



## Reversible Heatpump Air/Water on R454B type LHE HA/LS/RV/P2U/Kr

Reversible heatpump Air/Water for the production of chilled/hot water. The units are equipped with hermetic scroll compressors. Axial EC fans. Suitable for outdoor installation. Refrigerant R454B. These units are specially designed for cooling medium to large projects. Tandem technology offers multiple capacity stages and increases efficiency at part load. This also improves performance. Copper pipes and aluminium fins condenser coil with standard hydrophilic coating. **Only sell to certified air-conditioning installers. Mandatory commissioning by CAIROX.**

### Brand

- Emicon

### Application

- Outdoor air/water reversible heatpumps suitable for comfort and process cooling and heating applications

### Characteristics

- Cooling capacity: 38 to 310 kW
- Heating capacity: 45 to 350 kW

### Composition

- Refrigerant gas R454B
- Scroll compressors with crankcase heater and thermal overload
- Power supply 400V/3ph/50Hz
- Microprocessor controller
- Condenser coil with fins hydrophilic coating
- Leak detector

### Options

- A1NTU Pump group with 1 pump
- A2NTU Pump group with 2 pumps in parallel (1 in operation/1 standby)
- A1ZZU Pump group with 1 pump, buffer tank and expansion tank
- A2ZZU Hydraulic module with 2 pumps, buffer tank and expansion tank
- DCCF Winter control up to -20 °C (standard)
- DSSE Electronic soft starter
- FAMM Condenser coil protection grille

- INSE RS485 serial card Modbus
- KAVM Vibration dampers with springs
- KPSU1 Anti-frost kit for pump, internal piping and buffer tank (controlled by controller)
- KPSU2 Anti-frost kit for 2 pumps, internal piping and buffer tank ( controlled by controller)
- KPU1 Anti-frost kit for pump and internal piping (controlled by controller)
- KPU2 Anti-frost kit for 2 pumps and internal piping (controlled by controller)
- MAML Pressure gauges
- PCRL Remote control
- RAEV Anti-frost kit around the plate heat exchanger
- SGRS Master -Slave Cascade control system
- VTEE Electronic expansion valve
- PCP Anti-corrosion coating on the condenser coils (Powder coat RA Frost protection on evaporator (Electric heating with thermostat)
- VSC Inverter control compressors
- VSP Inverter control pump(s)
- AXT Diffuser on the axial fans
- GP Protection grille condensor
- IH RS485 serial card
- IH BAC BACNET RS485 serial card
- IWG Interface => SNMP or TCP/IP or BACNET IP or MODBUS IP
- I1 Insulation for around Victaulic flanges from pump to hydraulic lines
- I2 Insulation for around Victaulic flanges from tank to hydraulic lines

### Versions

- SA Standard version with AC fans (LS or XL) (ErP compliant for EU market)
- SE Standard version with EC fans (LS or XL) (ErP compliant for EU market)
- HA High efficiency with AC fans (LS or XL) (ErP compliant for EU market)
- HE High efficiency with EC fans (LS or XL) (ErP compliant for EU market)
- SL Low Noise
- XL Extra low noise
- P2U Version 2 pipes without production DHW
- P2S Version 2 pipes with DHW production via external 3-way valve

### Order example

#### LHE 0432 /SE/RV/P2U/Kr

Explanation

**43** Nominal cooling capacity (KW)

**2** Number of cooling circuits

**SE** Standard efficiency EC fans

**RV** Reversible heatpump

**P2U** Two pipes configuration

**Kr** Refrigerant R454B

		Specifications																		
LHE HA/LS/RV/P2U/Kr		0432	0492	0602	0702	0802	0902	1002	1202	1402	1602	1802	2002	2302	2502	2504	3004	3204	3504	4004
Cooling capacity	kW	39	43.2	51.2	56.4	63.7	79	88.4	96.6	116	128	143	156	178	198	195	227	253	284	321
Total power input Cooling	kW	14	16.7	18.9	21.9	23.4	27.5	32	36.9	44.2	44.7	52.5	59.7	67	74.6	73.7	82.6	92.4	107	118
Water flow	m³/h	6.70	7.42	8.79	9.69	10.95	13.58	15.19	16.61	19.94	22.04	24.51	26.89	30.55	34.01	33.48	39.05	43.54	48.74	55.15
Water pressure drop	kPa	10.9	9	11.8	11.7	10.95	16.7	15.19	24	18.5	18.6	11.9	14	24.9	13.2	43.8	50.3	33.2	30.9	30.4
Heating capacity	kW	45.1	49.5	58.5	65.2	71.2	88.9	100	111	131	144	161	178	204	230	222	258	282	325	355
Total power input Heating	kW	13.9	15	17.2	19.4	21.3	26.6	30.5	34.5	38.8	43.2	49.9	54.8	60.6	67.3	68.4	79.5	88.7	100	109
SCOP		3.57	3.67	3.97	3.91	3.86	3.7	3.67	3.68	3.7	3.74	3.69	3.62	3.76	3.83	3.65	3.62	3.65	3.66	3.73
Refrigerant (GWP)		R454B (466)																		
Precharged refrigerant charge	kg(CO2eq-kg)	10 (4.66)	14.5 (6.76)	19 (8.85)	19 (8.85)	19 (8.85)	27 (12.58)	27 (12.58)	27 (12.58)	36 (16.78)	36 (16.78)	36 (16.78)	45 (20.97)	45 (20.97)	60 (27.96)	60 (27.96)	72 (33.55)	72 (33.55)	72 (33.55)	72 (33.55)
Water flow	m³/h	7.83	8.60	10.16	11.32	12.37	15.44	17.37	19.25	22.69	24.94	27.98	30.98	35.35	39.99	38.55	44.78	49.01	56.48	61.69
Water pressure drop	kPa	12.8	10.3	14.3	14.6	13.3	19.7	24.3	29.2	22.2	22.3	23.9	28.6	32.3	17.1	48.7	55.5	37.5	35.4	33.7
Sound pressure level	dB(A)	43	44	44	45	46	50	51	53	54	55	55	55	57	59	56	57	58	58	58
Cooling capacity: Outdoor temperature 35°C - chilled water temperature in/out 7/12°C																				
Heating capacity: Outdoor temperature 7°C - water temperature in/out 40/45°C																				
Sound pressure level calculated according to ISO 3744 at 10 m distance from the unit																				

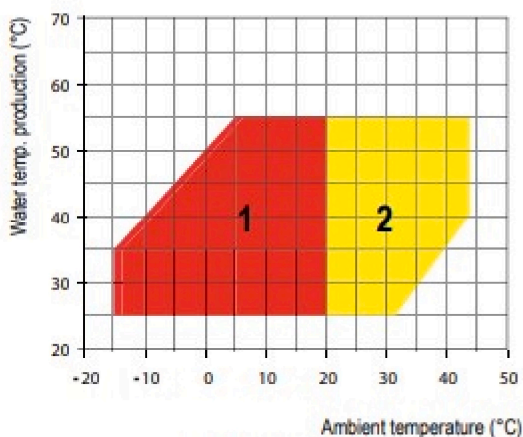
		Dimensions																		
LHE HA/LS/RV/P2U/Kr		432	492	602	702	802	902	1002	1202	1402	1602	1802	2002	2302	2502	2504	3004	3204	3504	4004
L	[mm]	2400	2400	2905	2905	2905	2905	2905	2905	3965	3965	3965	3965	3965	3965	4265	4265	4265	4265	4805
W	[mm]	1145	1145	1150	1150	1150	1150	1150	1150	1150	1150	1150	1150	1150	1150	2210	2210	2210	2210	2210
H	[mm]	1673	1673	1820	1820	1820	1820	1820	1820	1820	1820	1820	1820	2220	2220	2350	2350	2350	2350	2350
Gewicht/Poids	[kg]	690	720	1040	1060	1070	1100	1140	1210	1530	1550	1570	1590	1750	1780	3120	3170	3220	3270	3610

### Prices

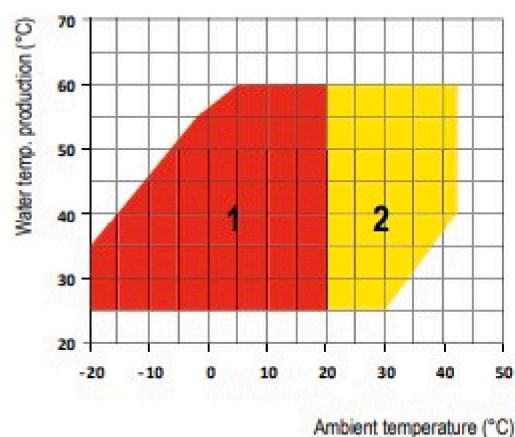
Detailed selection / quotation available on request



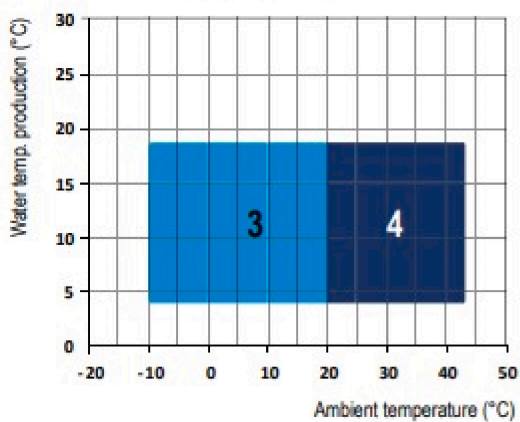
(SA/SE versions)



(HA/HE versions)



(RV versions Only)



- 1 Heating mode
- 2 Heating mode with head pressure control (DCCF)
- 3 Cooling with head pressure control (DCCF)
- 4 Cooling mode