

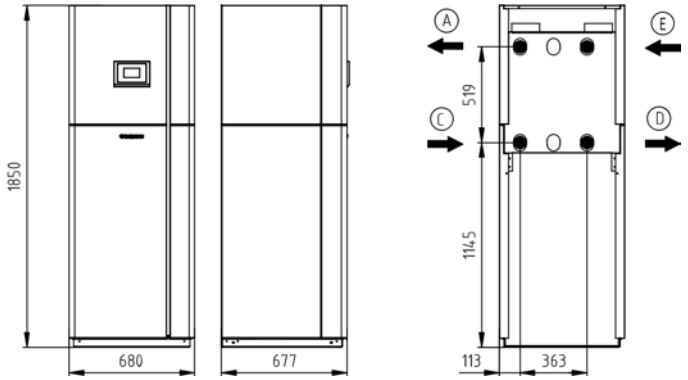
AQUA 54 HPLA

MONOVALENT HEATING SYSTEM WITH WATER AS HEAT SOURCE

ORDER NUMBER: 222610

SERIES: M6

TF MAX. 68 °C



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

APPLIANCE DATA

Dimensions HxWxD	[mm]	1900x680x680
Hydraulic connection	[inch]	2"
Weight	[kg]	228
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]	40
Max. operating current	[A]	31,00
Max. starting current/max. with soft start	[A]	158.00 / 79.00
Sound power level/sound pressure level (at 1 m distance)	[dBA]	54.00 / 46.00

HEATING MODE PERFORMANCE FIGURES (to EN 14511)

Standard point W10/W35

Heating output	[kW]	53,90
Total power consumption / operating current	[kW]/[A]	9.30 / 16.80
COP		5,80

Operating point W10/W50

Heating output	[kW]	49,70
Total power consumption / operating current	[kW]/[A]	11.80 / 21.40
COP		4,20

Operating point W10/W60

Heating output	[kW]	46,50
Total power consumption / operating current	[kW]/[A]	14.20 / 25.80
COP		3,30

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]	9,20
Internal pressure differential	[mbar]	60
Flow meter (FM)	external	FM-DN 50, kvs 40
Circulation pump heat sink (WNA)	external	Stratos 40/1-8
Residual head WNA external	[mbar]	499 (inkl. VMT)

REFRIGERANT CIRCUIT

Refrigerant		R410A
Refrigerant charge	[kg]	10,4

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]	9,60
Internal pressure differential	[mbar]	60
Flow meter (FM)	external	FM-DN 50 kvs 40
Flow meter pressure loss	[mbar]	60

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



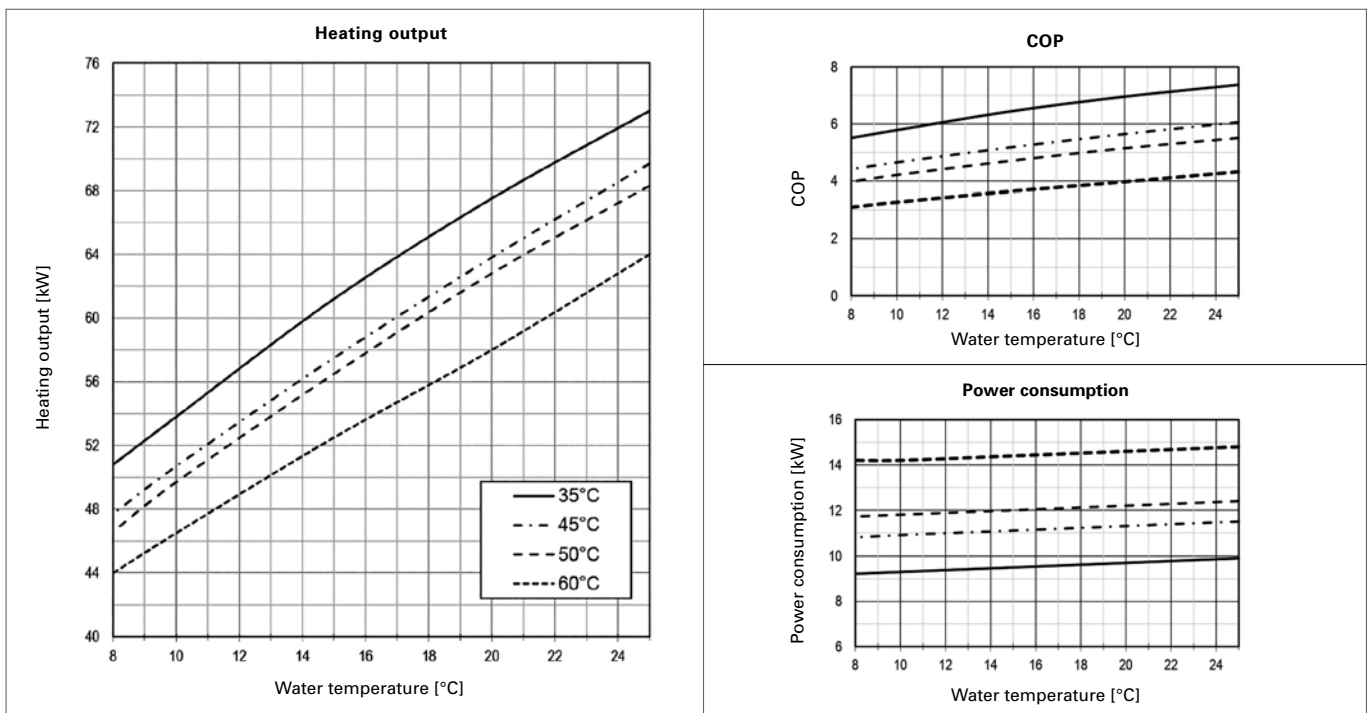
RECOMMENDED ACCESSORIES

	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)	911316 PHE 9507	Prim.: 2" Sec.: 2"	Prim.: 47 mbar Sec.: 43 mbar
3-way switching module internal	-	-	-
3-way switching module external	290342	DN50 (2"), kvs 40	53 mbar
Electric immersion heater internal	-	-	-
External electric immersion heater (heat pump buffer tank)	-	-	-
Heat source filter (WQA)	922486	-	10 mbar
Submersible pump (speed controlled)	290608	V	V = 4 - 28 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
		6 - 8	+	+
		> 8	-	0
Chloride [mg/l]	1.)	< 10	+	+
		10 - 100	+	+
		100 - 200	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	-	0
Sulphide [mg/l]	1.)	< 5	+	+
Chlorine (free) [mg/l]	1.)	< 0.5	+	+

PERFORMANCE CURVES AQUA 54 HPLA



PRODUCT DATA ErP: AQUA 54 HPLA

		COLDER	MEAN	HOTTER
LOW TEMPERATURE		35°C		
ηs	A++	249	243	245
Energy consumption	[kWh]	20694	17783	11405
P rated	[kW]	54	54	54
SCOP		6,42	6,26	6,31
MEDIUM TEMPERATURE		55°C		
ηs	A++	177	173	174
Energy consumption	[kWh]	25648	21979	14153
P rated	[kW]	48	48	48
SCOP		4,62	4,52	4,54
Sound power level [dBA]		indoor 54,0	outdoor -	
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.