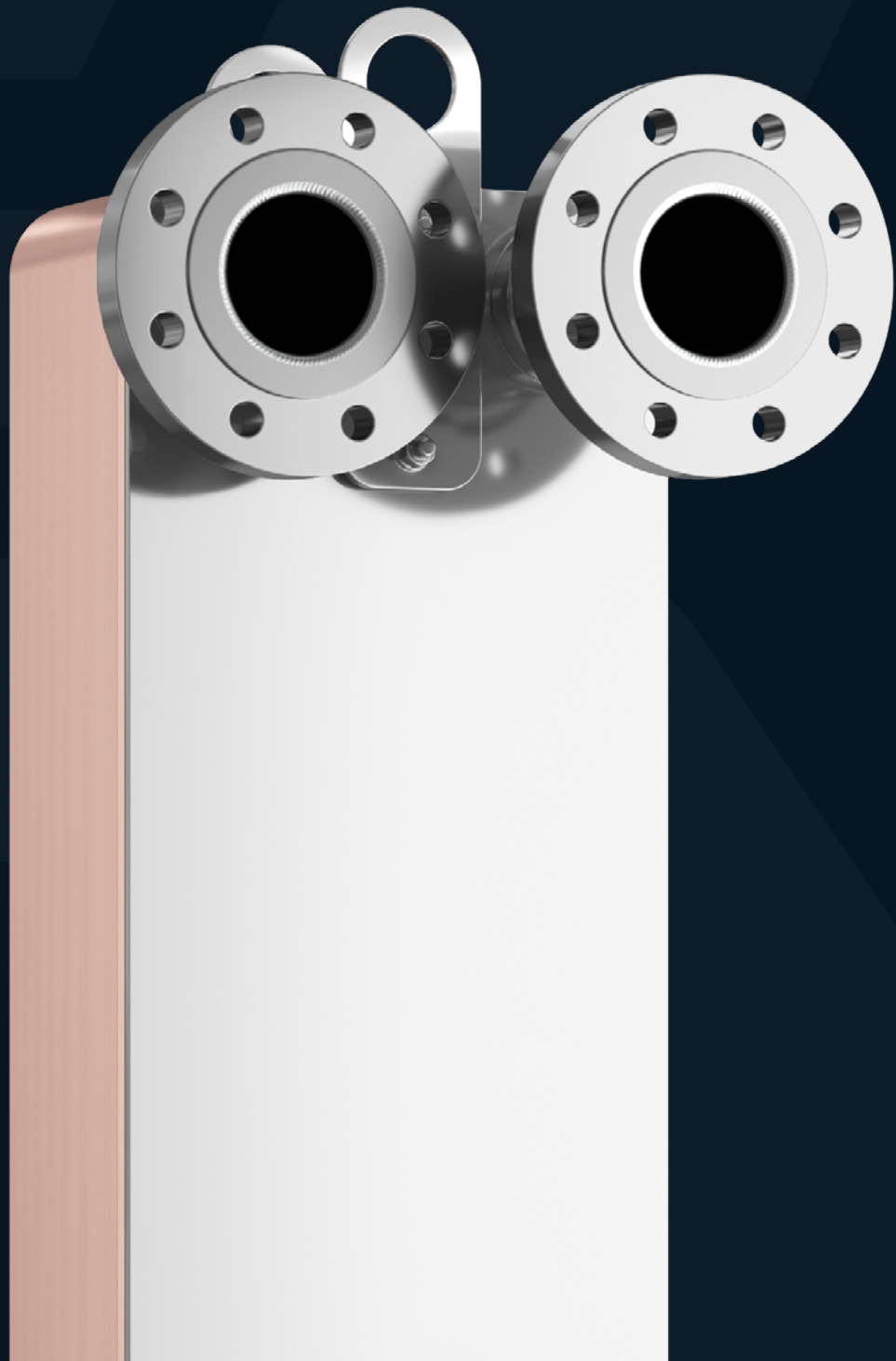


# BPHE

BRAZED PLATE  
HEAT EXCHANGERS



# BRAZED PLATE HEAT EXCHANGERS

Brazed plate heat exchangers are the perfect solution that allows to maintain high thermal performance at low operating costs.

Wide range of types, sizes, and numbers of plates and connections allows for optimizing the selection to particular application.

Copper or stainless brazing option offer additional application possibilities. Brazed plate heat exchangers guarantee reliable, long-term operation.



## WHY CHOOSE **HEXONIC** BRAZED PLATE HEAT EXCHANGERS?



### HIGH PERFORMANCE

Heat exchangers are designed for very efficient operations within a wide range of applications. They guarantee compact and flexible solutions.



### WIDE RANGE OF APPLICATIONS

Heat exchangers are used in central heating and domestic hot water systems, ventilation, technological and air-conditioning installations, as well as in heat pumps and ice water generators.



### CERTIFICATES AND STANDARDS

Manufactured in accordance with ASME, UL, PED, EAC.



### RELIABILITY

Advanced technology and high quality materials offer durability and reliability.



### FLEXIBLE DESIGN

We offer 1- or 2-pass versions with a choice of different types of connections such as: dual (external thread / soldering), internal thread, Victaulic, stainless steel flange, carbon steel flange.



### CAIRO EASY SELECTION

User-friendly CAIRO Selection Software makes the selection process easy.

# L

## BRAZED PLATE HEAT EXCHANGERS

DEDICATED TO HEATING OR COOLING SYSTEMS.

### APPLICATION



DOMESTIC HOT WATER SYSTEMS



CENTRAL HEATING SYSTEMS



SOLAR AND GEOTHERMIC HEATING SYSTEMS



INSTALLATIONS WITH HEAT PUMP



INSTALLATIONS WITH FIREPLACE WITH WATER JACKET

### ADVANTAGES



HIGH HEAT TRANSFER COEFFICIENT



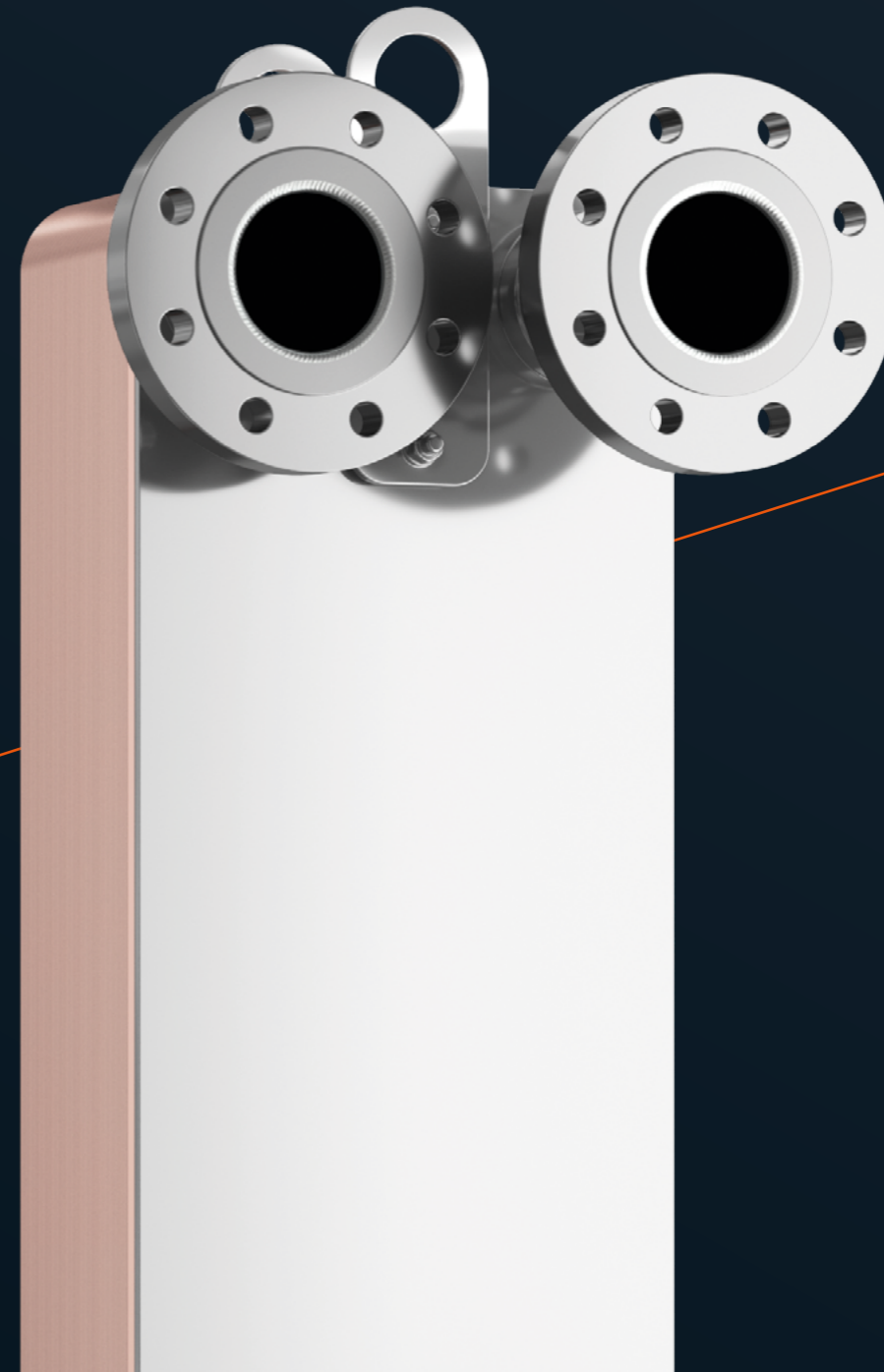
EASY ASSEMBLY AND DISMANTLE



COMPACT SIZE



RESISTANCE TO HIGH TEMPERATURE AND PRESSURE





MICROCHANNEL BRAZED  
PLATE HEAT EXCHANGER

8%  
↑

**INCREASE OF HEAT EXCHANGE  
EFFICIENCY BY UP TO 8%**  
COMPARING TO OTHER COMPETITIVE  
MICROCHANNEL HEAT EXCHANGERS

9%  
↓

**REDUCTION OF FLOW  
RESISTANCE BY UP TO 9%**  
COMPARING TO THE MOST  
EFFICIENT MICROCHANNEL HEAT  
EXCHANGER ON THE MARKET

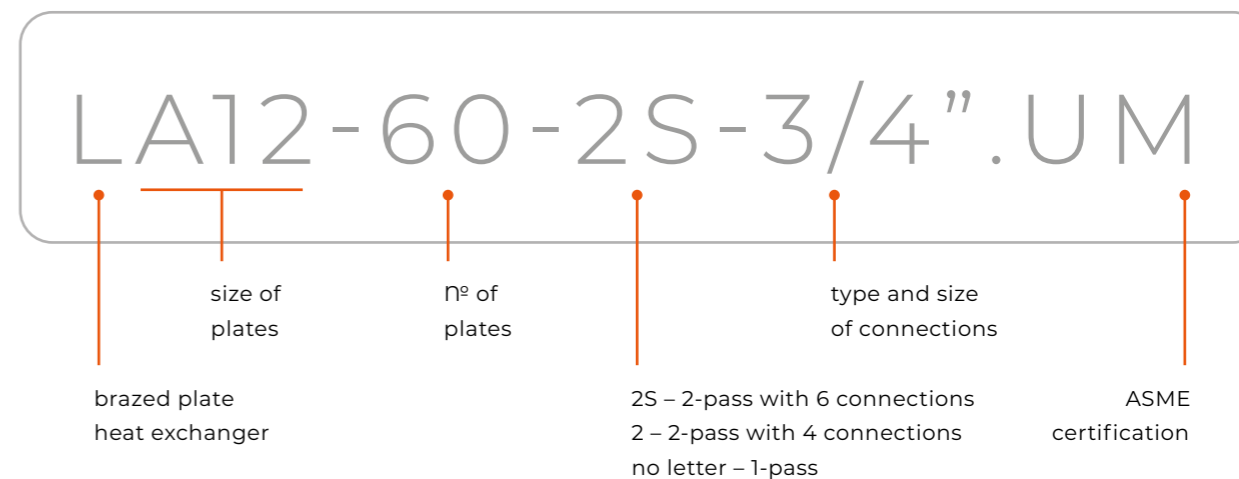
35%  
↑

**INCREASE OF HEAT EXCHANGE  
EFFICIENCY BY 35%**  
COMPARING TO EXCHANGERS  
WITH STANDARD HEAT PLATES



**HIGHER FLOW TURBULENCE  
ENHANCES HEAT EXCHANGE**  
THANKS TO OPTIMIZATION  
OF FLOW VELOCITY

EXEMPLAR DESIGNATION



PRODUCT LINE



# TECHNICAL DATA

## STANDARD LOCATION OF CONNECTIONS

### 1-PASS HEAT EXCHANGER

- K1 / K4** — inlet / outlet hot side
- K3 / K2** — inlet / outlet cold side

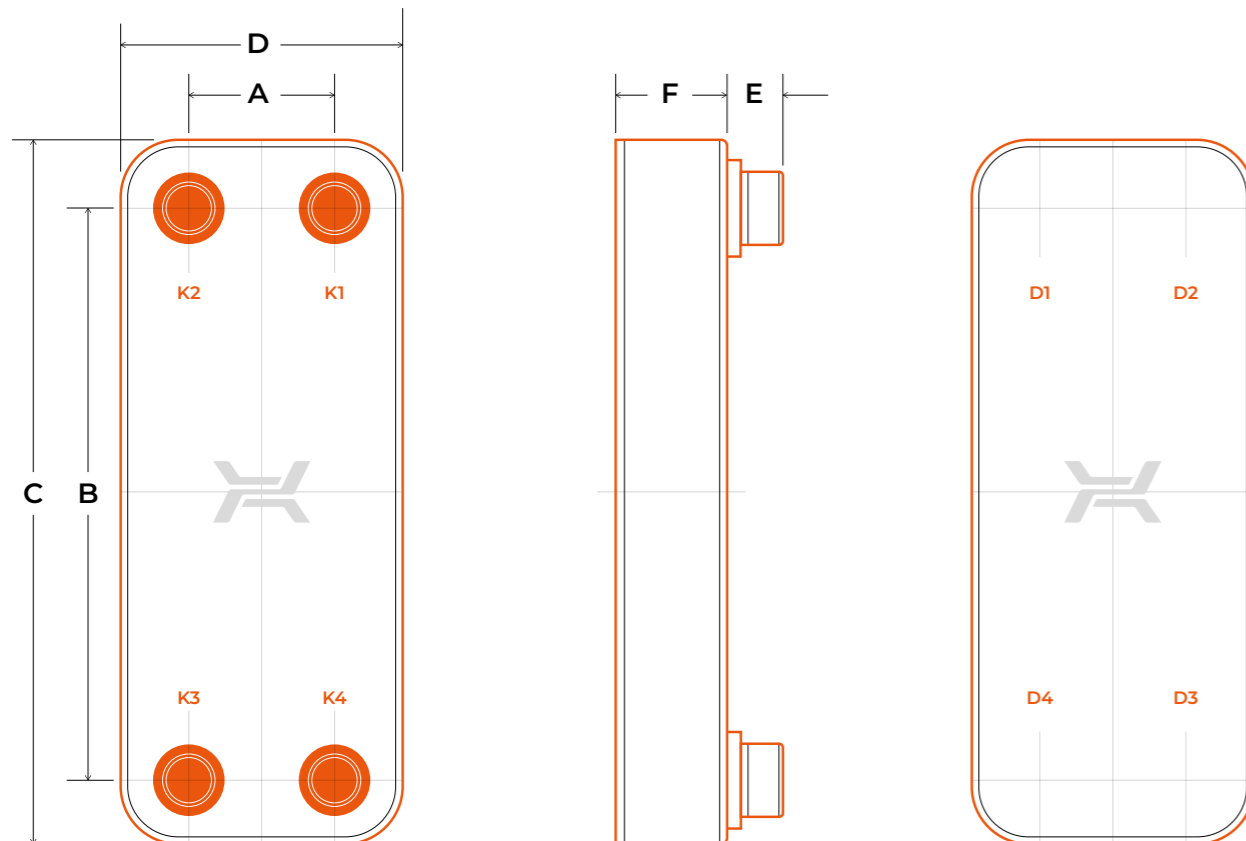
### 2-PASS HEAT EXCHANGER

- D4 / K4** — inlet / outlet hot side
- K3 / D3** — inlet / outlet cold side

### 2-PASS WITH 6 CONNECTIONS

#### ADDITIONALLY:

- K1** — vent connection / inlet of central heating return
- K2** — vent connection / inlet of domestic hot water circulation return



## MATERIALS

- STAINLESS STEEL
- COPPER BRAZING

## EXEMPLARY MEDIA

- WATER
- PROPYLENE GLYCOL SOLUTIONS
- OTHER (CONSULT THE MANUFACTURER)

## WORKING PARAMETERS

MAX. TEMPERATURE — 445°F

MIN. TEMPERATURE — -150°F

### MAX. PRESSURE

- LA, LB, LH — 435 PSI
- LM, LC, LD, LE — 362 PSI

# TECHNICAL PARAMETERS

Type	Dimensions						max N° of plates	Mass lb
	A	B	C	D	E	F		
	in	in	in	in	in	in		
LA12	1.6	6.1	7.5	2.8	0.6/0.8	0.35 + 0.10 × NP	60	0.88 + 0.11 × NP
LA14	1.7	6.5	8.0	3.2	0.6/0.8	0.35 + 0.09 × NP	60	1.32 + 0.11 × NP
LA21AS	1.6	10.9	13.4	2.9	0.6	0.39 + 0.09 × NP	60	1.28 + 0.13 × NP
LA22	1.7	10.2	11.8	3.2	0.6/0.8	0.35 + 0.09 × NP	60	1.76 + 0.16 × NP
LA22(X)	1.7	10.2	11.8	3.2	0.6/0.8	0.35 + 0.07 × NP	60	1.76 + 0.16 × NP
LA34	1.7	17.0	18.5	3.2	0.6/0.8	0.35 + 0.09 × NP	60	2.65 + 0.26 × NP
LJ30	1.8	10.6	12.5	3.9	0.8	0.35 + 0.07 × NP	60	2.43 + 0.14 × NP
LH40	1.7	16.3	18.1	3.5	1.1	0.39 + 0.09 × NP	60	3.75 + 0.30 × NP
LB31	2.7	9.1	11.3	4.8	1.1	0.39 + 0.09 × NP	150	3.53 + 0.25 × NP
LB47	2.7	14.2	16.4	4.8	1.1	0.39 + 0.09 × NP	150	4.63 + 0.37 × NP
LB60	2.7	18.9	21.2	4.8	1.1	0.43 + 0.09 × NP	150	5.73 + 0.48 × NP
LB60(X)	2.7	18.9	21.2	4.8	1.1	0.43 + 0.077 × NP	150	5.73 + 0.48 × NP
LM110	3.6	20.5	24.4	7.5	1.9	0.39 + 0.10 × NP	200	18.52 + 0.90 × NP
LC110	6.7	14.9	18.4	10.2	1.1/1.5; 3.9	0.43 + 0.09 × NP	200	19.18 + 0.90 × NP
LC110AS	6.7	14.9	18.4	10.2	1.9	0.39 + 0.09 × NP	200	19.18 + 0.90 × NP
LC170	6.7	23.6	27.1	10.2	1.1/1.5; 3.9	0.43 + 0.09 × NP	200	25.35 + 1.36 × NP
LD235	8.0	26.9	31.0	12.2	3.9	0.51 + 0.10 × NP	280	88.18 + 1.83 × NP
LE400	9.5	33.9	39.7	15.2	3.7	0.67 + 0.11 × NP	400	163.80 + 3.58 × NP
LF700	12.8	43.31	52.24	21.72	5.51	0.75 + 0.09 × NP	400	406.97 + 7.39 × NP

NP – number of plates | dim. F +/-3%.

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

Mass is given for 1-pass heat exchangers.

# LUNA

**BRAZED PLATE HEAT EXCHANGERS**  
 ENTIRELY MADE OF STAINLESS  
 MATERIALS DESIGNED TO MAINTAIN  
 HIGH SANITARY STANDARDS.

## APPLICATION

WHEN HIGH LEVEL  
 OF HYGIENE IS CRUCIAL



SYSTEMS WITH  
 DEMINERALIZED WATER



DOMESTIC HOT  
 WATER SYSTEMS



COOLING SYSTEMS  
 WITH HIGH HYGIENIC  
 STANDARDS

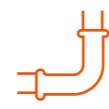
WHEN RELIABILITY  
 IS ESSENTIAL



CENTRAL HEATING  
 SYSTEMS



SYSTEMS WITH  
 AGGRESSIVE MEDIA



SYSTEMS WITH  
 GALVANIZED PIPES



INDUSTRIAL  
 COOLING SYSTEMS



HYDRAULIC  
 OIL COOLING

## ADVANTAGES



STAINLESS BRAZING  
 ALLOWS HOMOGENEOUS  
 CONSTRUCTION



HIGH SANITARY  
 STANDARDS



RESISTANCE  
 TO HIGH TEMPERATURE  
 AND PRESSURE



RESISTANCE  
 TO CORROSION



HIGH  
 DURABILITY



WIDE RANGE  
 OF APPLICATIONS

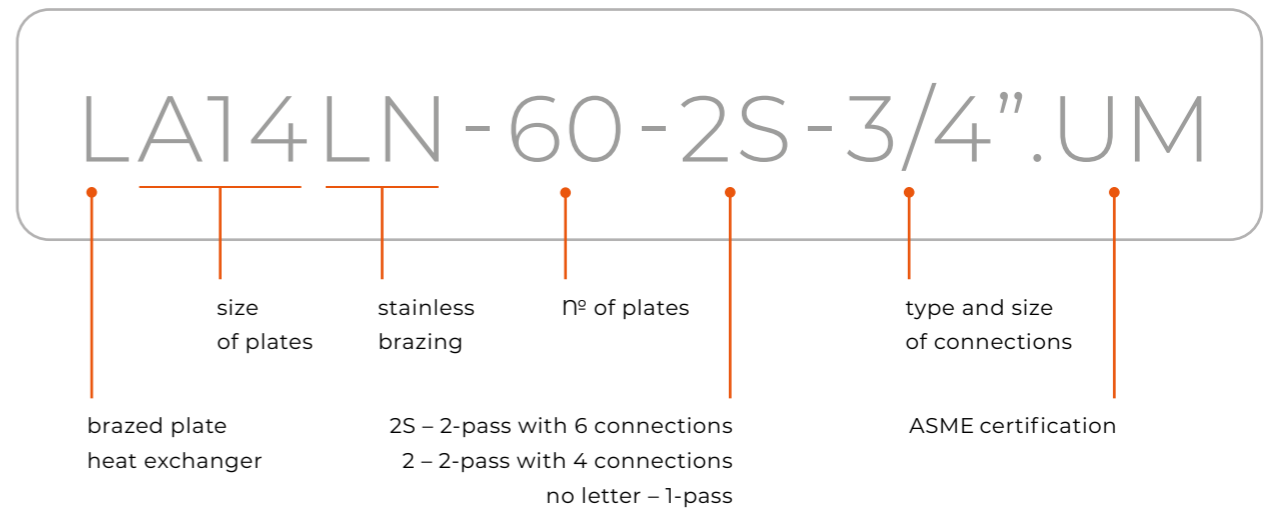


NO COPPER IONS  
 IN THE WATER

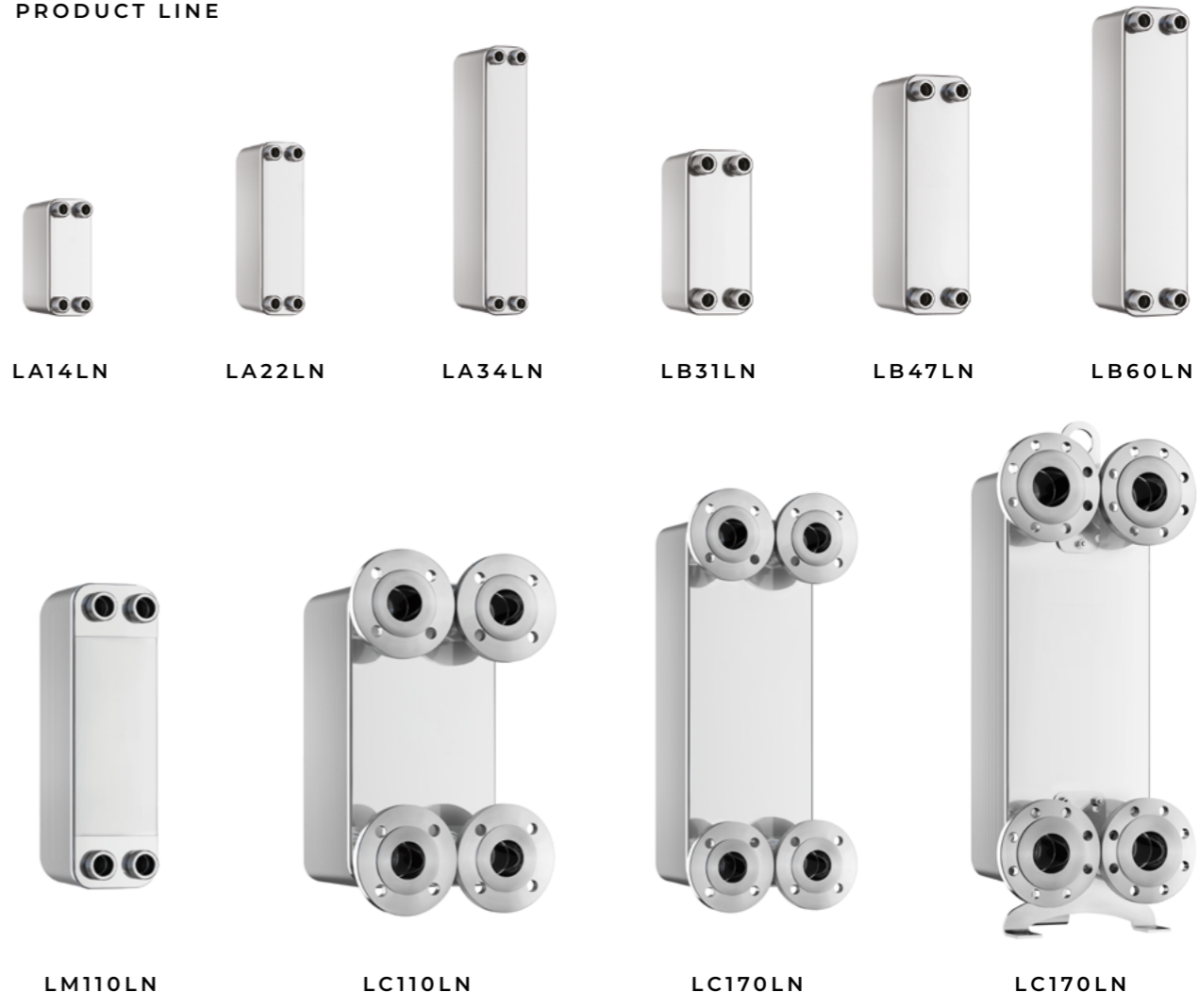




EXEMPLAR DESIGNATION



PRODUCT LINE



# TECHNICAL DATA

## STANDARD LOCATION OF CONNECTIONS

### 1-PASS HEAT EXCHANGER

- K1 / K4** — inlet / outlet hot side
- K3 / K2** — inlet / outlet cold side

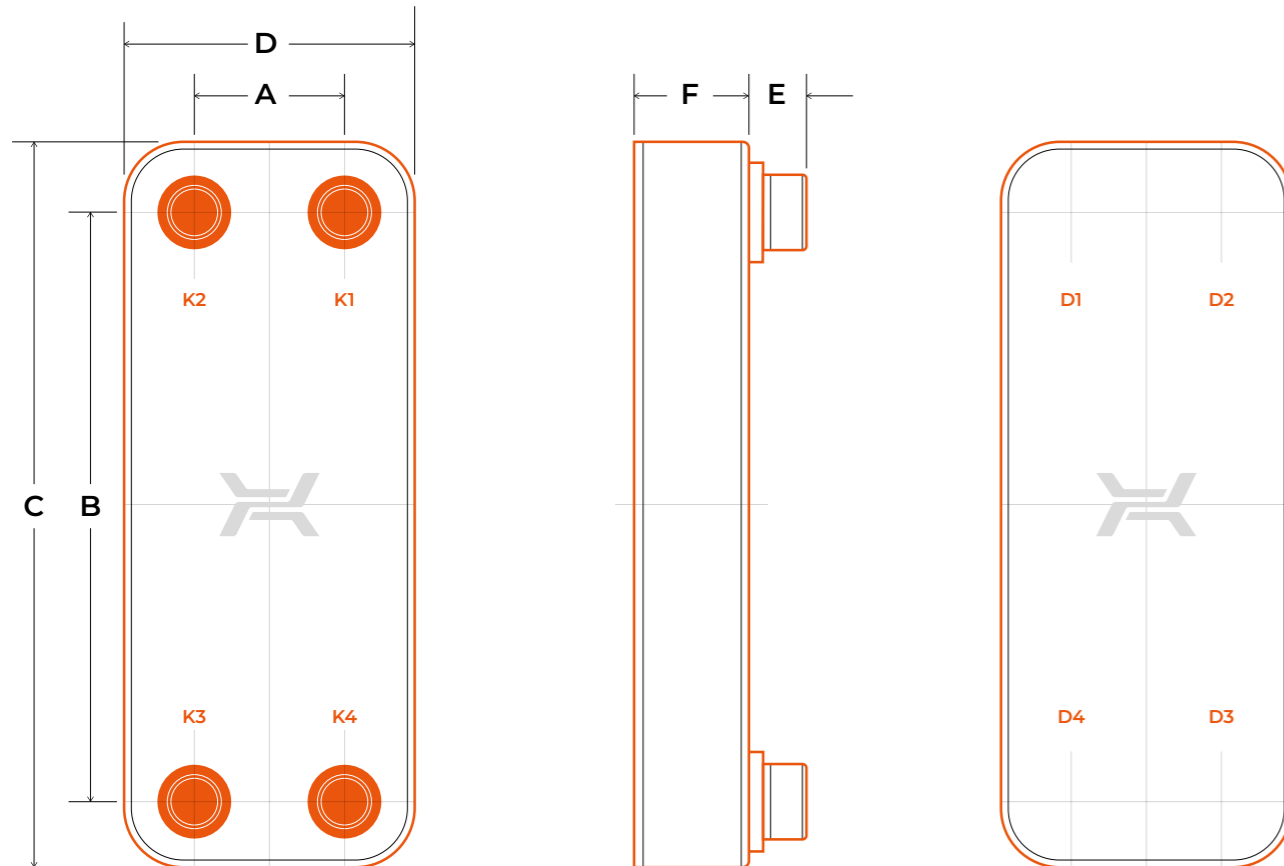
### 2-PASS HEAT EXCHANGER

- D4 / K4** — inlet / outlet hot side
- K3 / D3** — inlet / outlet cold side

### 2-PASS WITH 6 CONNECTIONS

#### ADDITIONALLY:

- K1** — vent connection / inlet of central heating return
- K2** — vent connection / inlet of domestic hot water circulation return



## MATERIALS

- STAINLESS STEEL
- STAINLESS BRAZING

## EXEMPLARY MEDIA

- WATER
- PROPYLENE GLYCOL SOLUTIONS
- OTHER (CONSULT THE MANUFACTURER)

## WORKING PARAMETERS

- MAX. TEMPERATURE — 392°F
- MIN. TEMPERATURE — -319°F
- LM LN — -150°F
- MAX. PRESSURE
- LA LN, LB LN, LC LN — 290 PSI
- LM LN, LD LN — 232 PSI

# TECHNICAL PARAMETERS

Type	Dimensions						max N° of plates	Mass
	A	B	C	D	E	F		
	in	in	in	in	in	in	lb	
LA14LN	1.7	6.5	8.0	3.2	0.6	0.35 + 0.09 × NP	60	1.32 + 0.12 × NP
LA22LN	1.7	10.2	11.8	3.2	0.6	0.35 + 0.09 × NP	60	1.76 + 0.17 × NP
LA34LN	1.7	17.0	18.5	3.2	0.6	0.35 + 0.09 × NP	60	2.65 + 0.25 × NP
LB31LN	2.7	9.1	11.3	4.8	1.1	0.39 + 0.09 × NP	150	3.53 + 0.28 × NP
LB47LN	2.7	14.2	16.4	4.8	1.1	0.39 + 0.09 × NP	150	4.85 + 0.38 × NP
LB60LN	2.7	18.9	21.2	4.8	1.1	0.39 + 0.09 × NP	150	5.95 + 0.48 × NP
LM110LN	3.6	20.5	24.4	7.5	1.9	0.39 + 0.10 × NP	180	6.66 + 0.392 × NP
LCT10LN	6.7	14.9	18.4	10.2	1.1; 3.9	0.43 + 0.09 × NP	180	20.06 + 0.99 × NP
LCT170LN	6.7	23.6	27.1	10.2	1.1; 3.9	0.43 + 0.09 × NP	180	26.24 + 1.41 × NP
LD235LN	8.0	26.9	31.0	12.2	3.9	0.51 + 0.1 × NP	160	89.95 + 0.11 × NP

NP – number of plates | dim. F+/-3%

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



## R

**BRAZED PLATE HEAT EXCHANGERS**

DESIGNED FOR USE IN COOLING OR HEATING INSTALLATIONS. REFRIGERANT EVAPORATORS, CONDENSERS AND ECONOMIZERS.

## APPLICATION



CHILLERS

REFRIGERATION  
UNITSHEAT  
PUMPSICE WATER  
GENERATORSCOOLING SYSTEMS  
WITH SPECIAL  
CONSTRUCTION

## ADVANTAGES

OUTSTANDING  
RELIABILITYOPTIMIZED  
FOR MODERN  
REFRIGERANTSRESISTANCE TO  
CYCLIC FATIGUESPECIAL CHANNEL  
PATTERN ENSURES  
EFFECTIVE  
EVAPORATION  
OR CONDENSATIONRESISTANCE  
TO FREEZING

### EVAPORATORS

A two-phase refrigerant is sent to the bottom welded connection of the exchanger. Flowing through the channels it evaporates completely while acquiring the required degree of overheating. Water or glycol flows in counter-current flow.

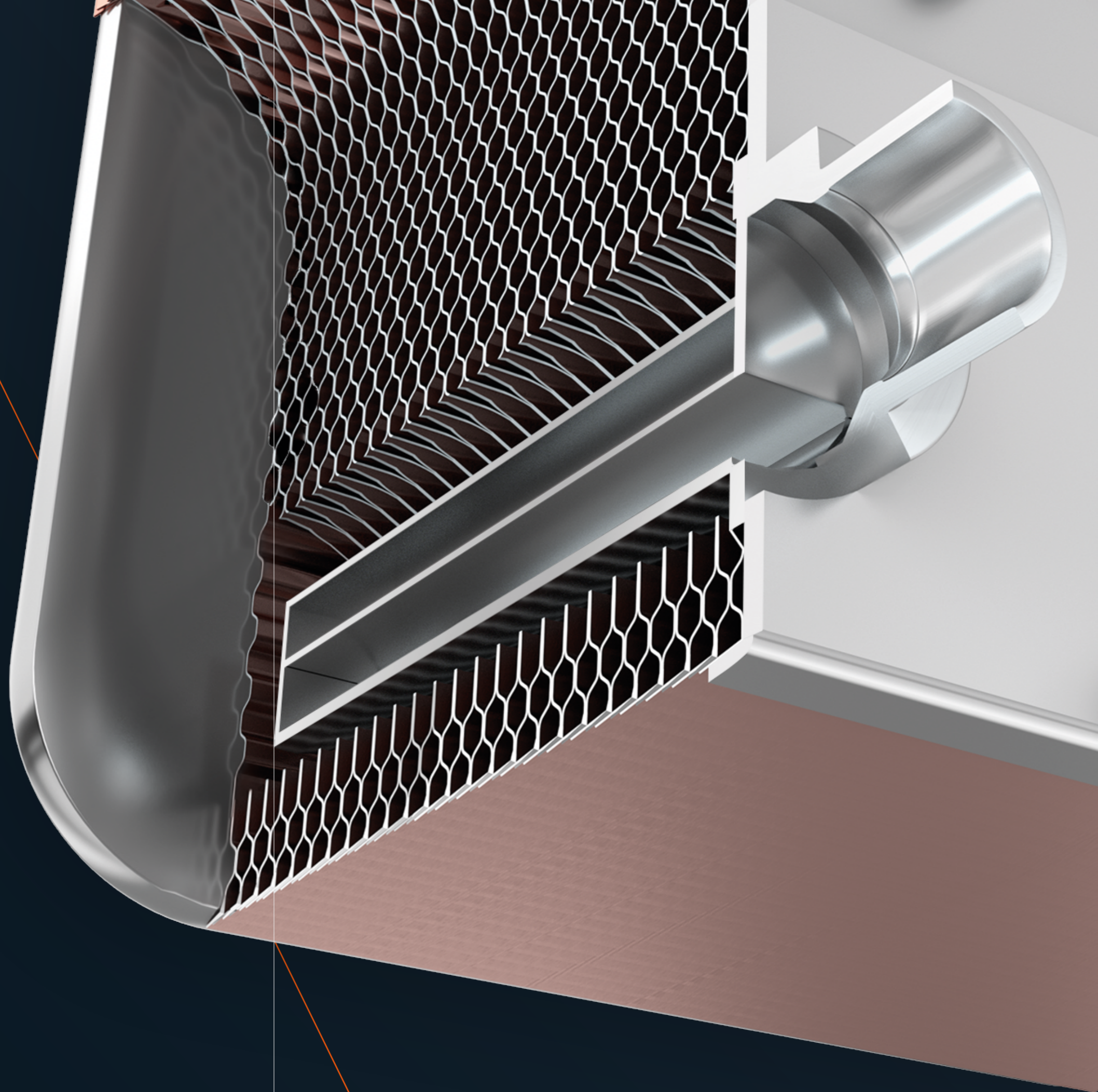
### CONDENSERS

Hot refrigerant vapours are sent to the top welded connection of the exchanger. Flowing through the channels they condense while acquiring the required degree of subcooling. Water and glycol flows in counter-current flow.

### RDS SYSTEM

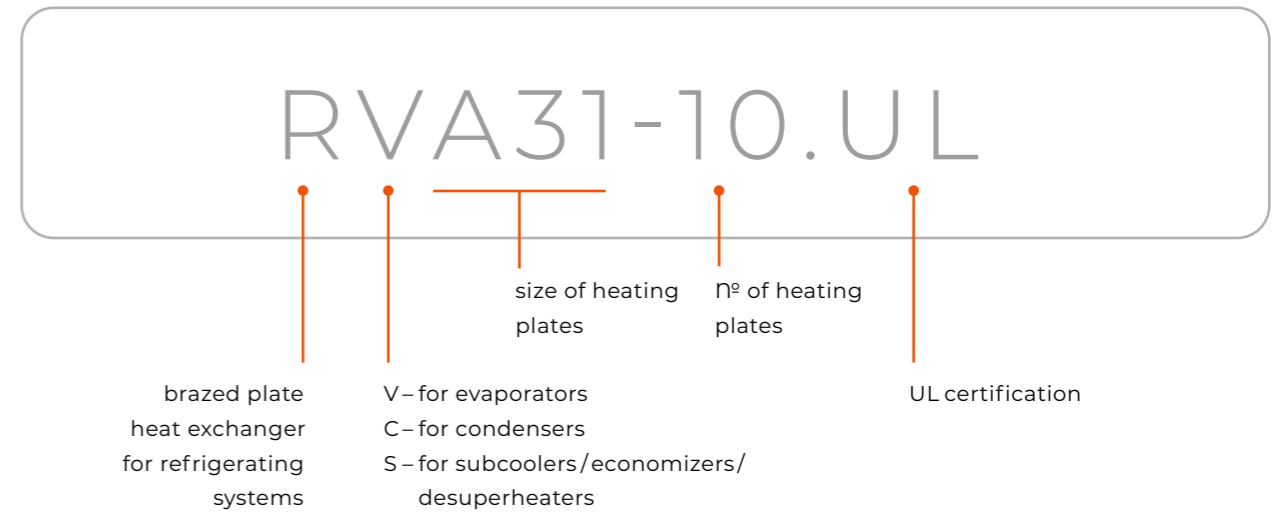
Hexonic developed the unique refrigerant distribution system RDS, for evaporators with potentially higher cooling performance.

The system ensures even medium distribution in evaporator channels, while at the same time reducing steam overheating fluctuations.





EXEMPLAR DESIGNATION



PRODUCT LINE

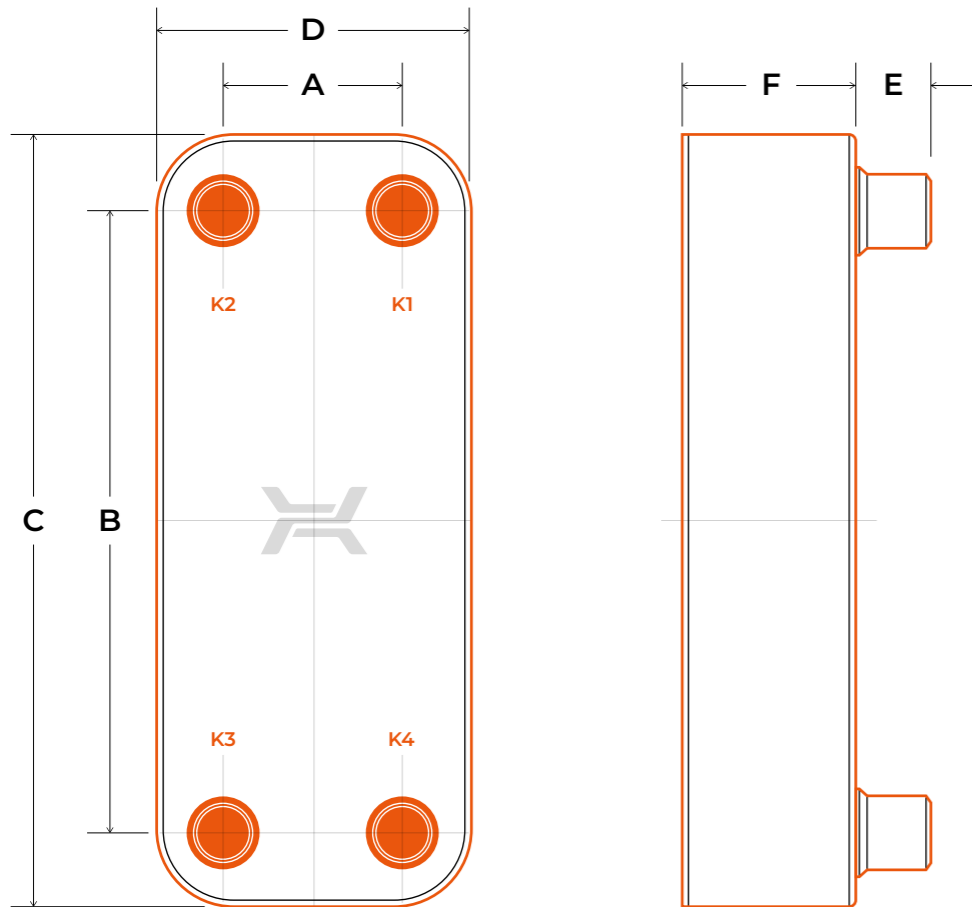


## TECHNICAL DATA

### STANDARD LOCATION OF CONNECTIONS

(DEPENDING ON WHETHER IT IS EVAPORATOR OR CONDENSER)

- K 4 / K 1** — inlet /outlet of water or glycol
- K 3 / K 2** — inlet /outlet of refrigerant



### MATERIALS

- STAINLESS STEEL
- COPPER BRAZING

### EXEMPLARY MEDIA

#### REFRIGERANT SIDE

- R32, R452B, R454B, R1234ZE, R290, R410

#### OTHER SIDE

- WATER
- PROPYLENE GLYCOL SOLUTIONS
- OTHER (CONSULT THE MANUFACTURER)

### WORKING PARAMETERS

MAX. TEMPERATURE — 302°F

MIN. TEMPERATURE — -150°F

MAX. PRESSURE — 653 PSI

## TECHNICAL PARAMETERS

Type	Dimensions						Weight
	A	B	C	D	E	F	
	in	in	in	in	in	in	lb

### EVAPORATORS

RVA14	1,7	6,5	8,0	3,2	0,6	0.35 + 0.09 × NP	1.54 + 0.11 × NP
RVA22	1,7	10,2	11,8	3,2	0,6	0.35 + 0.09 × NP	1.98 + 0.16 × NP
RVA34	1,7	17,0	18,5	3,2	0,6	0.35 + 0.09 × NP	2.87 + 0.26 × NP
RVB31	2,7	9,1	11,3	4,8	1,1	0.39 + 0.09 × NP	3.75 + 0.25 × NP
RVB47	2,7	14,2	16,4	4,8	1,1	0.39 + 0.09 × NP	5.07 + 0.37 × NP
RVB60	2,7	18,9	21,2	4,8	1,1	0.39 + 0.09 × NP	6.17 + 0.48 × NP
RVC110	6,7	14,9	18,3	10,2	1,1	0.39 + 0.09 × NP	19.40 + 0.9 × NP
RVC170	6,7	23,6	27,1	10,2	1,1	0.39 + 0.09 × NP	25.35 + 1.36 × NP
RVM110	3,6	20,5	24,4	7,5	1,1	0.393 + 0.102 × NP	18.52 + 0.9 × NP
RVD235	8,0	26,9	31,0	12,2	1,1	0.51 + 0.10 × NP	88.18 + 1.83 × NP

### CONDENSERS

RCA14	1,7	6,5	8,0	3,2	0,6	0.35 + 0.09 × NP	1.54 + 0.11 × NP
RCA22	1,7	10,2	11,8	3,2	0,6	0.35 + 0.09 × NP	1.98 + 0.16 × NP
RCA34	1,7	17,0	18,5	3,2	0,6	0.35 + 0.09 × NP	2.87 + 0.26 × NP
RCB31	2,7	9,1	11,3	4,8	1,1	0.35 + 0.09 × NP	3.75 + 0.25 × NP
RCB47	2,7	14,2	16,4	4,8	1,1	0.39 + 0.09 × NP	5.07 + 0.37 × NP
RCB60	2,7	18,9	21,2	4,8	1,1	0.39 + 0.09 × NP	6.17 + 0.48 × NP
RCC110	6,7	14,9	18,3	10,2	1,1	0.39 + 0.09 × NP	19.4 + 0.9 × NP
RCC170	6,7	23,6	27,1	10,2	1,1	0.39 + 0.09 × NP	25.35 + 1.36 × NP
RCM110	3,6	20,5	24,4	7,5	1,1	0.39 + 0.10 × NP	18.52 + 0.9 × NP
RCD235	8,0	26,9	31,0	12,2	1,1	0.51 + 0.10 × NP	88.18 + 1.83 × NP

### SUBCOOLERS / ECONOMIZERS / DESUPERHEATERS

RSA14	1,7	6,5	8,0	3,2	0,6	0.35 + 0.09 × NP	1.54 + 0.11 × NP
RSA22	1,7	10,2	11,8	3,2	0,6	0.35 + 0.09 × NP	1.98 + 0.16 × NP
RSA34	1,7	17,0	18,5	3,2	0,6	0.35 + 0.09 × NP	2.87 + 0.26 × NP
RSB31	2,7	9,1	11,3	4,8	1,1	0.39 + 0.09 × NP	3.75 + 0.25 × NP
RSB47	2,7	14,2	16,4	4,8	1,1	0.39 + 0.09 × NP	5.07 + 0.37 × NP

NP – number of plates | dim. F+/-3%

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

COOLING CAPACITY TABLE FOR LOW POWER INSTALLATIONS

Table with 12 columns (Evaporator and Condenser types) and multiple rows for different capacities (0.5 to 7.5 kW) and refrigerants (R32, R452B, R454B, R1234ZE, R290, R410A). Includes temperature conditions like 39/44.4°F and 105/101.4°F.

EVAPORATOR

CONDENSER

MEDIUM EVAPORATION TEMP. — 39/29/19°F OVERHEATING — 3K

MEDIUM CONDENSING TEMP. — 105/125/145°F OVERCOOLING — 2K

WATER 54/44°C - 44/34°F

WATER 85/95 - 105/115 - 125/135°F

PG35 32/23°F, DPMAX<30KPA

DPMAX<30KPA

COOLING CAPACITY TABLE FOR HIGH POWER INSTALLATIONS

Table with 12 columns (Evaporator and Condenser types) and multiple rows for different capacities (10 to 80 kW) and refrigerants (R32, R452B, R454B, R1234ZE, R290, R410A). Includes temperature conditions like 39/44.4°F and 105/101.4°F.

EVAPORATOR

CONDENSER

MEDIUM EVAPORATION TEMP. — 39/29/19°F OVERHEATING — 3K

MEDIUM CONDENSING TEMP. — 105/125/145°F OVERCOOLING — 2K

WATER 54/44°C - 44/34°F

WATER 85/95 - 105/115 - 125/135°F

PG35 32/23°F, DPMAX<30KPA

DPMAX<30KPA

## TYPE AND SIZE OF CONNECTIONS

L	Luna	R	Connections																	
			1/4"	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"	1 1/2"	1 1/8"	1 3/8"	1 5/8"	2"	2 1/8"	2 1/2"	3"	4"	6"
LA12				⊙	⊙			⊙												
LA14	LA14LN	RVA14	RCA14	RSA14	⊕	⊙	⊙	⊕	⊙	⊕										
LA22	LA22LN	RVA22	RCA22	RSA22	⊕	⊙	⊙	⊕	⊙	⊕										
LA34	LA34LN	RVA34	RCA34	RSA34	⊕	⊙	⊙	⊕	⊙	⊕										
LJ30								⊙		⊙										
LH40								⊙		⊙										
LB31	LB31LN	RVB31	RCB31	RSB31	⊕	⊕	⊕	⊕	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
LB47	LB47LN	RVB47	RCB47	RSB47	⊕	⊕	⊕	⊕	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
LB60	LB60LN	RVB60	RCB60		⊕	⊕	⊕	⊕	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
LM110	LM110LN	RVM110	RCM110						⊕					⊕	⊕	⊕	⊕	⊕	⊕	⊕
LC110	LC110LN	RVC110	RCC110						⊕	⊙	⊙	⊙	⊙	⊕	⊕	⊕	⊕	⊕	⊕	⊕
LC170	LC170LN	RVC170	RCC170						⊕	⊙	⊙	⊙	⊙	⊕	⊕	⊕	⊕	⊕	⊕	⊕
LD235	LD235LN	RVD235	RCD235																	⊕
LE400																				⊕
LF700																				⊕

- ⊙ internal thread
- ⊕ Victaulic
- ⊕ welded connection for R-line
- ⊙ dual (external thread and soldering)
- ⊕ flange

## MOUNTING BRACKETS

MOUNTING BRACKETS ARE MANUFACTURED USING STAINLESS STEEL OR CARBON ZINC-PLATED STEEL



## INSULATION

### INSULATION MADE OF POLYURETHANE FOAM COVERED WITH ALUMINUM (APFI)

- MAX. WORKING TEMPERATURE: 275°F
- THICKNESS: 1.18 IN
- THERMAL CONDUCTIVITY: 0.015 BTU/FT. HOUR°F



### INSULATION MADE OF EXPANDED POLYPROPYLENE (EPPI) WITH ALUMINUM (APFI)

- MAX. WORKING TEMPERATURE: 230°F
- THICKNESS: 1.10 IN
- THERMAL CONDUCTIVITY: 0.020 BTU/FT. HOUR°F



### COLD INSULATION FOR R-LINE HEAT EXCHANGERS

- WORKING TEMPERATURE RANGE: -40°F TO 230°F
- THICKNESS: 0.787 IN
- THERMAL CONDUCTIVITY: 0.021 BTU/FT. HOUR°F



