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# ZEOSOL

## Technical Data & Installation Manual



for solar cooling systems of ZEOSOL

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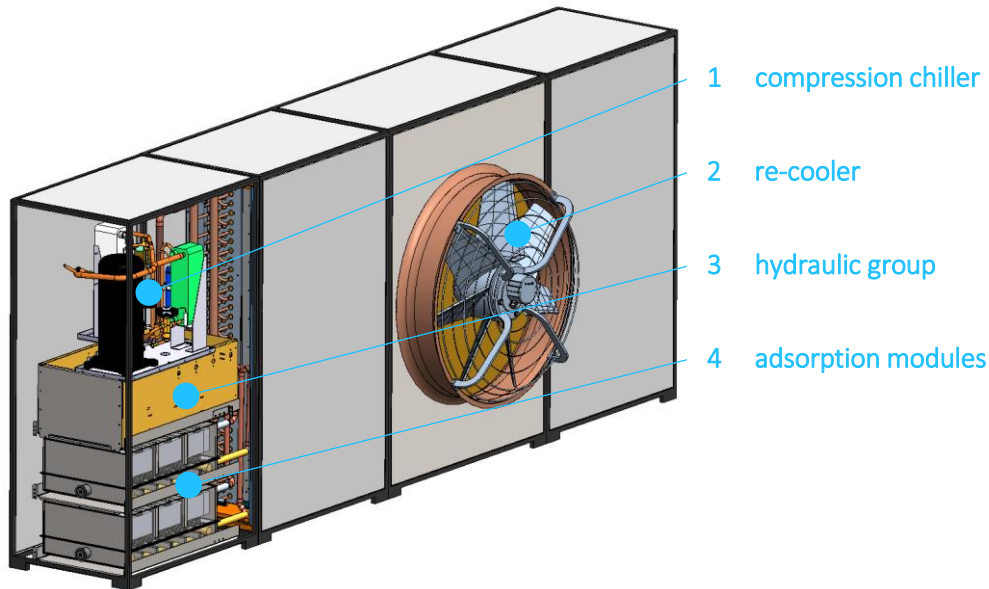
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We work continuously on our documents to keep them up-to-date and error-free. Despite all efforts, mistakes can never be ruled out completely. Any hint is welcome.

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## 1 Product Description

The chiller of ZEOSOL is a compact solar cooling system including the following components:



*Abb. 1. Structure of the ZEOSOL-Chiller*

### 1 compression chiller

The compression chiller enables constant cooling, even when the sun is not shining. In addition, the circuits of the evaporator and condenser can be switched so that the refrigeration machine becomes a heat pump.

### 2 re-cooler

The integrated re-cooler is equipped with a particularly efficient and quiet fan.

### 3 hydraulic group

The hydraulic group contains all the valves and pumps to control the different operating modes of the solar chiller.

### 4 adsorption modules

The adsorption modules enable solar cooling and generate chilled water from the heat of the solar field.

## 2 Technical Data

### 1.1 General Information

#### Performance data

---

|   |            |
|---|------------|
| Nominal solar cooling capacity <sup>1</sup> | 5.3 kW     |
| Thermal COP                                 | up to 0.54 |
| Nominal compression chiller                 | 6.0 kW     |

#### Dimensions & Weight

---

|  |                        |
|--|------------------------|
| Width x Depth x Height                                   | 3,800 x 609 x 1,560 mm |
| Footprint  | 2.31 m <sup>2</sup>    |
| Required space including operating and maintenance areas | 6.71 m <sup>2</sup>    |
| Empty weight   | 430 kg                 |
| Operating weight   | 510 kg                 |

#### Required free space

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|               |               |
|---------------|---------------|
| In front      | min. 5,000 mm |
| On both sides | min. 500 mm   |
| On rear       | min. 1,000 mm |

#### Other details

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|             |       |
|-------------|-------|
| Refrigerant | R134a |
|-------------|-------|

**Tab. 1. General technical data**

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<sup>1</sup> The nominal cooling capacity refers to the following inlet temperatures: HT = 85°C, MT = 24°C, LT = 19°C

## 1.2 Connections

### Electrical connection

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|                        |  |
|------------------------|--|
| Max. power consumption | 2,200 W  |
| Power supply           | 230 V AC ~ 50-60 Hz (1P)                                     |
| Recommended cable      | NYY-J 3x1.5<br>H07RN-F 3G1.5<br>Ölflex cable HEAT 105 3 G1.5 |

### solar connection

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|                  |                                      |
|------------------|--------------------------------------|
| Volume flow rate | 690 l/h                              |
| Connection       | 1 ¼" male thread, add a flat sealing |

### Cold water circuit LT

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|                  |                                      |
|------------------|--------------------------------------|
| Volume flow rate | 2,600 l/h                            |
| Connection       | 1 ¼" male thread, add a flat sealing |

*Tab. 2. Hydraulic and electrical connections*

# 3 Appendix

## 1.3 Technical Drawing

The technical drawing illustrates the ZEOSOL unit from three perspectives: an isometric view, a front view, and a side view. The isometric view shows a rectangular unit with a circular fan grille on top. The front view shows the unit's profile with a height dimension of 3800 and a width dimension of 609. The side view shows the unit's depth with a dimension of 1560. The drawing is overlaid on a grid with horizontal lines labeled 1 through 8 and vertical lines labeled A through F.

|               |               |  |            |                    |           |               |
|---------------|---------------|--|------------|--------------------|-----------|---------------|
| <b>ZEOSOL</b> |               | Allgemeinbezeichnung<br>DIN ISO 2748-m |            | Maßstab<br>1:20    | Rev       | Gewicht<br>kg |
| Rev           | Änderungsstuf | Datum                                  | Name       | Material<br>Metall | Werkstoff |               |
|               |               | Erstellt                               | 20.02.2020 | Benennung          |           |               |
|               |               | Gepr.                                  |            | Zeichnungs-Nr.     |           | Format<br>A3  |
|               |               | Norm                                   |            | Konfiguration      |           | von 1         |
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