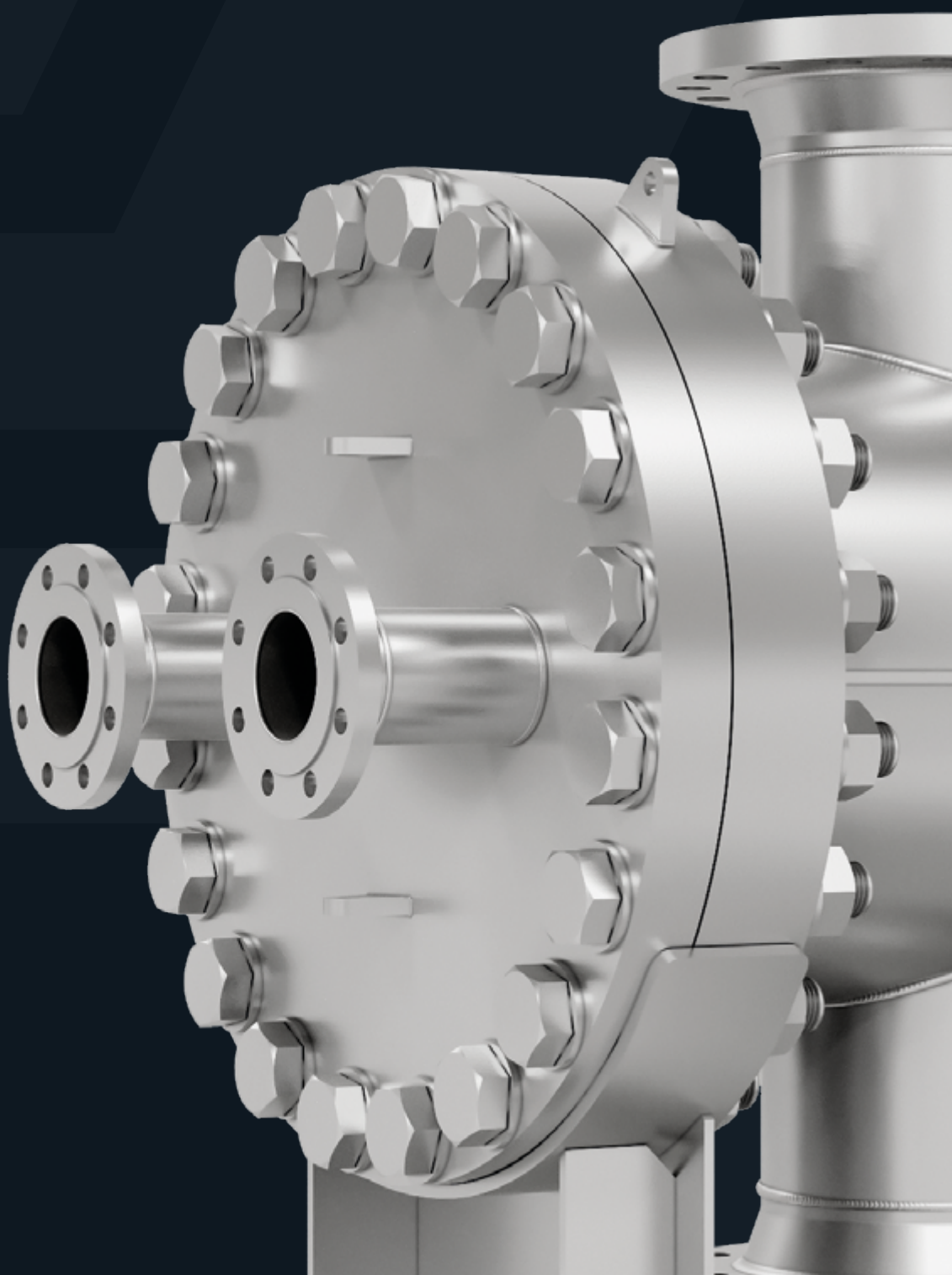
HEXONIC | HEAT EXCHANGERS

JAG SHIELD

PLATE & SHELL HEAT EXCHANGERS



JAG SHIELD
PLATE & SHELL HEAT EXCHANGER

APPLICATIONS

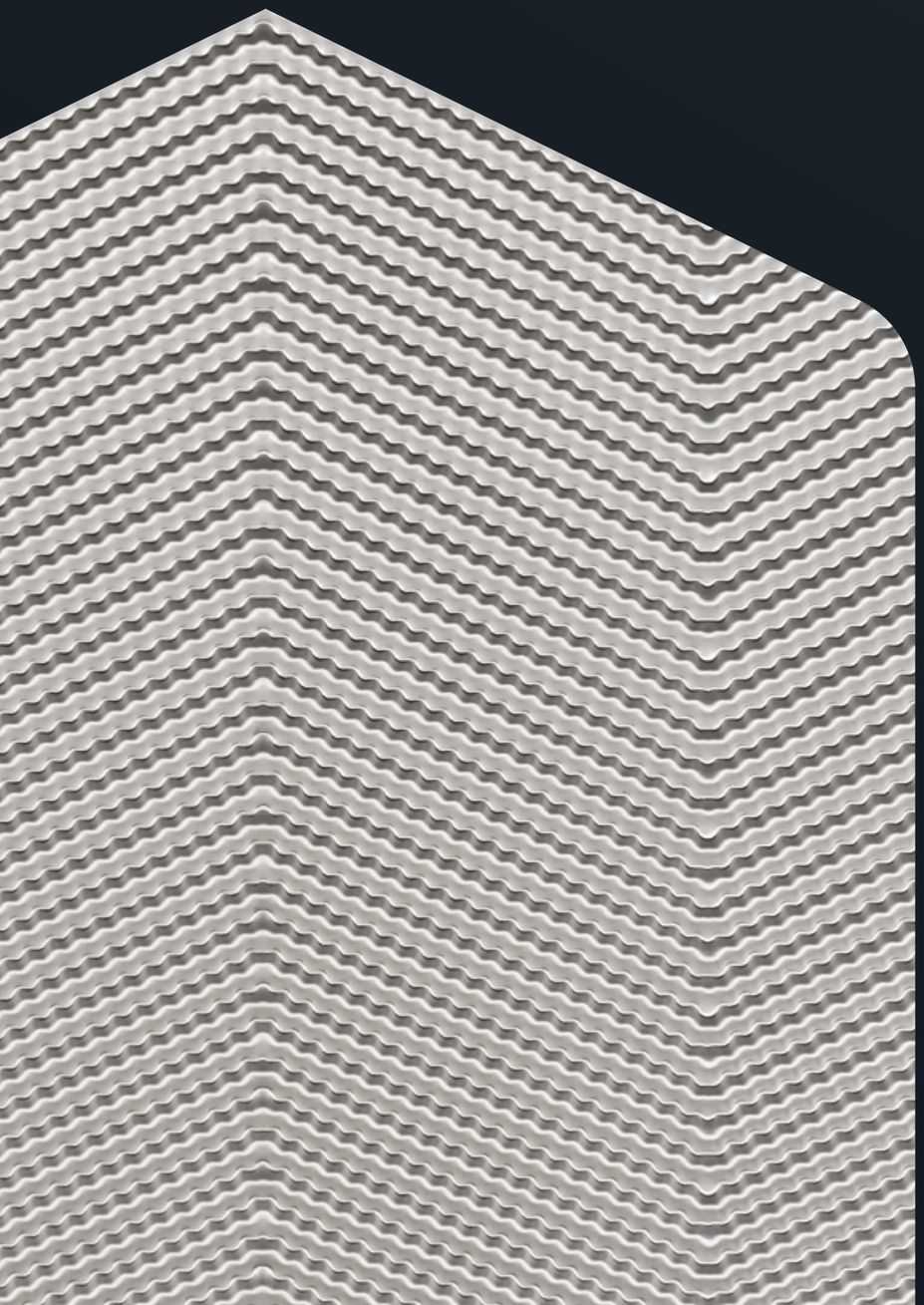
- REFRIGERATION INDUSTRY AS EVAPORATORS AND CONDENSERS
- INDUSTRIAL COOLING AND HEATING SYSTEMS
- SYSTEMS WITH AGGRESSIVE MEDIA
- VAPOUR CONDENSATION
- SUITABLE FOR CHEMICAL PROCESSES
- CIP SYSTEMS
- OIL COOLERS AND HEATERS
- GAS HEATERS AND COOLERS
- FUEL OIL HEATERS

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 SHIELD Plate & Shell 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 SHIELD Plate & Shell Heat Exchanger will become a long-life dependable solution for your applications.

INGENIOUS PATTERN



JAGGED
/ˈdʒaɡɪd/
WITH ROUGH, SHARP POINTS PROTRUDING

THE INNOVATIVE JAG DESIGN IS THE RESULT OF OVER SIX YEARS OF RESEARCH AND DEVELOPMENT.

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 modell ed 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 ENDURANCE

JAG SHIELD PLATE

STATE-OF-THE-ART

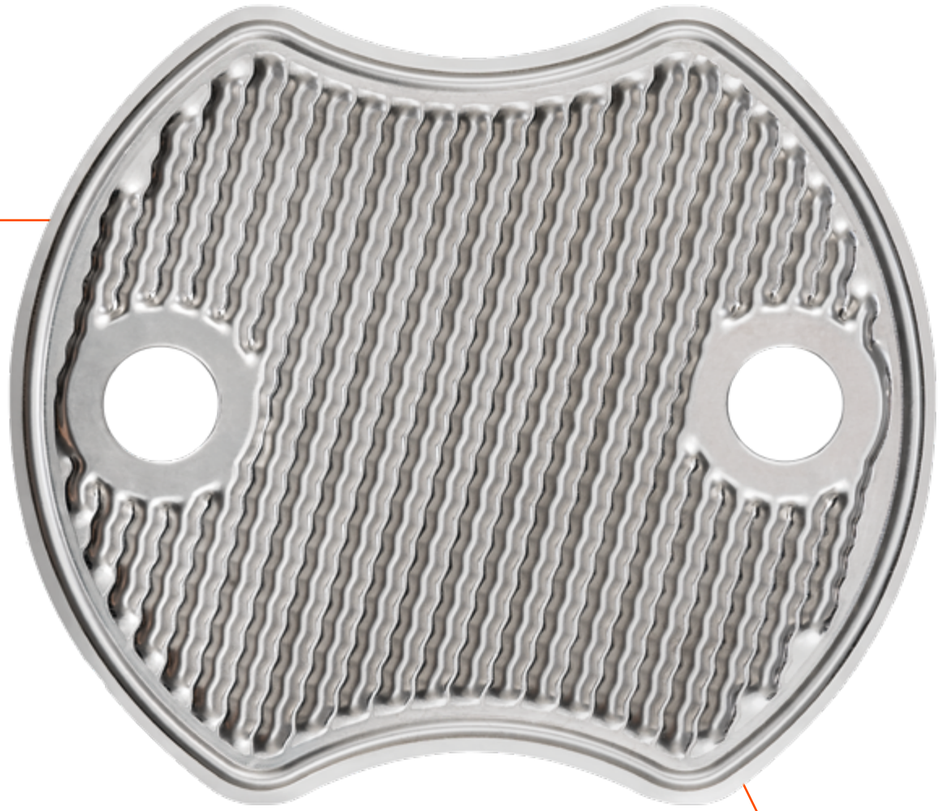
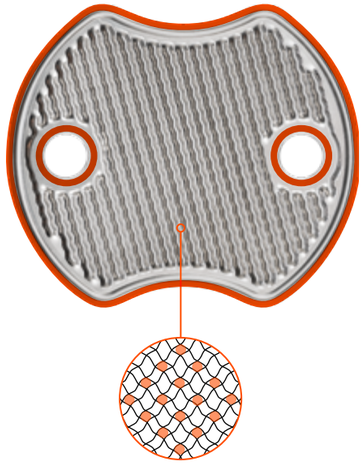


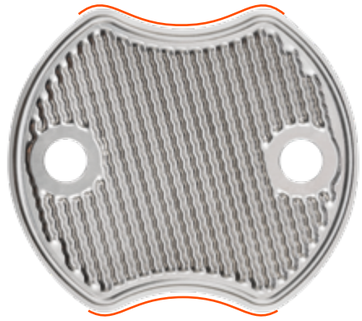
PLATE FEATURES



BRAZING INSTEAD OF WELDING

Vacuum brazing, used to join plates in pairs, unlike more popular circumferential welding, allows for a much larger joint surface. A pair of plates is connected along the entire outer circuit, at ports, and additionally at many optimally selected points of the heat exchange area.

It results in an extremely durable structure with remarkable resistance to variable loads and thermal stresses. This makes the exchanger incredibly reliable and leakproof. Copper, LUNATH stainless, and other brazing materials allow JAG SHIELD heat exchangers to be used in a variety of applications.

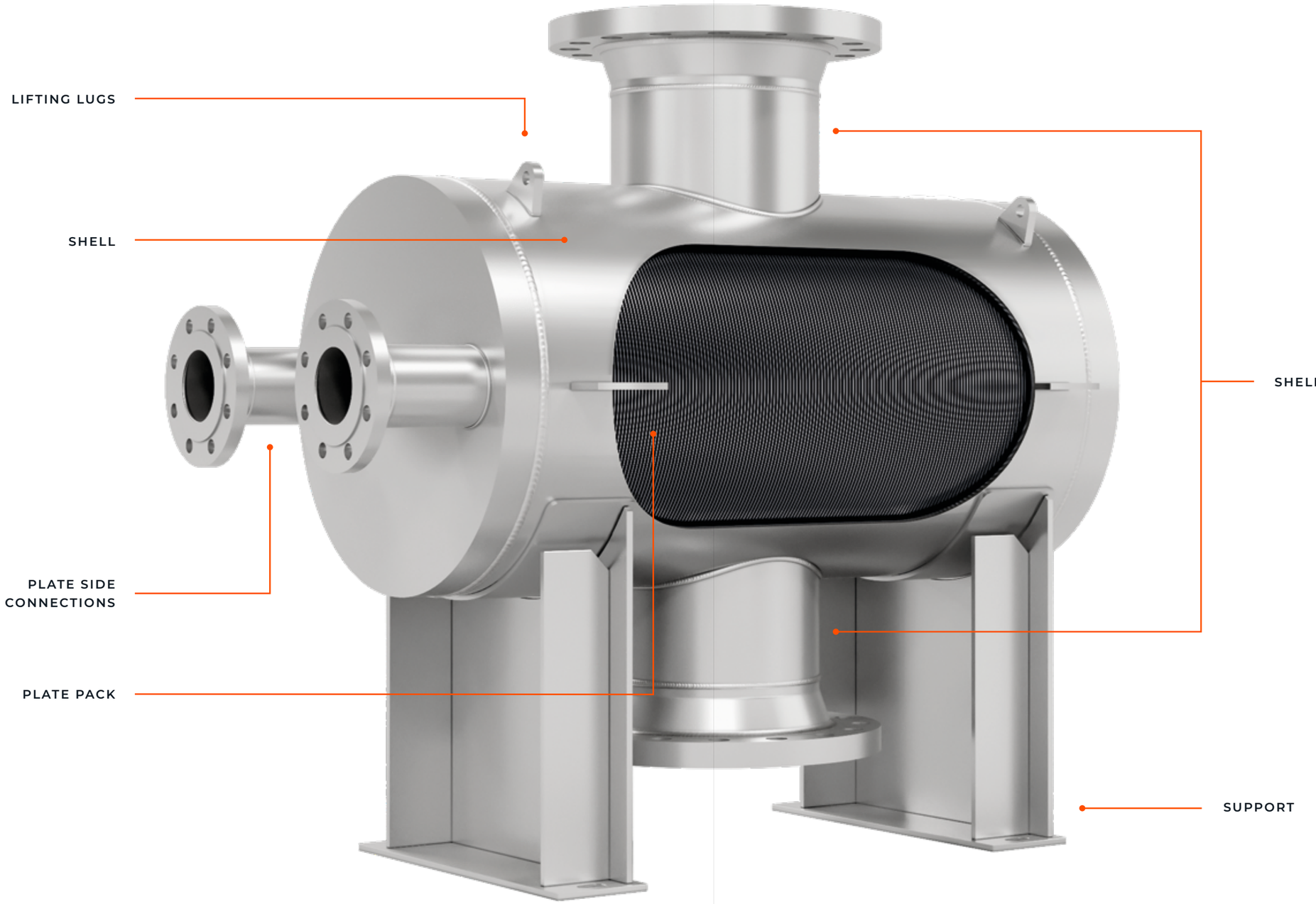


SPECIAL SHAPE OF THE PLATE

The unique shape of the JAG SHIELD plate provides exceptional thermal efficiency while maintaining low flow resistance. Thanks to the special plate shape, the flow directors are not needed as medium is distributed evenly inside the plate pack. Side cuts provide enough space for the shell medium entering the exchanger to properly fill the entire internal space.

It also makes the local flow resistance significantly reduced. Optimized use of the exchanger's volume allows for its compact construction. Additional circumferential corrugation of the heating plates stabilizes the package and optimizes stresses, ensuring a longer service life.

CONSTRUCTION



TECHNICAL DATA

Type	Plate side		Shell side		Max. heat transfer area
	Connection size	Connection spacing	Max. size of connections	Diameter	
	DN	mm	DN	mm	m²
JR-03H	DN25	132	DN80	219,1	3
JR-03L	DN25	132	DN80	219,1	3
JR-07H	DN50	208	DN150	323,9	13
JR-07L	DN50	208	DN150	323,9	13
JR-13H	DN80	286	DN200	457,2	37
JR-13L	DN80	286	DN200	457,2	36
JR-23H	DN100	410	DN300	609,6	83
JR-23L	DN100	410	DN300	609,6	80

HEATING PLATES MATERIAL

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

SHELL MATERIAL

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

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

PLATE THICKNESS: 0,6–1,0 MM

BRAZING MATERIAL

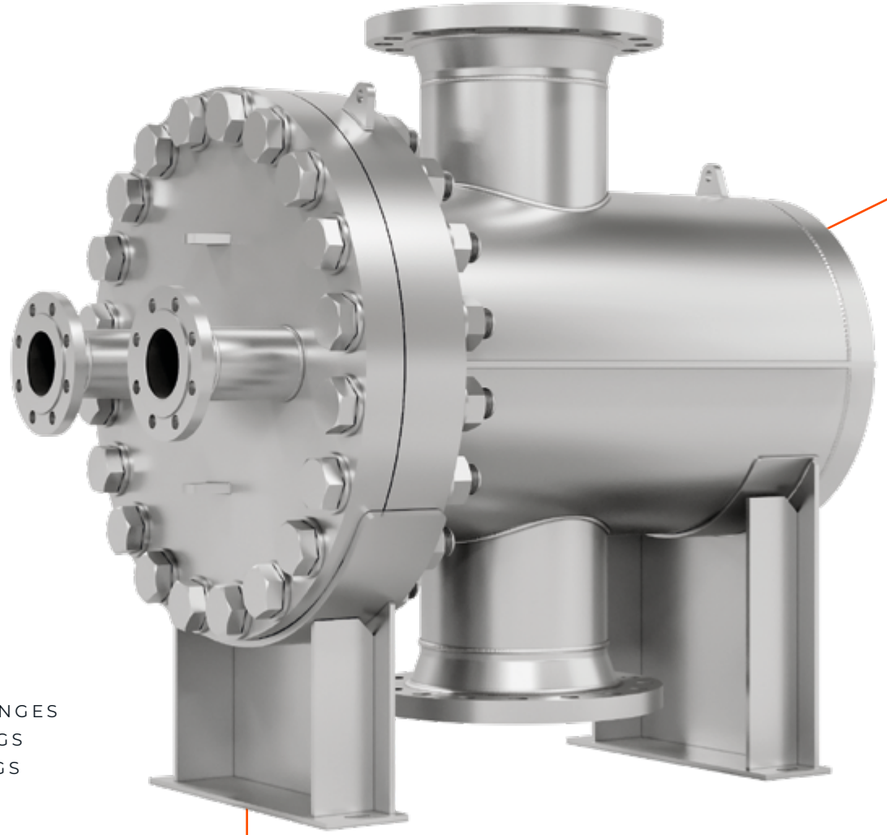
— COPPER
— LUNATH STAINLESS BRAZING

SINGLE AND MULTI-PASS FLOWS

TECHNICAL PARAMETERS

— MIN. PRESSURE -1 BAR
— MAX. PRESSURE 16, 25, 40, 60, 100 BAR (60, 100 BAR NON OPENABLE SHELL ONLY)
— MAX. TEMPERATURE 200˚C, 250˚C, 300˚C, 450˚C
— MIN. TEMPERATURE -50˚C

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



ACCESSORIES

— INSULATION
— COUNTER FLANGES
— EXTENDED LEGS
— EARTHING LUGS

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