

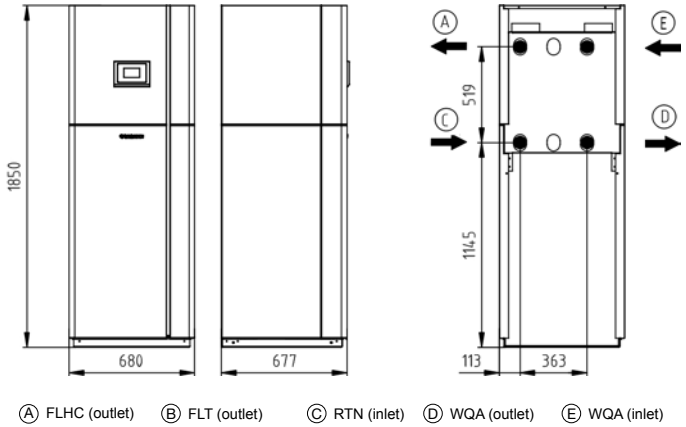
TERRA 40 HPLA

MONOVALENT HEATING SYSTEM WITH BRINE AS HEAT SOURCE

ORDER NUMBER: 221610

SERIES: M6

TF MAX. 68 °C



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 B0/W35

Heating output	[kW]	40,40
Total power consumption / operating current	[kW]/[A]	8.60 / 15.60
COP		4,70

Operating point B0/W50

Heating output	[kW]	37,50
Total power consumption / operating current	[kW]/[A]	11.10 / 20.20
COP		3,40

Operating point B0/W60

Heating output	[kW]	35,50
Total power consumption / operating current	[kW]/[A]	13.40 / 24.30
COP		2,60

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]	6,90
Internal pressure differential	[mbar]	40
Flow meter (FM)	external	FM-DN 50 kvs 40
Circulation pump heat sink (WNA)	external	Stratos 40/1-8
Residual head I WNA external	[mbar]	650 (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	
Number	[pce]	1
Max. heat transfer medium operating pressure	[bar]	6
Max. refrigerant operating pressure	[bar]	12
Heat transfer medium temperature differential	[K]	3
Application range	[°C]	-6/+20
Heat transfer medium	Brine max. 30%	
Test pressure	[bar]	51
Heat transfer medium flow rate	[m³/h]	9,99
Internal pressure differential	[mbar]	90
Flow meter (FM)	external	FM-DN 50 kvs 40
Circulation pump heat source (WQA)	Internal	Stratos 40/1-12
Residual head I WQA external	[mbar]	757 (inkl. VMT)

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
Heat pump separating cylinders	min. PU1000	min. PU1000	-
DHW tank	SP1000	30 l/kW at B0/W50	-
External plate heat exchanger (DHW heating)	911253 PHE 6007	Prim.: 1 1/4" Sec.: 1"	Prim.: 33 mbar Sec.: 49 mbar
3-way switching module internal	-	-	-
3-way switching module external	290342	DN50 (2"), kvs 40	30 mbar
Electric immersion heater internal	-	-	-
External electric immersion heater (heat pump buffer tank)	-	-	-
Brine collector set (shallow laying)	290508	ESKP 18	Pressure loss 80 mbar incl. brine distributor

EXTRACTION CAPACITY ACC. TO VDI 4640

FOR SHALLOW LAYING

Soil conditions	Max. spec. extraction capacity at 1800 h/a	Max. spec. extraction capacity at 2400 h/a
Dry, non-cohesive soil	10 W/m ²	8 W/m ²
Cohesive soil, moist	25 W/m ²	20 W/m ²
Water-saturated soil with sand/gravel	40 W/m ²	32 W/m ²

FOR DEEP TRENCH LAYING

Soil conditions	Max. spec. extraction capacity at 1800 h/a
Cohesive soil, moist	100 W/m deep trench
Water-saturated soil	125 W/m deep trench

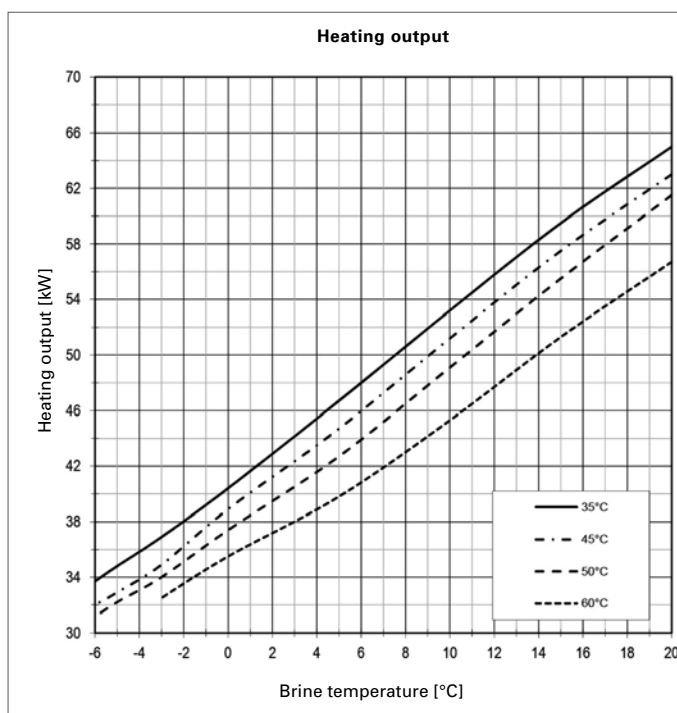
FOR GEOTHERMAL PROBES

Soil conditions	Spec. extraction capacity at 1800 h/a	Max. spec. extraction capacity at 2400 h/a
Dry sediment	25 W/m	20 W/m
Shale, slate	45 W/m	35 W/m
Firm rock with high thermal conductivity	84 W/m	70 W/m
Substratum with high groundwater flow	65-80 W/m	55-65 W/m

SIZING RECOMMENDATION WITH BRINE AS HEAT SOURCE

Pressure loss in connection line, incl. individual losses	Max. 100 mbar
Pressure loss in brine circuits or probes, incl. brine distributor	Max. 300 mbar

PERFORMANCE CURVES TERRA 40 HPLA



PRODUCT DATA ErP: TERRA 40 HPLA

		COLDER	MEAN	HOTTER
LOW TEMPERATURE A++			35°C	
η _s		201	196	197
Energy consumption	[kWh]	19060	16397	10515
P rated	[kW]	40	40	40
SCOP		5,22	5,09	5,13
MEDIUM TEMPERATURE A++			55°C	
η _s		141	138	139
Energy consumption	[kWh]	24083	20649	13296
P rated	[kW]	36	36	36
SCOP		3,73	3,65	3,66
		indoor	outdoor	
Sound power level	[dBA]	54,0	-	
Controller class with room remote control		VII	Controller contribution [%]	3,5
Controller class without room remote control		III	Controller contribution [%]	1,5

