

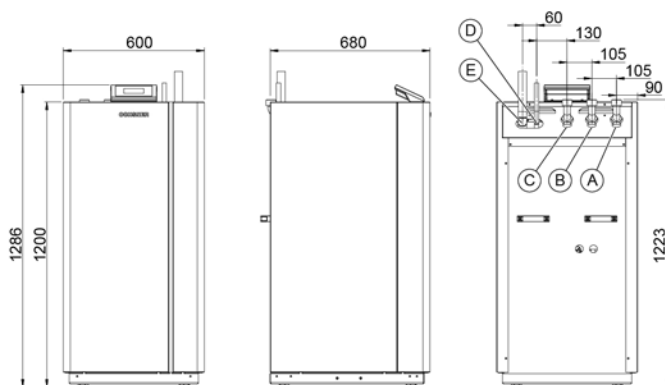
TERRA DX 18 HCUA

MONOVALENT HEATING SYSTEM WITH GROUND AS HEAT SOURCE

ORDER NUMBER: 277060

SERIES: M4

TF MAX. 65 °C



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

APPLIANCE DATA

Dimensions HxWxD	[mm]	1285x600x681
Hydraulic connection	[inch]	1 1/2"
Weight	[kg]	210
Casing colour		White/anthracite

SPECIFICATION

Phases/nominal voltage/frequency	[~]/[V]/[Hz]	3/400/50
Output factor cos φ		0,76
Fuse protection (tripping curve "C")	[A]	16
Max. operating current	[A]	12,00
Max. starting current/max. with soft start	[A]	70.00 / 35.00
Sound power level/sound pressure level (at 1 m distance)	[dBA]	57.00 / 49.00

HEATING MODE PERFORMANCE FIGURES (to EN 14511)

Standard point E4/W35

Heating output	[kW]	20,80
Total power consumption / operating current	[kW]/[A]	4.00 / 7.60
COP		5,20

Operating point E-1/W35

Heating output	[kW]	16,30
Total power consumption / operating current	[kW]/[A]	3.90 / 7.40
COP		4,40

Operating point E0/W50

Heating output	[kW]	15,40
Total power consumption / operating current	[kW]/[A]	4.80 / 9.10
COP		3,20

Operating point E0/W60

Heating output	[kW]	15,10
Total power consumption / operating current	[kW]/[A]	6.20 / 11.80
COP		2,40

CONDENSER

Type	Plate heat exchanger	
Material	Stainless steel 1.4301	
Max. refrigerant operating pressure	[bar]	30
Max. heat transfer medium operating pressure	[bar]	6
Heat transfer medium temperature differential	[K]	5
Application range	[°C]	65
Heat transfer medium	Water	
Test pressure	[bar]	45
Heat transfer medium flow rate	[m³/h]	3,57
Internal pressure differential	[mbar]	534
Flow meter (FM)	Internal	Installed as
Circulation pump heat sink (WNA)	Internal	Stratos Para 25/1-8
Residual head I WNA external	[mbar]	133 (M4-1), 239 (M4-4)

REFRIGERANT CIRCUIT

Refrigerant	R407C
Refrigerant charge (from-to)	[kg] 7,2-12,0

COMPRESSOR

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

EVAPORATOR

Type	Tube evaporator	
No. of circuits (recommended)	[pce]	(10*) 12
No. of circuits (max.)	[pce]	14
Length per circuit	[m]	75
Material	Copper / seamless PE outer casing	
Max. refrigerant operating pressure	[bar]	30

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		x		x

*Number of circuits possible for optimum soil conditions:
cohesive soil/moist or better at max. 1800 h/a

Geothermal collector:

The geothermal collectors O-Tube Pro are filled at the factory with nitrogen and each have a leakage indicator, which enables simple leakage monitoring during routing right up to the checks prior to commissioning. A collector array may not be built on and must be laid with a minimum clearance of 1.5 m to building components and property boundaries. The minimum spacing for collector pipes is 0.5 m. A routing plan of the individual collector circuits based on the actual routing is required for commissioning. The individual collector pipe ends of the collector circuits must be labelled.



RECOMMENDED ACCESSORIES

	Order no./type	Description	Pressure loss
Heat pump separating cylinders	min. PU500	30 l/kW at G-1/W50	–
DHW tank	min. SP300/SP350	30 l/kW at E0/W50	–
External plate heat exchanger (DHW heating)	911252 PHE 5007	Prim.: 1 1/4" Sec.: 1"	Prim.: 65 mbar Sec.: 90 mbar
3-way switching module internal	980191	–	21 mbar
3-way switching module external	290341	DN40 (1 1/2"). kvs 25	20 mbar
Electric immersion heater internal	980190	8.8 kW (2.6 / 3.0 / 3.2)	89 mbar
External electric immersion heater (heat pump buffer tank)	922509	9 kW	–
Copper geothermal collector (O-Tube Pro)	913209	75 m per unit	–

REQUIRED

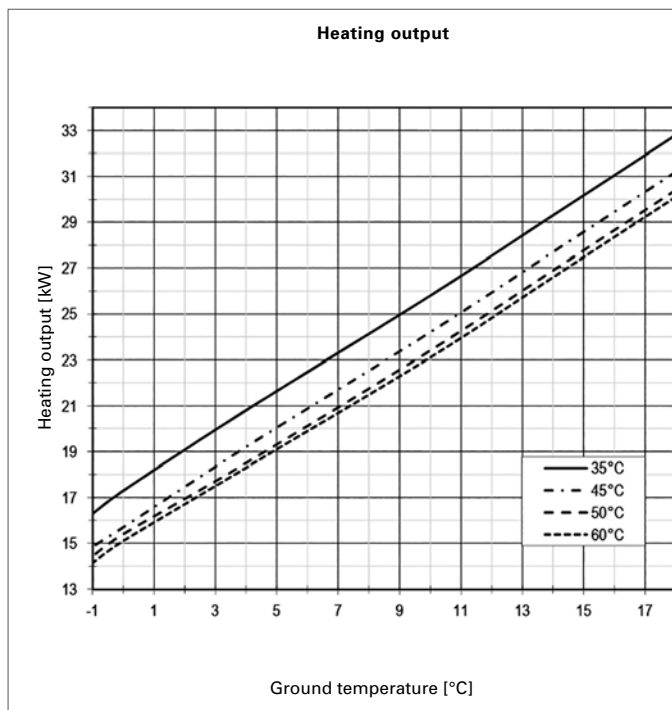
EXTRACTION SURFACE

Basic cooling capacity (at E4/W35)	[kW]	16.8
Extraction surface (at 1800 h/a)	[m²]	672
Extraction surface (at 2400 h/a)	[m²]	840
Max. connection length to collection shaft	[lm]	20

CONDITIONS IN ACC. WITH VDI 4640 OR ÖWAV 207

Soil conditions	Max. spec. extraction capacity at 1800 h/a	Max. spec. extraction capacity at 2400 h/a
Dry, non-cohesive soil	10 W/m² and 5 W/lm	8 W/m² and 4 W/lm
Cohesive soil, moist	20-30 W/m² and 15 W/lm	16-24 W/m² and 12 W/lm
Water-saturated soil, sand/gravel	40 W/m² and 20 W/lm	32 W/m² and 16 W/lm

PERFORMANCE CURVES TERRA DX 18 HCUA



PRODUCT DATA ErP: TERRA DX 18 HCUA

		COLDER	MEAN	HOTTER
LOW TEMPERATURE A++			35°C	
ηs		222	216	216
Energy consumption	[kWh]	8904	7677	4953
P rated	[kW]	21	21	21
SCOP		5,76	5,60	5,61
MEDIUM TEMPERATURE A++			55°C	
ηs		156	152	152
Energy consumption	[kWh]	10999	9452	6116
P rated	[kW]	18	18	18
SCOP		4,10	4,00	4,00
DHW A			SP300	
ηWH		103	103	103
Energy consumption	[kWh]	1389	1389	1389
Draw-off profile			XL	
Tank losses	[W]		94	
		indoor	outdoor	
Sound power level	[dBA]	57,0	-	
Controller class with room remote control		VII	Controller contribution [%]	3,5
Controller class without room remote control		III	Controller contribution [%]	1,5

