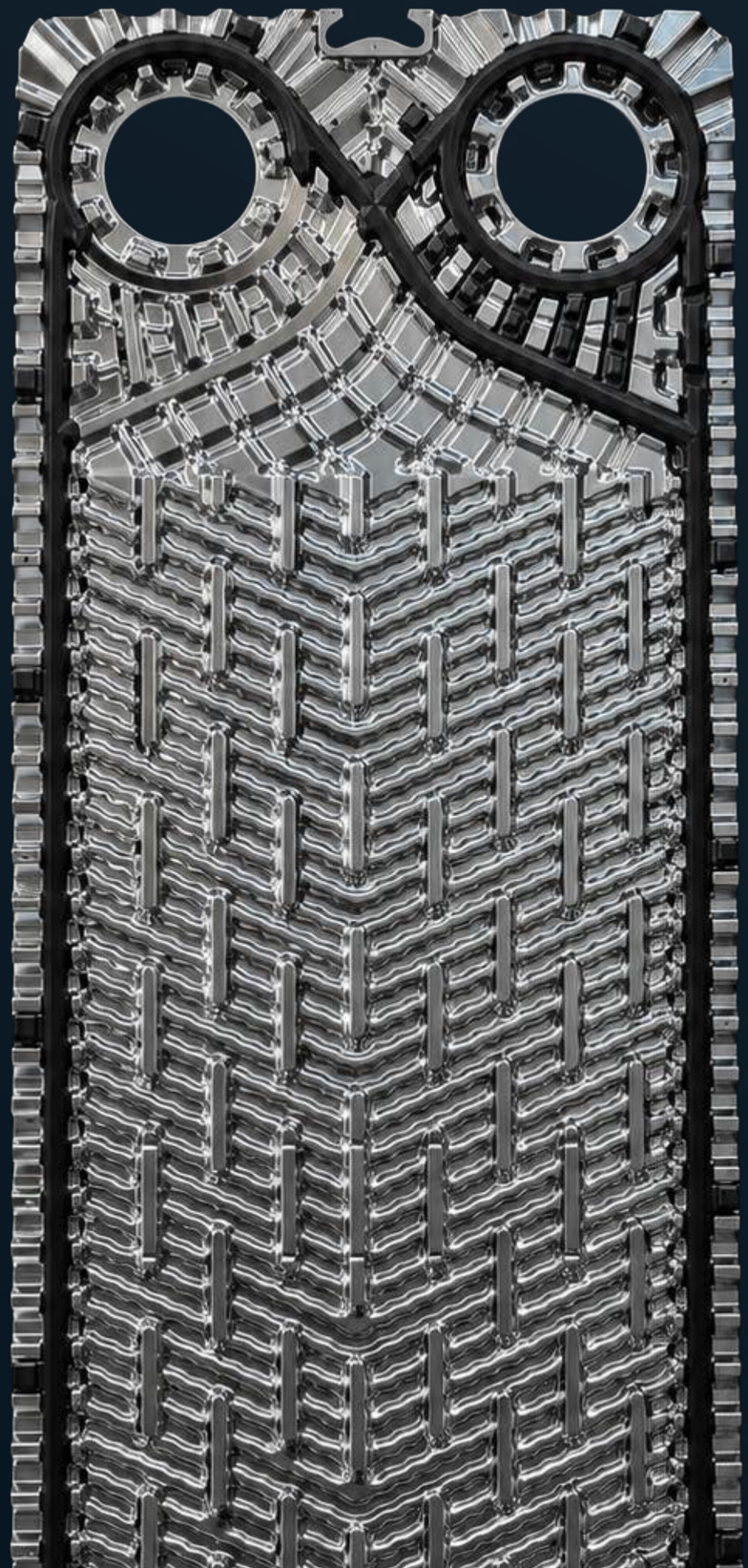
Three independent aligning systems guarantee a secure plate installation and facilitate service operations.

- **GASKET ALIGNING SYSTEM**
  special protruding elements align the plates in relation to one another
- **POINT LOCKING SYSTEM**
  dedicated corrugated elements on the plate
- **STELLAR SUSPENDING SYSTEM**
  alignment in position to the upper and lower bar.

THE FINITE ELEMENT METHOD ANALYSIS

The **Finite Element Method Analysis (FEM)** optimized the design of the JAG plate heat exchanger in terms of strength, mainly by improving the stress distribution on the cover plates and modifying the location of the fasteners, which contributed to the extension of the operating parameters.





REEFLOW PLATE

REEFLOW is a plate option dedicated to the JAG series JFD-060F plate and frame heat exchanger, designed for applications involving demanding media such as viscous fluids, contaminated media, and fluids containing particles, fibres, sediments, or suspensions. The specially developed plate pattern creates wider flow channels, which may help minimize the risk of clogging, support stable operation of the installation and facilitate proper heat exchanger selection for challenging process conditions.

REEFLOW is suitable for applications in the food processing, sugar, fermentation, pulp and paper, and chemical industries, as well as in wastewater treatment plants and biogas systems.

BENEFITS

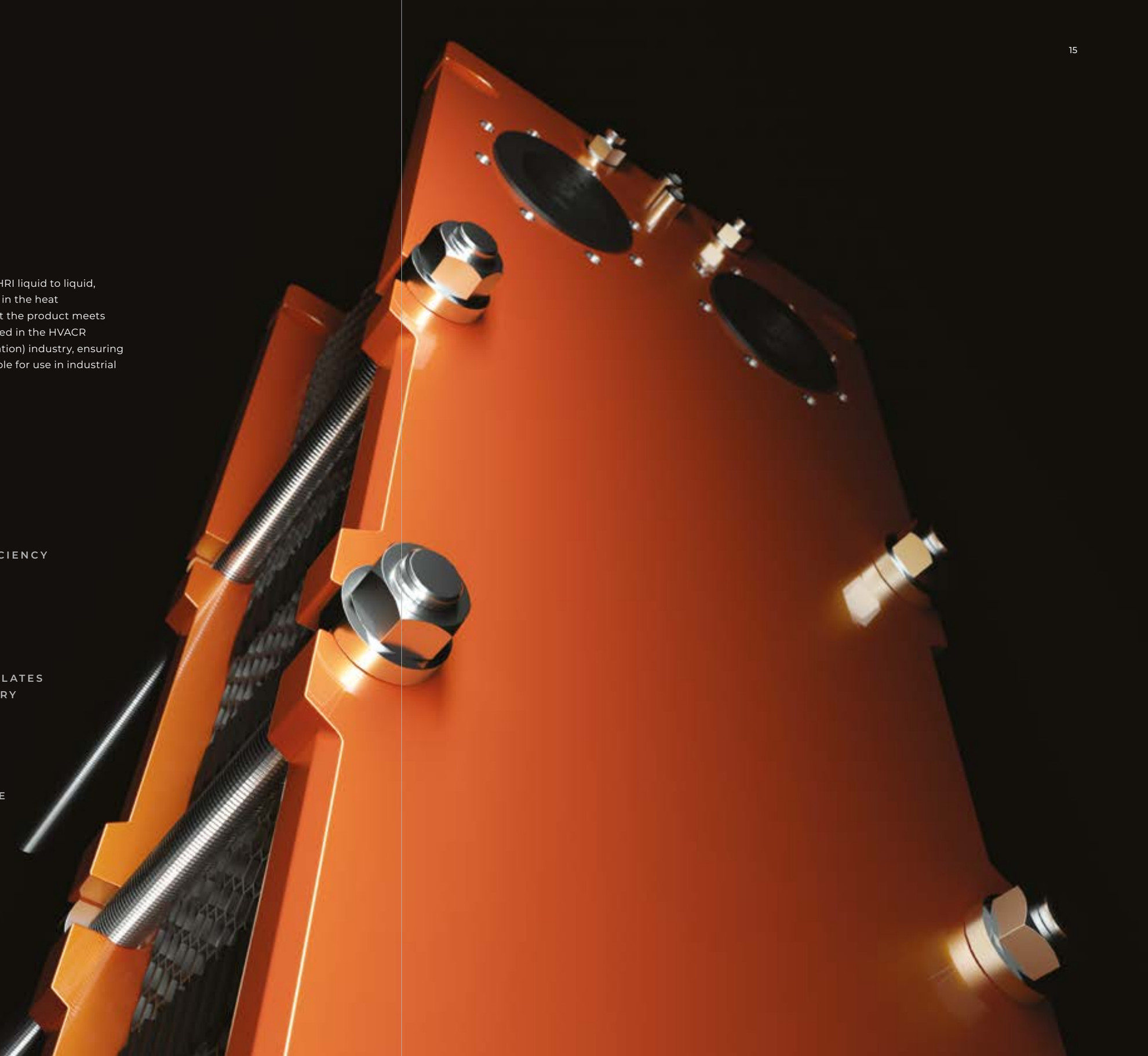
- INCREASED FLOW CAPACITY
- POSSIBILITY TO MINIMIZE THE RISK OF HEAT EXCHANGER CLOGGING
- IMPROVED HANDLING OF DEMANDING MEDIA
- POSSIBILITY TO ADAPT THE HEAT EXCHANGER TO SPECIFIC OPERATING CONDITIONS
- POSSIBILITY TO REDUCE PRESSURE DROP IN PROPERLY SELECTED APPLICATIONS

AHRI CERTIFIED®
www.ahridirectory.org
Liquid to Liquid Heat Exchangers
AHRI Standard 400

Plate&frame heat exchangers JAG are certified by AHRI liquid to liquid, which attests to their high quality and effectiveness in the heat exchange process. The AHRI certificate confirms that the product meets the technical and quality requirements that are placed in the HVACR (Heating, Ventilation, Air Conditioning, and Refrigeration) industry, ensuring that JAG heat exchangers are trustworthy and suitable for use in industrial or commercial processes.

THE AHRI CERTIFICATE CONFIRMS:

- THE HIGH DEGREE OF EFFICIENCY OF AJF HEAT EXCHANGERS
- THE INNOVATIVE THERMAL PROPERTIES OF HEATING PLATES WITH UNIQUE JAG GEOMETRY
- COMPLIANCE OF THE PARAMETERS OF PLATE HEAT EXCHANGERS WITH TECHNICAL DATA PROVIDED BY HEXONIC
- THE POSSIBILITY OF SELECTION BY THE PROPRIETARY CAIRO PROGRAM



GASKETS

PATENTED HYBRID LOCK SYSTEM

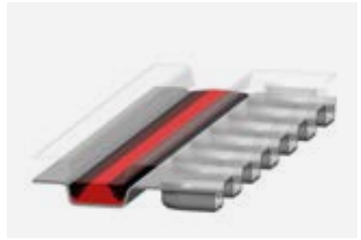
New construction of the patented gasket features two locking methods and an optimized unique shape. The hybrid lock system makes the mounting easier, quicker, and more stable throughout the exchanger assembly process. The innovative shape provides superior sealing capacity even in high pressure applications.

LOCK-IN METHOD

Each pin is pressed into the corresponding cut-out in the heating plate. Press-in locks stabilize the gasket on the plate during assembly.

LOCK-ON METHOD

Each T-shape clip catches on the corresponding fragment of the profiled edge of the heating plate fastening the gasket to the vertical side of the plate. It makes the assembly process easier and quicker.



OPTIMIZED UNIQUE SHAPE OF THE GASKET

Provides superior sealing capacity even in high pressure applications.

HIGHEST PRODUCTION STANDARDS

Top quality materials and dependability of supply.

CONSTRUCTION

1

METAL ROLLER

In larger models – enables easy sliding of the rear plate thus reducing maintenance time and effort. Rollers are accompanied by Teflon or polyamide slides to stabilize the rear plate.

2

Connection size: 1 ¼” – 14”

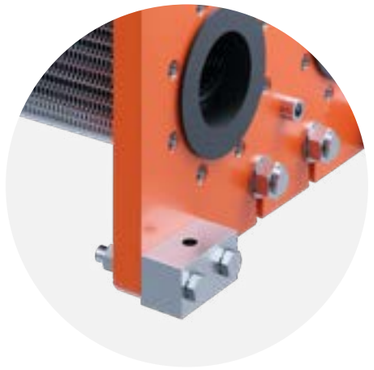
3

SPECIAL PROFILE OF THE CARRYING BAR

Serves to suspend heating plates in larger models. It is part of the five-point alignment system that secures the heating plates in the correct position.

4

Front and rear plate available in various colours.



5

ADDITIONAL FRONT FEET

Stabilize the heat exchanger and help to firmly attach it to the mounting platform.

6

SLIDING SLEEVE

In smaller models – makes the service easier and reduces corrosion of the rear plate.

7

LOCK WASHER

Makes it easier and faster to loosen and tighten the bolts.

8

Other frame elements made of galvanized or stainless steel.

9

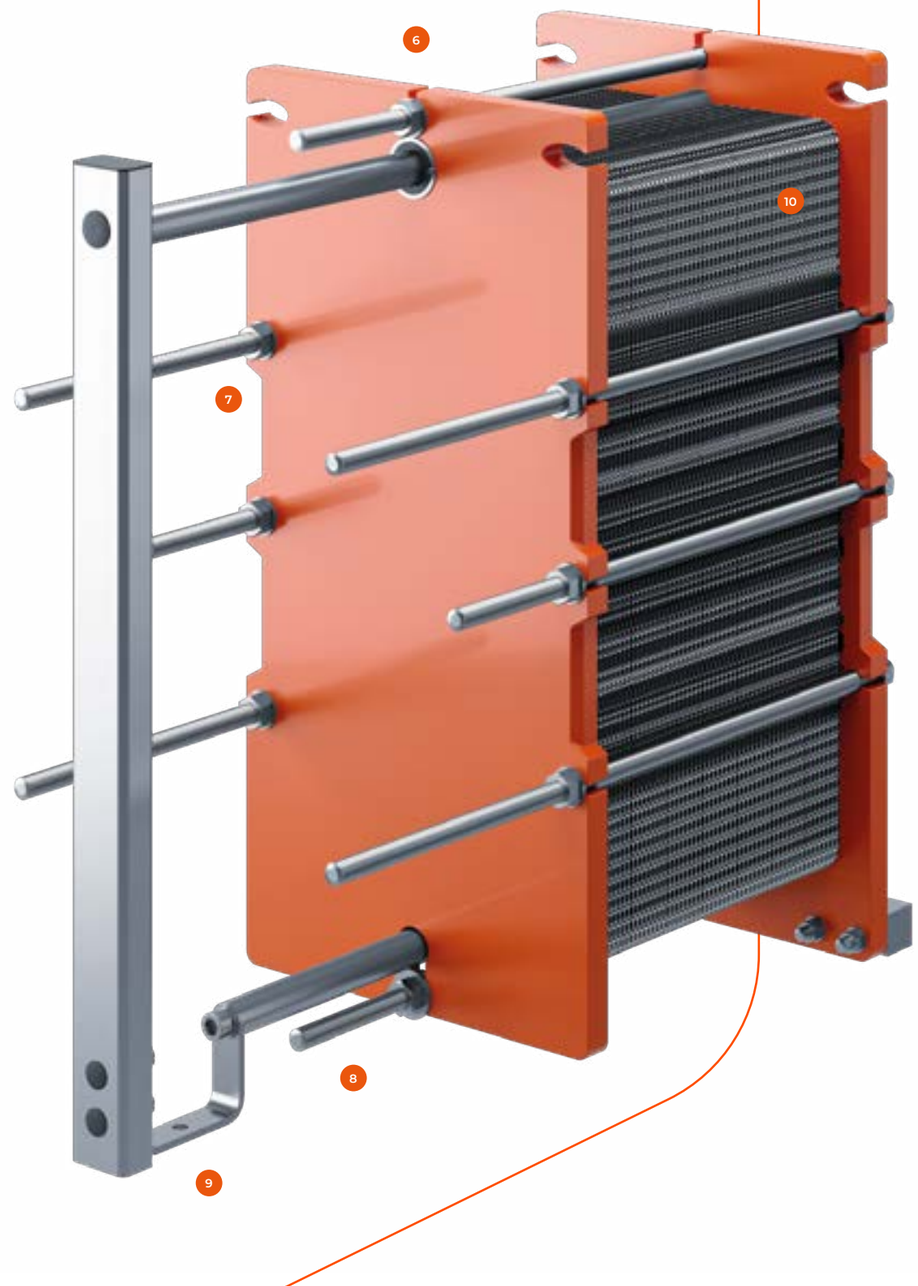
U-LEG

Enables easier assembly of the plate pack. It may also be used to fix the heat exchanger to the mounting platform.

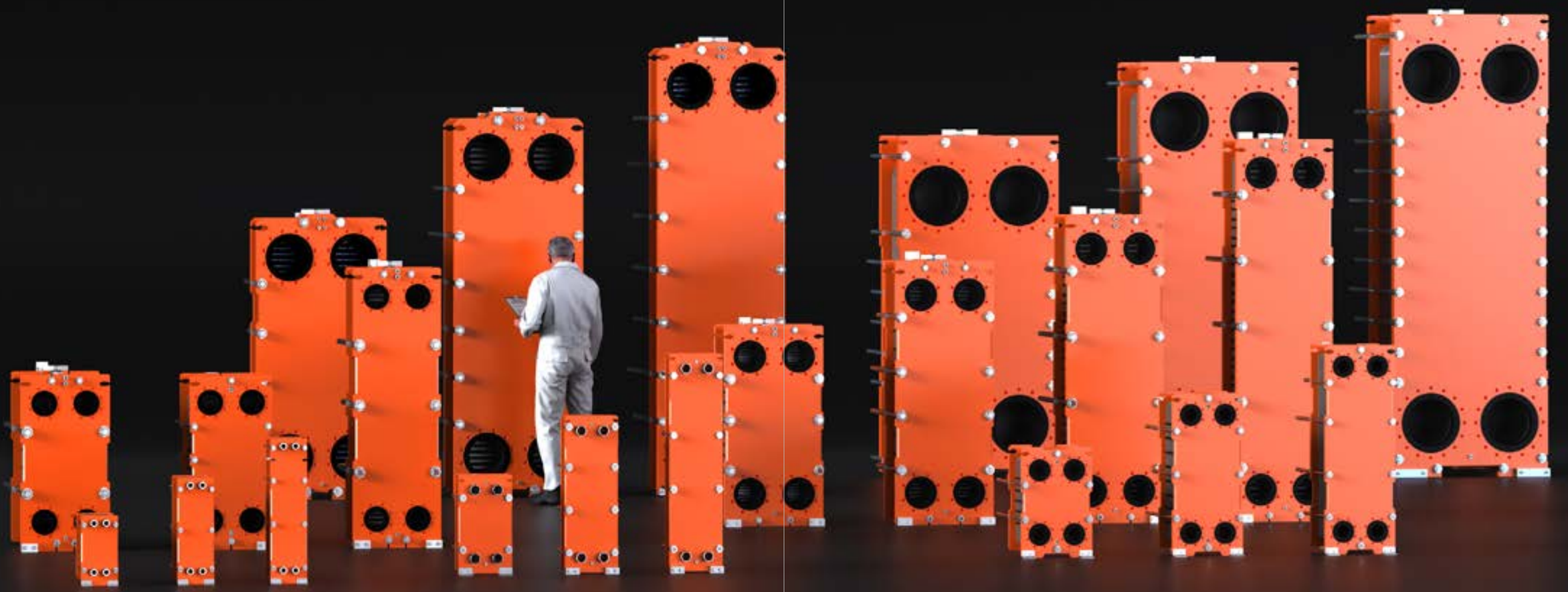
10

JAG SafePLATE

The double wall system option helps to prevent the mixing of media and allows for quick detection of leaks in installations where this is crucial.



POWER
RUNS IN THE FAMILY



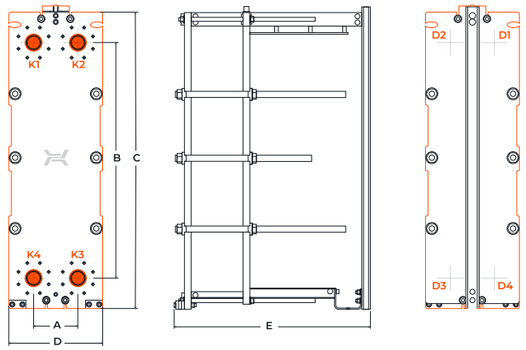
TECHNICAL DATA

STANDARD LOCATION OF CONNECTIONS (SINGLE-PASS):

K1 / K4 — Inlet / Outlet side 1
K3 / K2 — Inlet / Outlet side 2

STANDARD LOCATION OF CONNECTIONS (MULTI-PASS):

D4 / K4 — Inlet / Outlet side 1
K3 / D3 — Inlet / Outlet side 2



JAG	A	B	C	D	E max.	Max. allowable pressure PSI	Max. number of plates	Connection type and material	Connection dimensions
	in	in	in	in	in	–	–	–	–
JFA-003	2.76	11.02	17.12	8.27	21.81	150/250/300	87	with thread, stainless steel, titanium	1¼" NPT
JFA-006	2.76	19.31	25.41	8.27	21.81	150/250/300	87	with thread, stainless steel, titanium	1¼" NPT
JFA-009	2.76	27.95	34.05	8.27	21.81	150/250/300	87	with thread, stainless steel, titanium	1¼" NPT
JFB-010	5.24	15.75	23.39	12.4	43.82	150/250	173	with thread, stainless steel, titanium	2" NPT
JFB-015	5.24	29.13	36.77	12.4	43.82	150/250	173	with thread, stainless steel, titanium	2" NPT
JFB-025	5.24	43.3	51.04	12.4	43.82	150/250	173	with thread, stainless steel, titanium	2" NPT
JFC-015	8.46	15.35	26.37	17.32	44.49	150/250/300	169	Liners: NBR, EPDM, VITON, stainless steel, titanium	3''
JFC-025	8.46	28.35	39.37	17.32	44.49	150/250/300	169	Liners: NBR, EPDM, VITON, stainless steel, titanium	3''
JFC-035	8.46	39.76	50.78	17.32	44.49	150/250/300	169	Liners: NBR, EPDM, VITON, stainless steel, titanium	3''
JFD-030	10.24	28.74	44.48	21.65	104.53	150/250/300	560	Liners: NBR, EPDM, VITON, stainless steel, titanium	4''
JFD-060	10.24	54.33	70.07	21.65	104.72	150/250/300	560	Liners: NBR, EPDM, VITON, stainless steel, titanium	4''
JFD-060F	10.24	54.33	72.2	23.9	83.35	250/300	240	Liners: NBR, EPDM, VITON, stainless steel, titanium	4''
JFD-080	10.24	73.2	91.2	21.65	85.16	150/250/300	560	Liners: NBR, EPDM, VITON, stainless steel, titanium	4''
JFE-045	12.8	35.43	53.89	25.83	107.87	150/250/300	743	Liners: NBR, EPDM, VITON, stainless steel, titanium	6''
JFE-065	12.8	51.18	69.64	25.83	107.87	150/250/300	743	Liners: NBR, EPDM, VITON, stainless steel, titanium	6''
JFE-085	12.8	62.99	81.45	25.83	107.87	150/250/300	743	Liners: NBR, EPDM, VITON, stainless steel, titanium	6''
JFE-115	12.8	82.68	100.94	25.83	107.87	150/250/300	743	Liners: NBR, EPDM, VITON, stainless steel, titanium	6''
JFF-075	15.55	43.3	70.5	31.69	108	150/250/300	1109	Liners: NBR, EPDM, VITON, stainless steel, titanium	8''
JFG-100	17.91	55.11	80.73	36.81	108.9	150/250/300	1109	Liners: NBR, EPDM, VITON, stainless steel, titanium	10''
JFG-150	17.91	82.68	108.28	36.81	108.9	150/250/300	1109	Liners: NBR, EPDM, VITON, stainless steel, titanium	10''
JFG-200	17.91	102.36	127.96	36.81	108.9	150/250/300	1109	Liners: NBR, EPDM, VITON, stainless steel, titanium	10''
JFH-150	23.43	65.35	96.45	46.46	110.63	150/250/300	887	Liners: NBR, EPDM, VITON, stainless steel, titanium	14''
JFH-200	23.43	86.61	117.71	46.46	110.63	150/250/300	887	Liners: NBR, EPDM, VITON, stainless steel, titanium	14''
JFH-250	23.43	100.39	131.49	46.46	110.63	150/250/300	887	Liners: NBR, EPDM, VITON, stainless steel, titanium	14''

All dimensions and technical data are approximate only and may be changed without further notice.

HEATING PLATES MATERIAL

— STAINLESS STEEL 316L/1.4404, 304L/1.4307
— TITANIUM
— OTHER UPON REQUEST

FRONT AND REAR PLATE

— CARBON STEEL
— VARIOUS COLOURS AVAILABLE UPON REQUEST
— STANDARD CORROSION CLASS C3
— CLASSES UP TO C5 POSSIBLE

GASKET MATERIAL

— EPDM
— NBR
— FKM (VITON)

SANITARY STANDARD

— FRONT AND REAR PLATES MADE OF STAINLESS STEEL 304L OR 316L, SPECIAL EASY-CLEANING HYGIENIC SHAPE

— HYGIENIC CONNECTIONS – DIN 11851

— SPECIAL FEET WITH SMALL FOOTPRINT

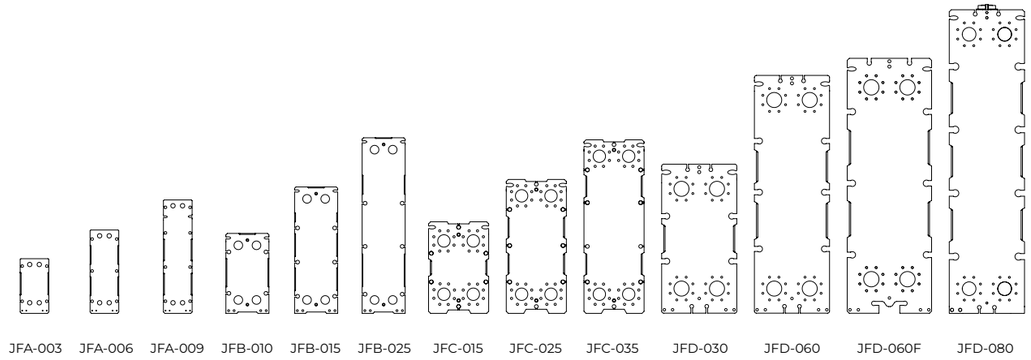
TECHNICAL PARAMETERS

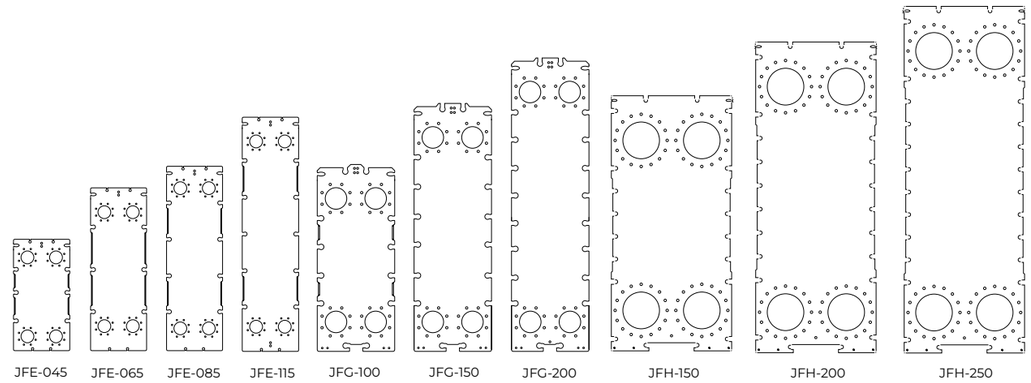
— MAX. PRESSURE 150, 250, 300, 400 PSI
— MAX. TEMPERATURE 300 °F
— MIN. TEMPERATURE -4 °F

ACCESSORIES

— DRIP TRAY
— INSULATION
— PROTECTION SHEET
— CONNECTION BOLTS

STANDARD – PED 2014/68/EU, OR ASME SEC VIII, DIV.1





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