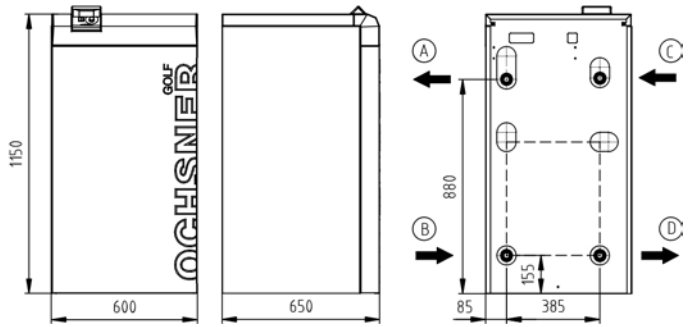


GMSW 12 HK PLUS

MONOVALENT HEATING SYSTEM WITH BRINE AS HEAT SOURCE

ORDER NUMBER: 264658
SERIES: GOLF MAXI HK PLUS
TF MAX. 65 °C



Ⓐ FLHC (outlet) Ⓑ RTNHC (inlet) Ⓒ WQA (inlet) Ⓓ WQA (outlet)

APPLIANCE DATA

Dimensions HxWxD	[mm]	1150x600x650
Hydraulic connection	[inch]	1 1/4"
Weight	[kg]	132
Casing colour		Tiger white 29/11289/grey RAL 7016

SPECIFICATION

Phases/nominal voltage/frequency	[~]/[V]/[Hz]	3/400/50
Output factor cos φ		0,73
Fuse protection (tripping curve "C")	[A]	13
Max. operating current	[A]	9,00
Max. starting current/max. with soft start	[A]	55.00 / 27.50
Sound power/sound pressure level (at 1 m distance)	[dBA]	45.60 / 37.60

HEATING MODE PERFORMANCE FIGURES (to EN 14511)

Standard point B0/W35

Heating output	[kW]	12,10
Total power consumption / operating current	[kW]/[A]	2.70 / 5.30
COP		4,50

Operating point B0/W50

Heating output	[kW]	10,50
Total power consumption / operating current	[kW]/[A]	3.30 / 6.50
COP		3,20

Operating point B0/W60

Heating output	[kW]	10,10
Total power consumption / operating current	[kW]/[A]	4.00 / 7.90
COP		2,50

COOLING MODE PERFORMANCE FIGURES

Operating point B25/W18

Cooling capacity	[kW]	14,00
Total power consumption / operating current	[kW]/[A]	2.50 / 4.90
Energy efficiency ratio EER		5,60

Operating point B25/W7

Cooling capacity	[kW]	9,20
Total power consumption / operating current	[kW]/[A]	2.30 / 4.50
Energy efficiency ratio EER		4,00

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]	2,10
Internal pressure differential	[mbar]	90
Flow meter FM standard	external	FM-DN 20 x 1 1/4" (male) kvs 10
Circulation pump heat sink (WNA)	Internal	Yonos Para RS 25/7.5
Residual head I WNA external, incl. FM	[mbar]	406

REFRIGERANT CIRCUIT

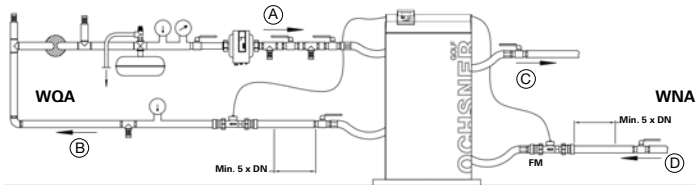
Refrigerant	R407C	
Refrigerant charge	[kg]	2,6

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]	45
Heat transfer medium flow rate	[m³/h]	2,90
Internal pressure differential	[mbar]	180
Flow meter (FM) standard	external	FM-DN 20 x 1 1/4" (male) kvs 10
Circulation pump heat source (WQA)	Internal	Stratos Para 25/1-8
Residual head I WQA external, incl. FM	[mbar]	582



- (A) Heat source inlet
- (B) Heat source outlet
- (C) Heat pump flow
- (D) Heat pump return

RECOMMENDED ACCESSORIES

Heat pump buffer tank	min. PU500	30 l/kW at B0/W35
DHW tank	min. SP300/SP350	30 l/kW at B0/W50
3-way switching module	DN32 (1 1/4")	kvs 16, pressure loss 17 mbar
External PHE for DHW heating	PHE 5007	Prim.: 1 1/4" / 14 mbar Sec.: 1" / 18 mbar
Brine collector set for shallow laying	ESK 6	Pressure loss 98 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

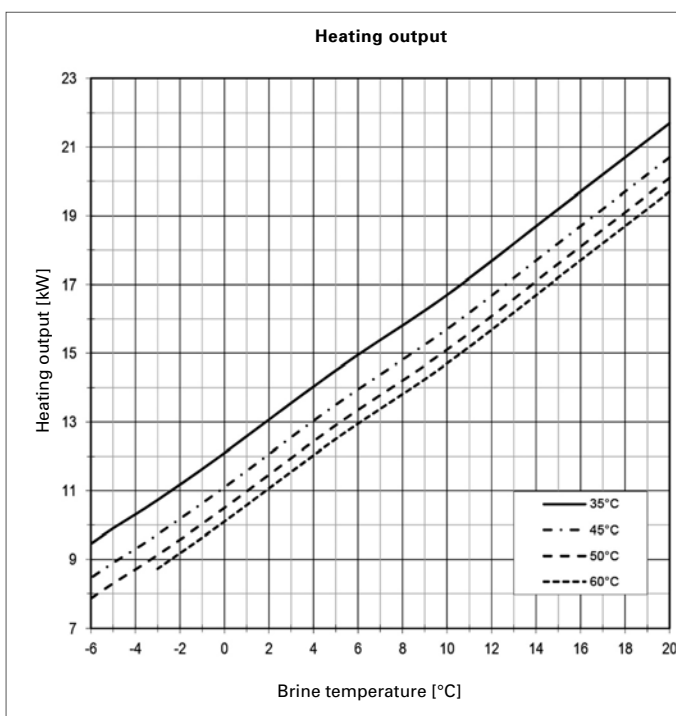
FOR GEOTHERMAL PROBES

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 GMSW 12 HK PLUS



PRODUCT DATA ErP: GMSW 12 HK PLUS

	COLDER	MEAN	HOTTER
LOW TEMPERATURE	A+++		35°C
ηs	190	184	183
Energy consumption	[kWh] 6035	5213	3382
P rated	[kW] 12	12	12
SCOP	4,94	4,79	4,78
MEDIUM TEMPERATURE	A++		55°C
ηs	132	128	128
Energy consumption	[kWh] 7248	6243	4059
P rated	[kW] 10	10	10
SCOP	3,50	3,41	3,39
DHW	A		SP300
ηWH	88	88	88
Energy consumption	[kWh] 1621	1621	1621
Draw-off profile	XL		
Tank losses	[W] 94		

	indoor	outdoor
Sound power level	[dBA] 45,6	-
Controller class with room remote control	VII	Controller contribution [%] 3,5
Controller class without room remote control	III	Controller contribution [%] 1,5

