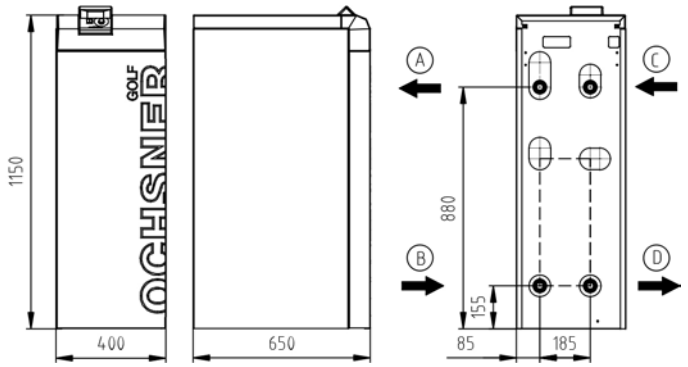


# GMSW 18 PLUS

## MONOVALENT HEATING SYSTEM WITH BRINE AS HEAT SOURCE

ORDER NUMBER: 264840  
SERIES: GOLF MAXI PLUS  
TF MAX. 65 °C



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

### APPLIANCE DATA

|                      |        |  |
|----------------------|--------|--|
| Dimensions HxWxD     | [mm]   | 1150x600x650                             |
| Hydraulic connection | [inch] | 1 1/2"                                   |
| Weight               | [kg]   | 181                                      |
| Casing colour        |        | Tiger white<br>29/11289/grey<br>RAL 7016 |

### SPECIFICATION

|  |              |               |
|--|--------------|---------------|
| Phases/nominal voltage/frequency                         | [~]/[V]/[Hz] | 3/400/50      |
| Output factor cos φ                                      |              | 0,75          |
| Fuse protection (tripping curve "C")                     | [A]          | 16            |
| Max. operating current                                   | [A]          | 13,00         |
| Max. starting current/max. with soft start               | [A]          | 75.00 / 37.50 |
| Sound power level/sound pressure level (at 1 m distance) | [dBA]        | 53.00 / 45.00 |

### HEATING MODE PERFORMANCE FIGURES (to EN 14511)

#### Standard point B0/W35

|   |          |             |
|---|----------|-------------|
| Heating output                              | [kW]     | 17,00       |
| Total power consumption / operating current | [kW]/[A] | 3.80 / 7.30 |
| COP   |          | 4,50        |

#### Operating point B0/W50

|   |          |             |
|---|----------|-------------|
| Heating output                              | [kW]     | 16,10       |
| Total power consumption / operating current | [kW]/[A] | 5.10 / 8.70 |
| COP   |          | 3,20        |

#### Operating point B0/W60

|   |          |             |
|---|----------|-------------|
| Heating output                              | [kW]     | 15,40       |
| Total power consumption / operating current | [kW]/[A] | 5.90 / 9.60 |
| COP   |          | 2,60        |

### CONDENSER

|   |          |                           |
|---|----------|---------------------------|
| Type  |          | Plate heat exchanger      |
| Material                                      |          | Stainless steel<br>1.4301 |
| Max. refrigerant operating pressure           | [bar]    | 45                        |
| 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]    | 54                        |
| Heat transfer medium flow rate                | [m³/h]   | 2,91                      |
| Internal pressure differential                | [mbar]   | 110                       |
| Flow meter FM standard                        | external | FM-DN 25 kvs 20           |
| Circulation pump heat sink (WNA)              | Internal | Yonos Para RS<br>25/7.5   |
| Residual head   WNA external, incl. FM        | [mbar]   | 247                       |

### REFRIGERANT CIRCUIT

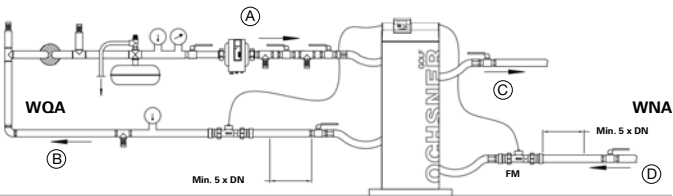
|                    |      |       |
|--------------------|------|-------|
| Refrigerant        |      | R410A |
| Refrigerant charge | [kg] | 3,3   |

### COMPRESSOR

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

### EVAPORATOR

|   |          |                           |
|---|----------|---------------------------|
| Type  |          | Plate heat exchanger      |
| Material                                      |          | Stainless steel<br>1.4301 |
| 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]     | -5/+20                    |
| Heat transfer medium                          |          | Brine max. 30%            |
| Test pressure                                 | [bar]    | 54                        |
| Heat transfer medium flow rate                | [m³/h]   | 4,15                      |
| Internal pressure differential                | [mbar]   | 170                       |
| Flow meter (FM) standard                      | external | FM-DN 25 kvs 20           |
| Circulation pump heat source (WQA)            | Internal | Stratos Para<br>25/1-12   |
| Residual head   WQA external, incl. FM        | [mbar]   | 1019                      |



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

### RECOMMENDED ACCESSORIES

|  |                  |   |
|--|------------------|---|
| Heat pump separating cylinders         | min. PU800       | 30 l/kW at B0/W35                             |
| DHW tank                               | min. SP500/SP550 | 30 l/kW at B0/W50                             |
| 3-way switching module                 | DN40 (1 1/2")    | kvs 25, pressure loss 14 mbar                 |
| External PHE for DHW heating           | PHE 5007         | Prim.: 1 1/4" / 33 mbar<br>Sec.: 1" / 43 mbar |
| Brine collector set for shallow laying | ESK 8            | Pressure loss 65 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 <sup>2</sup>                        | 8 W/m <sup>2</sup>                         |
| Cohesive soil, moist                  | 25 W/m <sup>2</sup>                        | 20 W/m <sup>2</sup>                        |
| Water-saturated soil with sand/gravel | 40 W/m <sup>2</sup>                        | 32 W/m <sup>2</sup>                        |

#### 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                        |

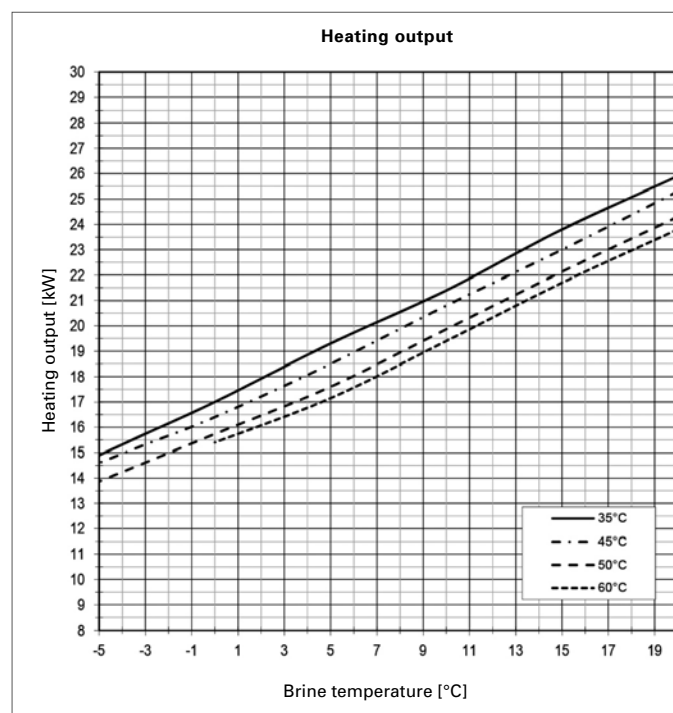
#### FOR GEOTHERMAL PROBES

| 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 18 PLUS



### PRODUCT DATA ErP: GMSW 18 PLUS

|                           | COLDER      | MEAN         | HOTTER |
|---------------------------|-------------|--------------|--------|
| <b>LOW TEMPERATURE</b>    | <b>A++</b>  | <b>35°C</b>  |        |
| η <sub>s</sub>            | 193         | 187          | 188    |
| Energy consumption        | [kWh] 8345  | 7199         | 4647   |
| P rated                   | [kW] 17     | 17           | 17     |
| SCOP                      | 5,03        | 4,88         | 4,89   |
| <b>MEDIUM TEMPERATURE</b> | <b>A++</b>  | <b>55°C</b>  |        |
| η <sub>s</sub>            | 137         | 134          | 134    |
| Energy consumption        | [kWh] 10723 | 9210         | 5961   |
| P rated                   | [kW] 16     | 16           | 16     |
| SCOP                      | 3,63        | 3,54         | 3,54   |
| <b>DHW</b>                | <b>A</b>    | <b>SP500</b> |        |
| η <sub>WH</sub>           | 88          | 88           | 88     |
| Energy consumption        | [kWh] 1576  | 1576         | 1576   |
| Draw-off profile          |             | XL           |        |
| Tank losses               | [W]         | 117          |        |

|  | indoor     | outdoor                         |
|--|------------|---------------------------------|
| Sound power level                            | [dBA] 53,0 | -                               |
| Controller class with room remote control    | VII        | Controller contribution [%] 3,5 |
| Controller class without room remote control | III        | Controller contribution [%] 1,5 |

