

BPHE

BRAZED PLATE
HEAT EXCHANGERS



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BRAZED PLATE HEAT EXCHANGERS
 DESIGNED FOR USE IN COOLING
 OR HEATING INSTALLATIONS,
 REFRIGERANT EVAPORATORS,
 CONDENSERS AND ECONOMIZERS.

APPLICATION



CHILLERS



REFRIGERATION
UNITS



HEAT
PUMPS



ICE WATER
GENERATORS



COOLING SYSTEMS
WITH SPECIAL
CONSTRUCTION

ADVANTAGES



OUTSTANDING
RELIABILITY



OPTIMIZED
FOR MODERN
REFRIGERANTS



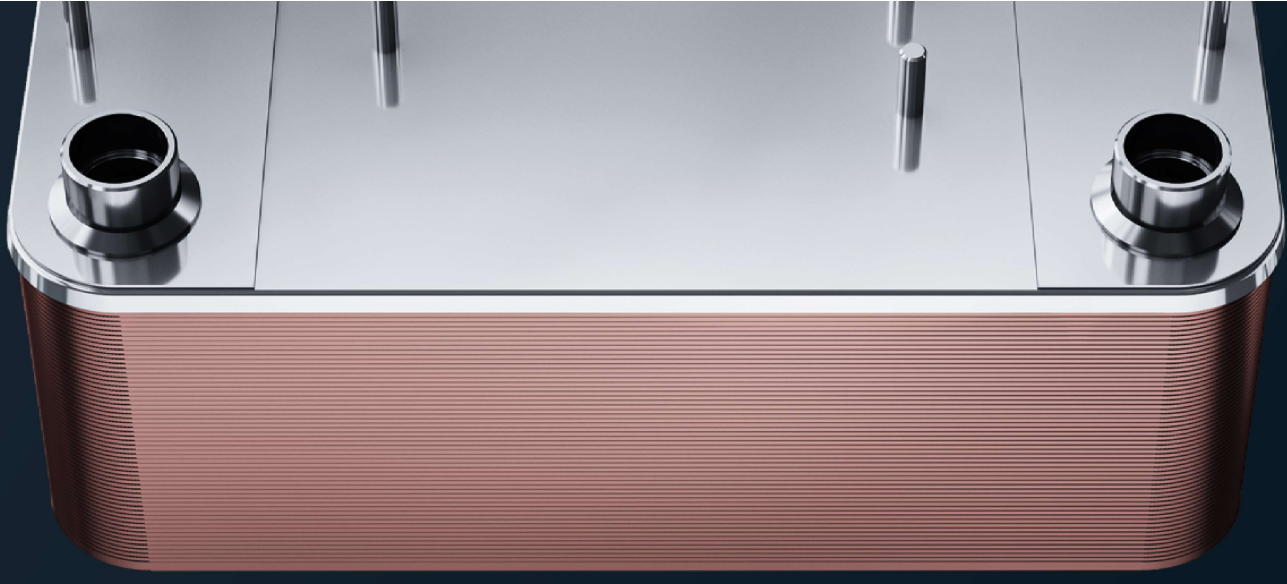
RESISTANCE TO
CYCLIC FATIGUE



SPECIAL CHANNEL
PATTERN ENSURES
EFFECTIVE
EVAPORATION
OR CONDENSATION



RESISTANCE
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.

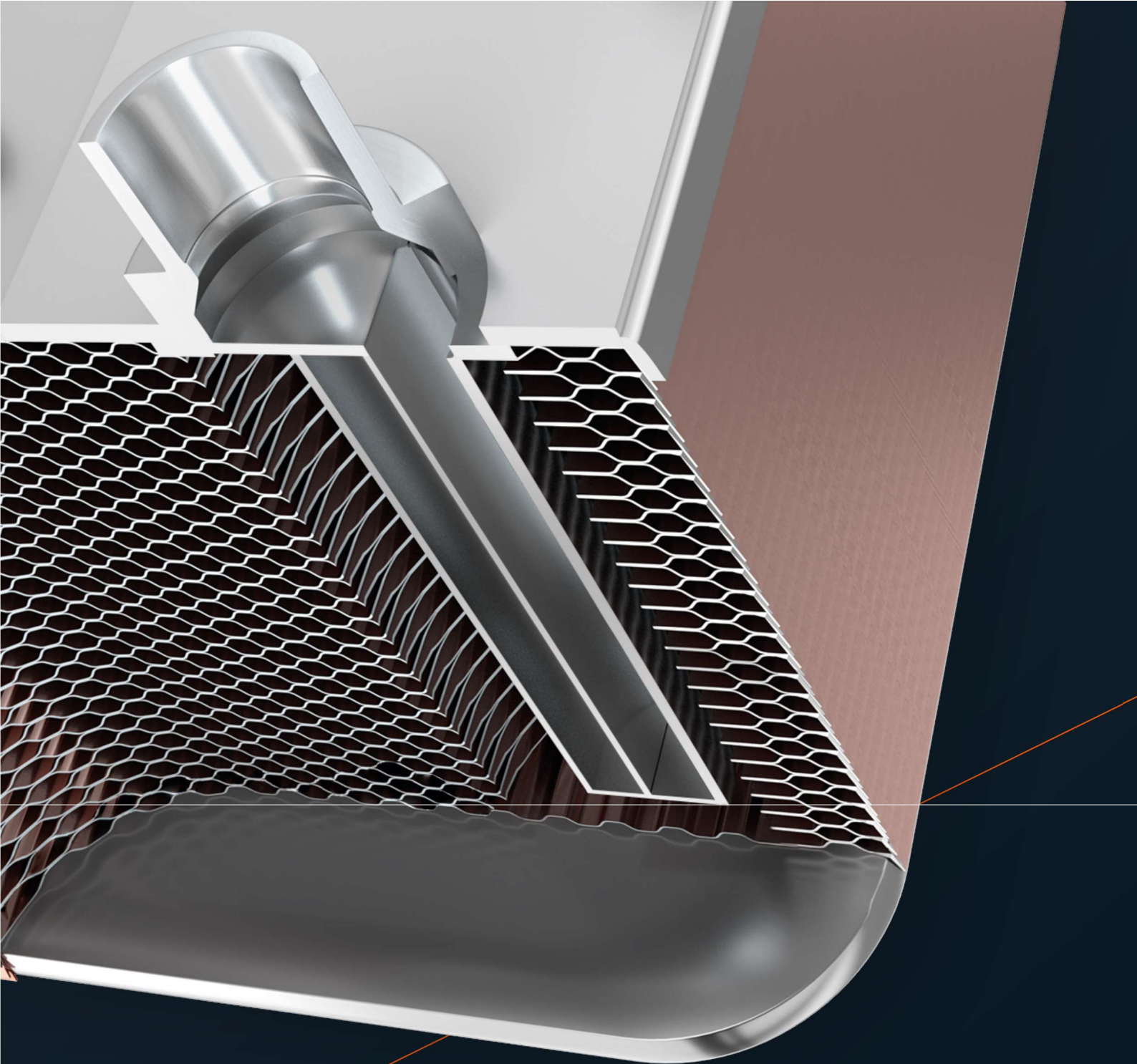
CONDENSERS

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

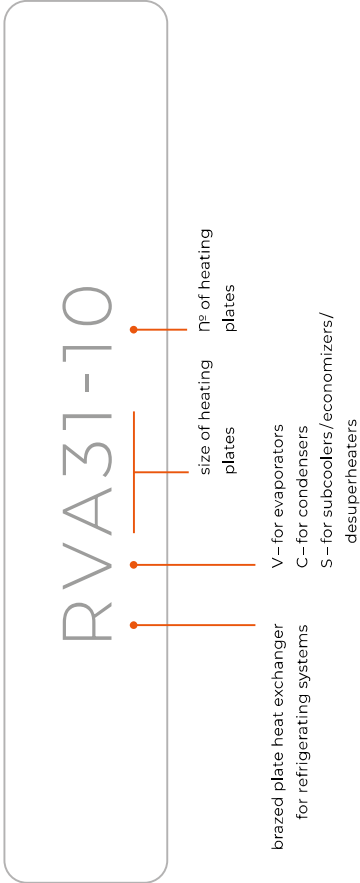
Hexonic developed the unique refrigerant distribution system RDS, for evaporators with potentially higher cooling performance.

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





EXEMPLAR DESIGNATION



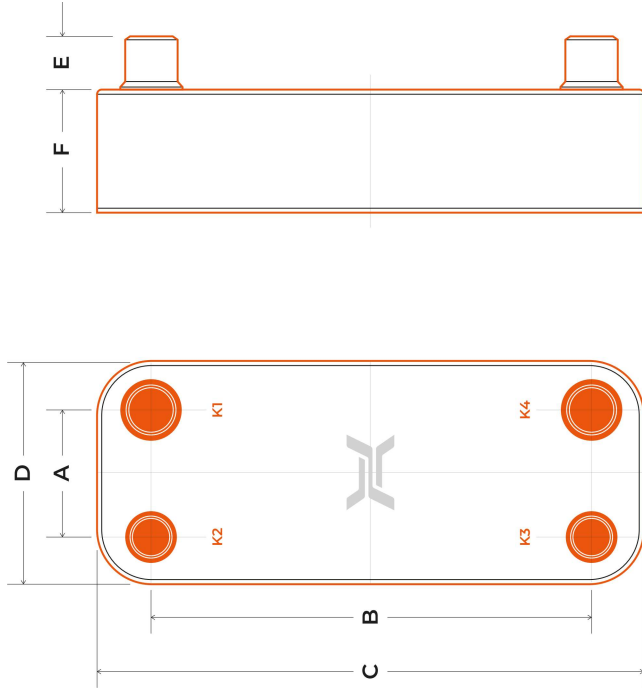
PRODUCT LINE



TECHNICAL DATA

STANDARD LOCATION OF CONNECTIONS
(DEPENDENT ON WHETHER IT IS EVAPORATOR OR CONDENSER)

- K4 / K1 — inlet /outlet of refrigerant
- K3 / K2 — inlet /outlet of water or glycol



MATERIALS

- STAINLESS STEEL
- COPPER BRAZING

EXEMPLARY MEDIA

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

OTHER SIDE

- WATER
- PROPYLENE GLYCOL SOLUTIONS
- GROUP II FLUIDS
- OTHER (CONSULT THE MANUFACTURER)

WORKING PARAMETERS

- MAX. TEMPERATURE — 150°C / 302°F
- MIN. TEMPERATURE — -195°C / -319°F

MAX. PRESSURE

- REFRIGERANT SIDE — 4,5 MPA / 653 PSI
- WATER, GLYCOL SIDE — 2,5 MPA / 363 PSI

TECHNICAL PARAMETERS

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

EVAPORATORS

RVA14	42	17	164	6,5	203	8,0	3,2	16	0,6	9 + 2,3 × NP	0,35 + 0,09 × NP	0,7 + 0,049 × NP	1,54 + 0,11 × NP
RVA22	42	17	260	10,2	299	11,8	3,2	16	0,6	9 + 2,3 × NP	0,35 + 0,09 × NP	0,9 + 0,073 × NP	1,98 + 0,16 × NP
RVA34	42	17	432	17,0	471	18,5	3,2	16	0,6	9 + 2,3 × NP	0,35 + 0,09 × NP	1,3 + 0,116 × NP	2,87 + 0,26 × NP
RVB31	68	27	232	9,1	286	11,3	4,8	28	1,1	10 + 2,35 × NP	0,39 + 0,09 × NP	1,7 + 0,114 × NP	3,75 + 0,25 × NP
RVB47	68	27	360	14,2	417	16,4	4,8	28	1,1	10 + 2,35 × NP	0,39 + 0,09 × NP	2,3 + 0,168 × NP	5,07 + 0,37 × NP
RVB60	68	27	460	18,9	538	21,2	4,8	28	1,1	10 + 2,35 × NP	0,39 + 0,09 × NP	2,8 + 0,219 × NP	6,17 + 0,48 × NP
RVB60X	68	27	460	18,9	538	21,2	4,8	28	1,1	13 + 1,95 × NP	0,39 + 0,077 × NP	2,8 + 0,219 × NP	6,17 + 0,48 × NP
RVCT10	170	67	378	14,9	466	18,3	2,98	10,2	2,8	10 + 2,4 × NP	0,39 + 0,09 × NP	8,8 + 0,409 × NP	19,40 + 0,9 × NP
RVCT70	170	67	600	23,6	688	27,1	2,98	10,2	2,8	10 + 2,4 × NP	0,39 + 0,09 × NP	11,5 + 0,617 × NP	25,35 + 1,36 × NP
RVM100	91	36	520	20,5	619	24,4	1,90	7,5	2,8	10 + 2,6 × NP	0,393 + 0,102 × NP	8,4 + 0,408 × NP	18,52 + 0,9 × NP
RVD235	204	80	682	26,9	788	31,0	3,10	12,2	2,8	13 + 2,5 × NP	0,51 + 0,10 × NP	40 + 0,628 × NP	88,18 + 1,83 × NP

CONDENSERS

RCA14	42	17	164	6,5	203	8,0	3,2	16	0,6	9 + 2,3 × NP	0,35 + 0,09 × NP	0,7 + 0,049 × NP	1,54 + 0,11 × NP
RCA22	42	17	260	10,2	299	11,8	3,2	16	0,6	9 + 2,3 × NP	0,35 + 0,09 × NP	0,9 + 0,073 × NP	1,98 + 0,16 × NP
RCA34	42	17	432	17,0	471	18,5	3,2	16	0,6	9 + 2,3 × NP	0,35 + 0,09 × NP	1,3 + 0,116 × NP	2,87 + 0,26 × NP
RCB31	68	27	232	9,1	286	11,3	4,8	28	1,1	10 + 2,35 × NP	0,35 + 0,09 × NP	1,7 + 0,114 × NP	3,75 + 0,25 × NP
RCB47	68	27	360	14,2	417	16,4	4,8	28	1,1	10 + 2,35 × NP	0,39 + 0,09 × NP	2,3 + 0,168 × NP	5,07 + 0,37 × NP
RCB60	68	27	460	18,9	538	21,2	4,8	28	1,1	10 + 2,35 × NP	0,39 + 0,09 × NP	2,8 + 0,219 × NP	6,17 + 0,48 × NP
RCB60X	68	27	460	18,9	538	21,2	4,8	28	1,1	13 + 1,95 × NP	0,39 + 0,077 × NP	2,8 + 0,219 × NP	6,17 + 0,48 × NP
RCC10	170	67	378	14,9	466	18,3	2,98	10,2	2,8	10 + 2,4 × NP	0,39 + 0,09 × NP	8,8 + 0,409 × NP	19,4 + 0,9 × NP
RCC70	170	67	600	23,6	688	27,1	2,98	10,2	2,8	10 + 2,4 × NP	0,39 + 0,09 × NP	11,5 + 0,617 × NP	25,35 + 1,36 × NP
RCM10	91	36	520	20,5	619	24,4	1,90	7,5	2,8	10 + 2,6 × NP	0,39 + 0,10 × NP	8,4 + 0,408 × NP	18,52 + 0,9 × NP
RCD235	204	80	682	26,9	788	31,0	3,10	12,2	2,8	13 + 2,5 × NP	0,51 + 0,10 × NP	40 + 0,628 × NP	88,18 + 1,83 × NP

SUBCOOLERS / ECONOMIZERS / DESUPERHEATERS

RSN14	42	17	164	6,5	203	8,0	3,2	16	0,6	9 + 2,3 × NP	0,35 + 0,09 × NP	0,7 + 0,049 × NP	1,54 + 0,11 × NP
RSA22	42	17	260	10,2	299	11,8	3,2	16	0,6	9 + 2,3 × NP	0,35 + 0,09 × NP	0,9 + 0,073 × NP	1,98 + 0,16 × NP
RSA34	42	17	432	17,0	471	18,5	3,2	16	0,6	9 + 2,3 × NP	0,35 + 0,09 × NP	1,3 + 0,116 × NP	2,87 + 0,26 × NP
RSB31	68	27	232	9,1	286	11,3	4,8	28	1,1	10 + 2,35 × NP	0,39 + 0,09 × NP	1,7 + 0,114 × NP	3,75 + 0,25 × NP
RSB47	68	27	360	14,2	417	16,4	4,8	28	1,1	10 + 2,35 × NP	0,39 + 0,09 × NP	2,3 + 0,168 × NP	5,07 + 0,37 × NP

NP = number of plates | dim. F, 1-3%

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

COOLING CAPACITY TABLE FOR HIGH POWER INSTALLATIONS

EVAPORATOR (ΔT_{GROUND SOURCE} = 10K) CONDENSER (ΔT_{INSTALLATION} = 5K)

power [kW]	R134A E		R134A		R290		R134A E		R134A		R290	
	W50W90 ΔT=10K	W43W80 ΔT=10K	R134A	W43W80 ΔT=10K	R290	W53W70 ΔT=10K	R134A E	R290	R134A	W43W80 ΔT=10K	R290	R134A
150 kW	RVC170-60	RVC170-60	RVC170-60	RVC170-60	RVC170-60	RVC170-60	RVC170-60	RVC170-60	RVC170-60	RVC170-60	RVC170-60	RVC170-60
180 kW	RVC170-70	RVC170-70	RVC170-70	RVC170-70	RVC170-70	RVC170-70	RVC170-70	RVC170-70	RVC170-70	RVC170-70	RVC170-70	RVC170-70
210 kW	RVC170-80	RVC170-80	RVC170-80	RVC170-80	RVC170-80	RVC170-80	RVC170-80	RVC170-80	RVC170-80	RVC170-80	RVC170-80	RVC170-80
240 kW	RVD235-70	RVD235-70	RVD235-70	RVD235-70	RVD235-70	RVD235-70	RVD235-70	RVD235-70	RVD235-70	RVD235-70	RVD235-70	RVD235-70
270 kW	RVD235-80	RVD235-80	RVD235-80	RVD235-80	RVD235-80	RVD235-80	RVD235-80	RVD235-80	RVD235-80	RVD235-80	RVD235-80	RVD235-80
300 kW	RVD235-90	RVD235-90	RVD235-90	RVD235-90	RVD235-90	RVD235-90	RVD235-90	RVD235-90	RVD235-90	RVD235-90	RVD235-90	RVD235-90
350 kW	RVD235-100	RVD235-100	RVD235-100	RVD235-100	RVD235-100	RVD235-100	RVD235-100	RVD235-100	RVD235-100	RVD235-100	RVD235-100	RVD235-100
400 kW	RVD235-120	RVD235-120	RVD235-120	RVD235-120	RVD235-120	RVD235-120	RVD235-120	RVD235-120	RVD235-120	RVD235-120	RVD235-120	RVD235-120
450 kW	RVD235-130	RVD235-130	RVD235-130	RVD235-130	RVD235-130	RVD235-130	RVD235-130	RVD235-130	RVD235-130	RVD235-130	RVD235-130	RVD235-130
500 kW	RVD235-140	RVD235-140	RVD235-140	RVD235-140	RVD235-140	RVD235-140	RVD235-140	RVD235-140	RVD235-140	RVD235-140	RVD235-140	RVD235-140

COOLING CAPACITY TABLE FOR LOW POWER INSTALLATIONS

EVAPORATOR (ΔT_{GROUND SOURCE} = 5K) CONDENSER (ΔT_{INSTALLATION} = 10K)

W12	R452B		R454B		R32		R452B		R454B		R32	
	W32	W45	R452B	R454B	R32	R452B	R454B	R32	R452B	R454B	R32	R452B
4 kW	RVA2-50	RVA2-50	RVA2-50	RVA2-50	RVA2-50	RVA2-50	RVA2-50	RVA2-50	RVA2-50	RVA2-50	RVA2-50	RVA2-50
6 kW	RVA3-40	RVA3-40	RVA3-40	RVA3-40	RVA3-40	RVA3-40	RVA3-40	RVA3-40	RVA3-40	RVA3-40	RVA3-40	RVA3-40
9 kW	RVA3-30	RVA3-30	RVA3-30	RVA3-30	RVA3-30	RVA3-30	RVA3-30	RVA3-30	RVA3-30	RVA3-30	RVA3-30	RVA3-30
12 kW	RVA3-20	RVA3-20	RVA3-20	RVA3-20	RVA3-20	RVA3-20	RVA3-20	RVA3-20	RVA3-20	RVA3-20	RVA3-20	RVA3-20
16 kW	RVA4-20	RVA4-20	RVA4-20	RVA4-20	RVA4-20	RVA4-20	RVA4-20	RVA4-20	RVA4-20	RVA4-20	RVA4-20	RVA4-20
20 kW	RVA4-10	RVA4-10	RVA4-10	RVA4-10	RVA4-10	RVA4-10	RVA4-10	RVA4-10	RVA4-10	RVA4-10	RVA4-10	RVA4-10
25 kW	RVA4-30	RVA4-30	RVA4-30	RVA4-30	RVA4-30	RVA4-30	RVA4-30	RVA4-30	RVA4-30	RVA4-30	RVA4-30	RVA4-30
35 kW	RVA5-40	RVA5-40	RVA5-40	RVA5-40	RVA5-40	RVA5-40	RVA5-40	RVA5-40	RVA5-40	RVA5-40	RVA5-40	RVA5-40
50 kW	RVA6-50	RVA6-50	RVA6-50	RVA6-50	RVA6-50	RVA6-50	RVA6-50	RVA6-50	RVA6-50	RVA6-50	RVA6-50	RVA6-50
60 kW	RVA6-40	RVA6-40	RVA6-40	RVA6-40	RVA6-40	RVA6-40	RVA6-40	RVA6-40	RVA6-40	RVA6-40	RVA6-40	RVA6-40

CONDENSER

MEDIUM
EVAPORATION TEMP.
— 100/90/80 °C
OVERHEATING — 2K

WATER
50/45 °C – 45/40 °C – 35/30 °C
DPMAX < 30KPA

WATER
80/90 °C – 70/80 °C – 60/70 °C
DPMAX < 30KPA

MEDIUM
EVAPORATION TEMP.
— 85/95 °C – 75/85 °C – 65/75 °C
DPMAX < 30KPA

WATER
50/45 °C – 45/40 °C – 35/30 °C
DPMAX < 30KPA

EVAPORATOR

MEDIUM
EVAPORATION TEMP.
— 35/30/25 °C
OVERHEATING — 3K

WATER
50/45 °C – 45/40 °C – 35/30 °C
DPMAX < 30KPA

MEDIUM
EVAPORATION TEMP.
— 45/35/30 °C
OVERHEATING — 3K

WATER
50/45 °C – 45/40 °C – 35/30 °C
DPMAX < 30KPA

ECONOMIZER

RA0A	R410A
4 kW	RSA1-10
6 kW	RSAM-10
9 kW	RSAX-20
12 kW	RSA1-30
16 kW	RSB1-15
20 kW	RSB1-20
25 kW	RSB1-20
35 kW	RSB1-30
50 kW	RSB1-40
60 kW	RSB1-60

CONDENSER

MEDIUM
EVAPORATION TEMP.
— 4/-1/-8 °C
OVERHEATING — 3K

WATER
12/7 °C – 7/2 °C
DPMAX < 30KPA

CONDENSING TEMP.
— 58/48/38 °C
OVERHEATING — 2K

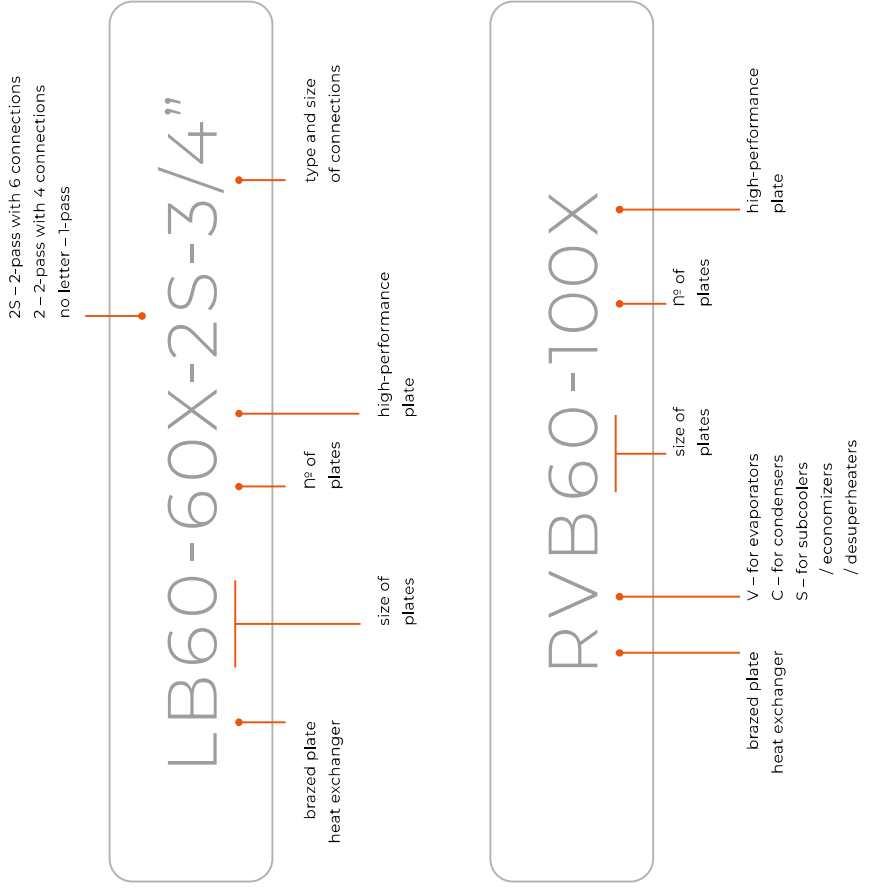
WATER
23/35 °C – 35/45 °C – 45/55 °C
DPMAX < 30KPA

PG35
0/-5 °C
DPMAX < 30KPA

THE HIGH-PERFORMANCE PLATE

Our product range of brazed plate heat exchangers stands out for its extensive assortment and adaptable features, offering unmatched diversity in size, brazing material, connection types, flow arrangements, and accessory options. Now, we have gone one step further and created a reinforced heat exchanger dedicated to cooling and heating solutions. These ultra-efficient heat exchangers feature special heating plates "X", providing enhanced heat transfer efficiency and increased turbulence flow of the medium. Consequently, this leads to increased thermal efficiency, lower investment costs, and a reduced footprint.

EXEMPLAR DESIGNATION



ADVANTAGES

