TERRA 14 HPLA

- **BRINE/WATER HEAT PUMP (MONOVALENT HEATING SYSTEM)**
- **M2/M4 INDOOR UNIT**
- **HEATING**
- **OTE CONTROLLER**

APPLIANCE DATA

Order no.		265040
Suitable building heat load	kW	11 - 14
Max. flow temperature	°C	65
Indoor unit		
Dimensions (HxWxD)	mm	1289x600x680
Hydraulic assembly connection (dimension)	inch	1 1/4
Hydraulic assembly connection (connection type)		Male thread
Weight (excl. packaging)	kg	230
Standard colour		White/anthracite
Sound power level (EN12102)	dB(A)	49
Sound pressure level (at 1 m)	dB(A)	42

HEAT SOURCE SYSTEM

Evaporator type (WQA)		Plate heat exchanger
Evaporator material (WQA)		Stainless steel 1.4301
Temperature differential (WQA)	K	3
Flow rate (WQA)	m³/h	3,3
Residual head (WQA)	mbar	421
Flow meter		As standard internal
Heat transfer medium		Brine max. 30%
Circulation pump (WQA)		Stratos Para 25/1-8
Max. heat transfer medium op. pressure	bar	3
Min. limits of use, heating / max.	°C	-5 / 20

HEAT SINK SYSTEM

Condenser type (WNA)		Plate heat exchanger
Condenser material (WNA)		Stainless steel 1.4301
Temperature differential (WNA)	K	5
Flow rate (WNA)	m³/h	2,3
Internal pressure differential (WNA), M2-1/M4-1	mbar	414
Internal pressure differential (WNA), M2-4/M4-4	mbar	-
Residual head (WNA), M2-1/M4-1	mbar	63
Residual head (WNA), M2-4/M4-4	mbar	-
Flow meter		As standard internal
Circulation pump		Yonos Para HPS 25/7.5 internal
Heat transfer medium		Water
Max. heat transfer medium op. pressure	bar	3
Min. limits of use, heating / max.	°C	15 / 65

ELECTRICAL DATA

Frequency	Hz	50	
Power factor		0,84	
Main power circuit			
Rated voltage range	V	~380-400	3/N/PE
Rated current	A	10	
Max. starting current	A	30	
Fuse protection		1x C16A 3p	
Control circuit			
Rated voltage range	V	~220-240	L1/N/PE
Rated current	A	6,3	
Fuse protection		1x C13A 1p	

Electric auxiliary heater (optional)			
Rated voltage range	V	~380-400	3/N/PE
Rated current, stage 1	A	15	
Rated current, stage 2	A	15	
Rated current, stage 3	A	15	
Rated power consumption, stage 1	kW	2,9	
Rated power consumption, stage 2	kW	2,9	
Rated power consumption, stage 3	kW	2,9	
Fuse protection		1x B16A 3p	

REFRIGERANT CIRCUIT

Refrigerant		R410A
Refrigerant charge	kg	2,3
Max. refrigerant operating pressure	bar	45
Compressor type		Scroll

PERFORMANCE FIGURES

B0/W35		
Heating output (EN14511)	kW	13,20
Power consumption (EN14511)	kW	2,74
Coefficient of performance COP (EN14511)		4,82
B0/W55		
Heating output (EN14511)	kW	12,00
Power consumption (EN14511)	kW	3,93
Coefficient of performance COP (EN14511)		3,05

ENERGY EFFICIENCY (AVERAGE CLIMATE ZONE)

at max. flow temperature (heating)	°C	35	55
Energy efficiency class (D to A+++)		A+++	A++
P rated	kW	13	12
Efficiency ETAs	%	203	142
SCOP		5,28	3,75
at min. flow temperature (cooling)	°C	18	7
SEER		-	-

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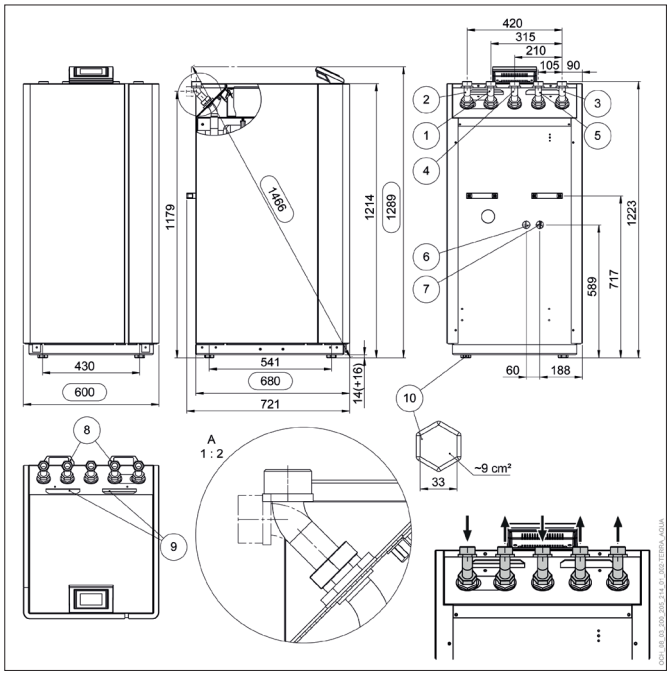
Notes:
- Additional technical information and documents are available from the Download area at www.ochsner.com
- The applicable regional and national laws, standards and regulations must be observed.



1 Heat source flow
2 Heat source return
3 Heating water flow
4 Heating water/DHW return
5 DHW flow
6 Safety valve drain (heat sink side)
7 Safety valve drain (heat source side)
8 Carrying handles (removable)
9 Cable entries
10 Plastic glides (height-adjustable, 4 pce)

GUIDE VALUE FOR EXTRACTION CAPACITY WITH SHALLOW LAYING (VDI 4640)

Soil conditions	Max. spec. extraction capacity at 1800 h/a [W/m²]	Max. spec. extraction capacity at 2400 h/a [W/m²]
Dry, non-cohesive soil	10	8
Cohesive soil, moist	25	20
Water-saturated soil, sand/gravel	40	32

GUIDE VALUE FOR EXTRACTION CAPACITY WITH DEEP TRENCH LAYING (VDI 4640)

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

GUIDE VALUE FOR EXTRACTION CAPACITY WITH DEEP DRILLING (VDI 4640)

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

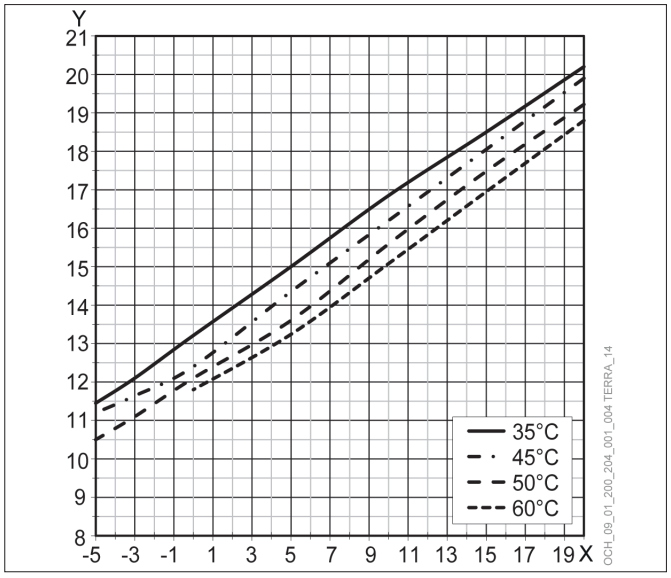
RECOMMENDED MAX. PRESSURE LOSSES

Connection line, incl. individual losses	max. 100 mbar
Brine circuits or probes, incl. brine distributor	max. 300 mbar

RECOMMENDED ACCESSORIES

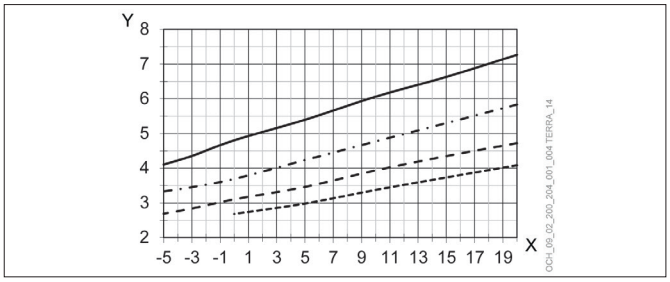
Type	Description	Sizing	Order no.
Heat pump buffer tank	min. PU 300	30 l/kW at B0/W35	920828
DHW tank	min. SP 300	30 l/kW at B0/W50	920823
	min. SP 350		920709
External plate heat exchanger	PHE 5007, Prim. 1 1/4 “, Sec. 1 “	Pressure loss: Prim. 37 mbar, Sec. 48 mbar	911252
3-way switching module internal [1]			980202
3-way switching module external	DN32 (1 1/4 “), kvs 16	Pressure loss: 20 mbar	290229
Electric immersion heater internal	8,8 kW	2,9/2,9/2,9 kW	980201
External electric immersion heater (heat pump buffer tank) [2]	9,0 kW		922509
Brine collector set (shallow laying) [3]	ESK 7 brine collector set	incl. brine distributor: 49 mbar	290170
Passive cooling set [4]			290865

HEATING OUTPUT



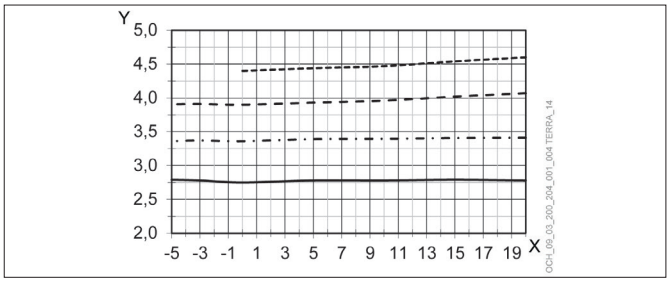
X Brine temperature [°C]
Y Heating output [kW]

COP



X Brine temperature [°C]
Y COP

POWER CONSUMPTION



X Brine temperature [°C]
Y Power consumption [kW]

[1] If an internal 3-way switching module is selected as an accessory, control of an external auxiliary heat generator for DHW heating is not possible.
[2] For an air/water heat pump, an additional heat generator (e.g. electric immersion heater) is essential.
[3] For the scope of delivery of an ESK brine collector set, see Design section (TERRA).
[4] For the scope of delivery of the passive cooling sets, see Design section (TERRA).