

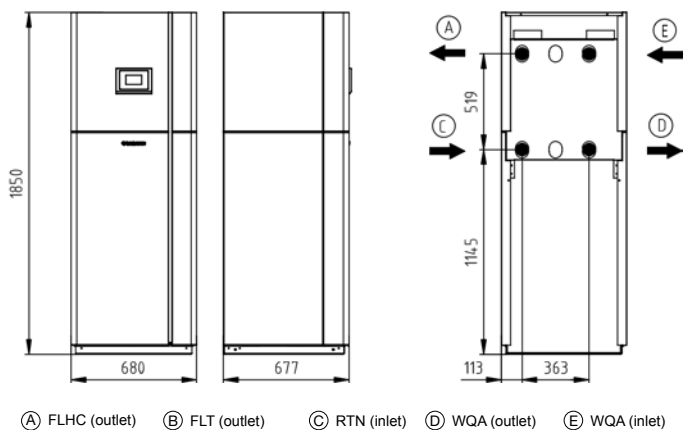
AQUA 97 HPLA

MONOVALENT HEATING SYSTEM WITH WATER AS HEAT SOURCE

ORDER NUMBER: 222630

SERIES: M6

TF MAX. 68 °C



(A) FLHC (outlet) (B) FLT (outlet) (C) RTN (inlet) (D) WQA (outlet) (E) WQA (inlet)

APPLIANCE DATA

Dimensions HxWxD	[mm]	1900x680x680
Hydraulic connection	[inch]	2"
Weight	[kg]	306
Casing colour		White/anthracite

SPECIFICATION

Phases/nominal voltage/frequency	[~]/[V]/[Hz]	3/400/50
Output factor cos φ		0,80
Fuse protection (tripping curve "C")	[A]	80
Max. operating current	[A]	64,00
Max. starting current/max. with soft start	[A]	248.00 / 124.00
Sound power level/sound pressure level (at 1 m distance)	[dBA]	60.00 / 52.00

HEATING MODE PERFORMANCE FIGURES (to EN 14511)

Standard point W10/W35

Heating output	[kW]	98,80
Total power consumption / operating current	[kW]/[A]	19.00 / 34.50
COP		5,20

Operating point W10/W50

Heating output	[kW]	89,40
Total power consumption / operating current	[kW]/[A]	22.30 / 40.50
COP		4,00

Operating point W10/W60

Heating output	[kW]	83,70
Total power consumption / operating current	[kW]/[A]	26.10 / 47.40
COP		3,20

CONDENSER

Type		Plate heat exchanger
Material		Stainless steel 1.4401
Max. refrigerant operating pressure	[bar]	45
Max. heat transfer medium operating pressure	[bar]	6
Heat transfer medium temperature differential	[K]	5
Application range	[°C]	68
Heat transfer medium		Water
Test pressure	[bar]	51
Heat transfer medium flow rate	[m³/h]	16,90
Internal pressure differential	[mbar]	75
Flow meter (FM)	external	FM-DN 50, kvs 40
Circulation pump heat sink (WNA)	external	Stratos 65/1-12
Residual head I WNA external	[mbar]	602 (inkl. VMT)

REFRIGERANT CIRCUIT

Refrigerant		R410A
Refrigerant charge	[kg]	13,7

COMPRESSOR

Type		Scroll
Output levels		1
Speed	[rpm]	2900
Voltage/frequency	[V]/[Hz]	400 / 50

EVAPORATOR

Type		Plate heat exchanger
Material		Stainless steel 1.4401
Max. heat transfer medium operating pressure	[bar]	6
Max. refrigerant operating pressure	[bar]	14
Heat transfer medium temperature differential	[K]	4
Application range	[°C]	+8/+25
Heat transfer medium		Water
Test pressure	[bar]	51
Heat transfer medium flow rate	[m³/h]	17,10
Internal pressure differential	[mbar]	81
Flow meter (FM)	external	FM-DN 50 kvs 40
Flow meter pressure loss	[mbar]	180

Hydraulic version			Electric immersion heater		3-way switching module	
			Internal	external	Internal	external
M2-1	M4-1		x		x	
M2-2	M4-2			x	x	
M2-3	M4-3		x			x
M2-4	M4-4	M6		x		x



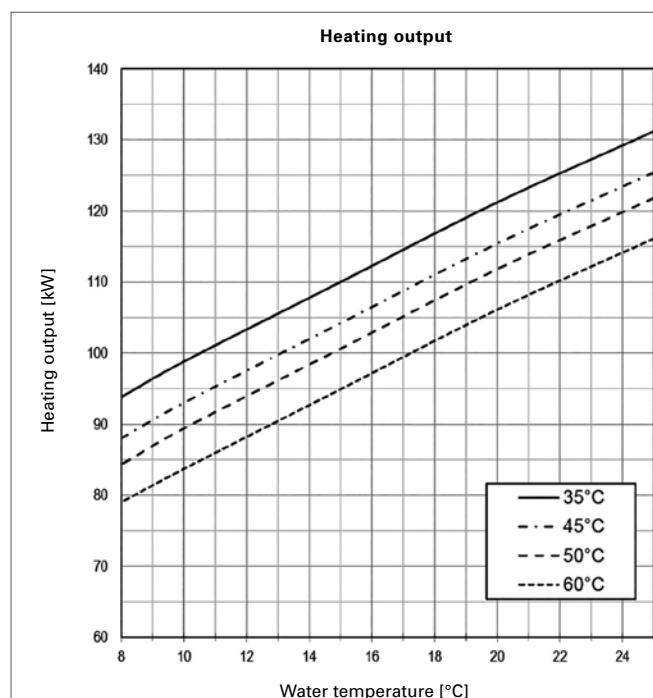
RECOMMENDED ACCESSORIES

	Order no./type	Description	Pressure loss and residual head
Heat pump separating cylinders	min. PU1500	30 l/kW at W10/W35	–
DHW tank	SP1000	30 l/kW at W10/W50	–
External plate heat exchanger (DHW heating)	911370 PHE 9609	Prim.: 2" Sec.: 2"	Prim.: 98 mbar Sec.: 92 mbar
3-way switching module internal	-	-	-
3-way switching module external	290342	DN50 (2"), kvs 40	178 mbar
Electric immersion heater internal	-	-	-
External electric immersion heater (heat pump buffer tank)	-	-	-
Heat source filter (WQA)	922486	-	40 mbar
Submersible pump (speed controlled)	290608	V	V = 7 - 18 mWC

LIMITS OF USE OF PLATE HEAT EXCHANGER:

			Plate heat exchanger		Shell and tube heat exchanger	
			Copper soldered	Stainless steel soldered	Stainless steel	
El. Conductivity	[μS/cm]	1.)	< 500	> 500	50 - 2500	
pH value	1.)	< 6	0	0	0	
		6 - 8	+	+	+	
		> 8	–	0	0	
Chloride	[mg/l]	1.)	< 10	+	+	
			10 – 100	+	+	
			100 – 200	0	+	
		> 200	–	– (3)	0	
Sulphate	[mg/l]	1.)	< 50	+	+	
			50 – 100	0	+	–
			> 100	–	0	–
Carbon dioxide (free aggressive)	[mg/l]	1.)	< 5	+	+	
			5 – 20	0	+	+
			> 20	–	0	–
Oxygen	[mg/l]	1.)	< 1	+	+	+
			1 – 8	0	+	+
			> 8	–	+	0
Ammonium	[mg/l]	1.)	< 2	+	+	+
			2 – 20	0	+	–
			> 20	–	+	–
Iron with manganese	[mg/l]	2.)	< 0.2	< 0.2 (3)	< 0.5	
Manganese	[mg/l]	2.)	> 0.05	–	– (3)	0
Sulphide	[mg/l]	1.)	< 5	+	+	+
Chlorine (free)	[mg/l]	1.)	< 0.5	+	+	+

PERFORMANCE CURVES AQUA 97 HPLA



PRODUCT DATA ErP: AQUA 97 HPLA

		COLDER	MEAN	HOTTER
LOW TEMPERATURE A++		35°C		
ηs		217	213	215
Energy consumption	[kWh]	43252	36927	23697
P rated	[kW]	99	99	99
SCOP		5,63	5,53	5,57
MEDIUM TEMPERATURE A++		55°C		
ηs		165	162	163
Energy consumption	[kWh]	49364	42121	27115
P rated	[kW]	87	87	87
SCOP		4,32	4,25	4,26
		indoor	outdoor	
Sound power level	[dBA]	60,0	-	
Controller class with room remote control		VII	Controller contribution [%]	3,5
Controller class without room remote control		III	Controller contribution [%]	1,5

- + = Material has generally good resistance
- = We advise against use
0 = corrosion may occur if several factors are rated 0

- 1.) If these limits are not observed, a stainless steel soldered stainless steel plate heat exchanger must be installed in the heat pump instead of the copper soldered stainless steel plate heat exchanger (specified with the order).
- 2.) Due to anticipated ochre formation, we advise against the use of a water/water heat pump.
- 3.) The limits of use of a stainless steel soldered plate heat exchanger are largely determined by, in addition to iron and manganese, the concentrations of chlorides.

