

TERRA 76 HPLA

MONOVALENT HEATING SYSTEM WITH BRINE AS HEAT SOURCE

ORDER NUMBER: 221630

SERIES: M6

TF MAX. 68 °C

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 B0/W35

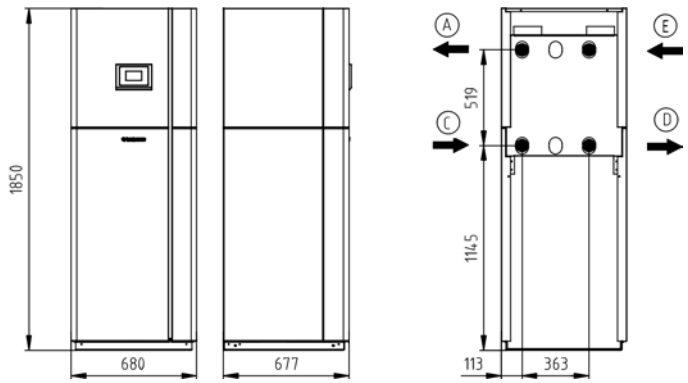
Heating output	[kW]	77,50
Total power consumption / operating current	[kW]/[A]	17.60 / 32.00
COP		4,40

Operating point B0/W50

Heating output	[kW]	70,70
Total power consumption / operating current	[kW]/[A]	22.10 / 40.10
COP		3,20

Operating point B0/W60

Heating output	[kW]	66,70
Total power consumption / operating current	[kW]/[A]	26.10 / 47.40
COP		2,60



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

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]	13,30
Internal pressure differential	[mbar]	50
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]	748 (inkl. VMT)

REFRIGERANT CIRCUIT

Refrigerant		R410A
Refrigerant charge	[kg]	13,3

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]	18,82
Internal pressure differential	[mbar]	150
Flow meter (FM)	external	FM-DN 50 kvs 40
Circulation pump heat source (WQA)	Internal	Stratos 65/1-12
Residual head I WQA external	[mbar]	544 (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. PU1500	min. PU1500	-
DHW tank	SP1000	30 l/kW at B0/W50	-
External plate heat exchanger (DHW heating)	911340 PHE 9609	Prim.: 2" Sec.: 2"	Prim.: 58 mbar Sec.: 51 mbar
3-way switching module internal	-	-	-
3-way switching module external	290342	DN50 (2"), kvs 40	110 mbar
Electric immersion heater internal	-	-	-
External electric immersion heater (heat pump buffer tank)	-	-	-
Brine collector set (shallow laying)	290510	ESKP 30	Pressure loss 110 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

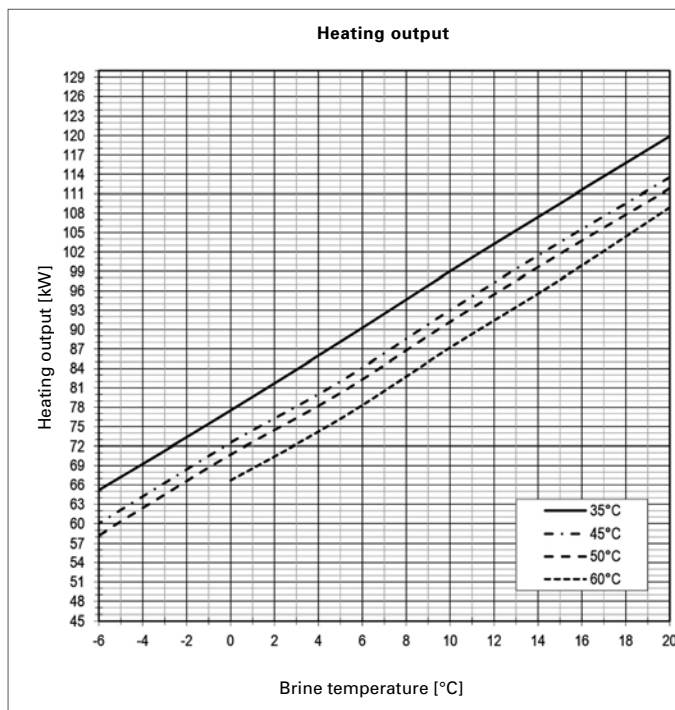
FOR GEOTHERMAL PROBES

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 76 HPLA



PRODUCT DATA ErP: TERRA 76 HPLA

		COLDER	MEAN	HOTTER
LOW TEMPERATURE	A++		35°C	
η _s		174	170	172
Energy consumption	[kWh]	40118	34333	22007
P rated	[kW]	74	74	74
SCOP		4,55	4,46	4,50
MEDIUM TEMPERATURE	A++		55°C	
η _s		129	126	127
Energy consumption	[kWh]	48385	41334	26592
P rated	[kW]	67	67	67
SCOP		3,42	3,36	3,38
		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

