

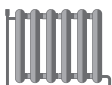


ENERG  
енергия · ενεργεια



Ochsner

AIR 23



55 °C

35 °C



A++

A++



49 dB



54 dB

■ 12  
■ 16  
■ 17  
kW

■ 11  
■ 16  
■ 17  
kW



|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |               |                  |     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|------------------|-----|
| Technische Daten der Wärmepumpe:<br>Heatpump datasheet:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |               |                  |     |
| Hersteller:<br>Manufacturer:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | OCHSNER       |                  |     |
| Modell:<br>Model:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | AIR 23 C12A   |                  |     |
| Angaben zur Energieeffizienzklasse und der Nennleistung:<br>Information concerning energy efficiency class and rated heat output:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |               |                  |     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | average / low | average / medium |     |
| Energieeffizienzklasse Raumheizung:<br>Energy efficiency class space heater:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | A++           | A++              | -   |
| Wärmenennleistung:<br>Rated heat output:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 16            | 16               | kW  |
| Energieeffizienz Raumheizung:<br>Energy efficiency space heater:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 174           | 136              | %   |
| Jährlicher Endenergieverbrauch Raumheizung:<br>Annual final energy consumption space heater:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 7236          | 9600             | kWh |
| Schallleistungspegel in Innenräumen<br>Sound power level indoors                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |               | 49               | dB  |
| Besondere Vorkehrungen bei Zusammenbau, Installation oder Wartung:<br>Special precautions concerning assembly, installation or maintenance:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |               |                  |     |
| <p>Sowohl die Auslegung als auch der Anschluss, Aufbau und die Befüllung der Anlage wurde nach gültigen Normen, Vorschriften und Verordnungen durch eine dazu ermächtigte Fachfirma oder Fachhandwerk vorgenommen. Besteht die Anlagen aus mehreren Geräteteilen sind diese mit OCHSNER Originalzubehör aus dem Lieferumfang von OCHSNER zu verbinden und zu errichten. Anlagenteile sind auf kürzestem und direktem Wege miteinander zu verbinden und überschreiten den Verbindungsabstand von 5m nicht. Unter Einhaltung der Bedienungs- und Installationsanleitung wird die Anlage im Rahmen seines bestimmungsgemäßen Gebrauch für eine privat genutzte Gebäudeheizung verwendet. Die Inbetriebnahme hat ausschließlich durch den OCHSNER Werkskundendienst stattzufinden. Wartungen und Inspektionen nach Herstellerangaben sind mindestens alle 12 Monate durchzuführen, sofern nicht Gesetze und Verordnungen zu einem häufigeren Intervall auffordern.</p> <p>The system was sized, connected, laid out and filled in accordance with applicable standards, regulations and ordinances by a qualified contractor. If the system consists of several sections, these must be connected and installed using original OCHSNER accessories as supplied by OCHSNER. System sections must be connected via the shortest route possible and must not exceed a connection distance of 5 m. In accordance with the operating and installation manual, the system is used as intended for a private building heating system. Commissioning must only be carried out by OCHSNER Customer Service. Maintenance and inspection according to the manufacturer's instructions must be carried out at least every 12 months unless legal requirements and ordinances specify a shorter interval.</p> |               |                  |     |
| Zusätzliche Angaben:<br>Additional information:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | low           | medium           |     |
| Wärmenennleistung kälteres Klima<br>Rated heat output colder climate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 11            | 12               | kW  |
| Wärmenennleistung wärmeres Klima<br>Rated heat output warmer climate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 17            | 17               | kW  |
| Energieeffizienz Raumheizung kälteres Klima<br>Energy efficiency space heater colder climate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 161           | 123              | %   |
| Energieeffizienz Raumheizung wärmeres Klima<br>Energy efficiency space heater warmer climate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 199           | 157              | %   |
| Jährl. Energieverbrauch Raumheizung kälteres Klima<br>Annual energy consumption space heater colder climate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 6821          | 9740             | kWh |
| Jährl. Energieverbrauch Raumheizung wärmeres Klima<br>Annual energy consumption space heater warmer climate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 4558          | 5563             | kWh |
| Schallleistungspegel im Außenbereich<br>Sound power level outdoors                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |               | 54               | dB  |
| Technische Daten des Temperaturreglers:<br>Technical data of the temperature controller:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |               |                  |     |
| Hersteller:<br>Manufacturer:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | OCHSNER       |                  |     |
| Modell:<br>Model:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | OTE           |                  |     |
| Klasse des Reglers mit Raumfernbedienung<br>Controller class with room remote control                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | VII           | -                |     |
| Beitrag des Reglers zur Raumheizungs-Energieeffizienz mit Raumfernbedienung<br>Contribution of the controller to the energy efficiency space heater with room remote control                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 3,5           | %                |     |
| Klasse des Reglers ohne Raumfernbedienung<br>Controller class without room remote control                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | III           | -                |     |
| Beitrag des Reglers zur Raumheizungs-Energieeffizienz ohne Raumfernbedienung<br>Contribution of the controller to the enerav efficiency space heater without room remote control                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1,5           | %                |     |

|                                       |         |
|---------------------------------------|---------|
| <b>Manufacturer:</b>                  | Ochsner |
| <b>Model:</b>                         | AIR 23  |
| <b>Air - to-water heat pump</b>       |         |
| Low-temperature heat pump:            | no      |
| Equipped with a supplementary heater: | no      |
| Heat pump combination heater:         | no      |
| Application:                          | low     |
| Climate:                              | average |

| Item                                                                                                  | Symbol        | Value | Unit |
|-------------------------------------------------------------------------------------------------------|---------------|-------|------|
| <b>Rated heat output *</b>                                                                            | <i>Prated</i> | 16    | kW   |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature $T_j$ |               |       |      |
| $T_j = -7\text{ °C}$                                                                                  | <i>Pdh</i>    | 13,7  | kW   |
| $T_j = +2\text{ °C}$                                                                                  | <i>Pdh</i>    | 17,3  | kW   |
| $T_j = +7\text{ °C}$                                                                                  | <i>Pdh</i>    | 20,8  | kW   |
| $T_j = +12\text{ °C}$                                                                                 | <i>Pdh</i>    | 24,4  | kW   |
| $T_j = \text{bivalent temperature}$                                                                   | <i>Pdh</i>    | 13,7  | kW   |
| $T_j = \text{operation limit}$                                                                        | <i>Pdh</i>    | 12,5  | kW   |
| For air-to-water heat pumps: $T_j = -15\text{ °C}$ (if $TOL < -20\text{ °C}$ )                        | <i>Pdh</i>    | 10,6  | kW   |
| Bivalent temperature                                                                                  | $T_{biv}$     | -7    | °C   |
| Power input "compressor off"                                                                          |               | 0     | W    |
| Power consumption in modes other than active mode                                                     |               |       |      |
| Off mode                                                                                              | $P_{OFF}$     | 20    | W    |
| Thermostat-off mode                                                                                   | $P_{TO}$      | 20    | W    |
| Standby mode                                                                                          | $P_{SB}$      | 20    | W    |
| Crankcase heater mode                                                                                 | $P_{CK}$      | 0     | W    |
| Other items                                                                                           |               |       |      |
| Capacity control                                                                                      | fixed         |       |      |
| Sound power level, indoors/outdoors                                                                   | $L_{WA}$      | 49,5  | dB   |
|                                                                                                       |               | 54    |      |
| Annual energy consumption                                                                             | $Q_{HE}$      | 7236  | kWh  |

| Item                                                                                                                                | Symbol      | Value | Unit |
|-------------------------------------------------------------------------------------------------------------------------------------|-------------|-------|------|
| Seasonal space heating energy efficiency                                                                                            | $\eta_S$    | 174   | %    |
| Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature $T_j$ |             |       |      |
| $T_j = -7\text{ °C}$                                                                                                                | $COP_d$     | 3,59  |      |
| $T_j = +2\text{ °C}$                                                                                                                | $COP_d$     | 4,45  |      |
| $T_j = +7\text{ °C}$                                                                                                                | $COP_d$     | 4,98  |      |
| $T_j = +12\text{ °C}$                                                                                                               | $COP_d$     | 5,85  |      |
| $T_j =$ bivalent temperature                                                                                                        | $COP_d$     | 3,59  |      |
| $T_j =$ operation limit                                                                                                             | $COP_d$     | 3,27  |      |
| For air-to-water heat pumps: $T_j = -15\text{ °C}$ (if $TOL < -20\text{ °C}$ )                                                      | $COP_d$     | 2,84  |      |
| For air-to-water heat pumps: Operation limit temperature                                                                            | $TOL$       | -23   | °C   |
| Heating water operating limit temperature                                                                                           | $WTOL$      | 65    | °C   |
| Supplementary heater                                                                                                                |             |       |      |
| Rated heat output *                                                                                                                 | $P_{sup}$   | 2,99  | kW   |
| Type of energy input                                                                                                                | electricity |       |      |
|                                                                                                                                     |             |       |      |
| For air-to-water heat pumps: Rated air flow rate, outdoors                                                                          | -           | 8000  | m³/h |
| For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger                                        | -           |       | l/h  |

|                                                                                                                                                                                                                                                                                                    |          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| Contact details:                                                                                                                                                                                                                                                                                   | Ochsner, |
| * For heat pump space heaters and heat pump combination heaters, the rated heat output <i>Prated</i> is equal to the design load for heating <i>Pdesignh</i> , and the rated heat output of a supplementary heater <i>Psup</i> is equal to the supplementary capacity for heating <i>sup(Tj)</i> . |          |

The calculation tool was made by Bundesverband Wärmepumpe BWP e.V.

|                                       |         |
|---------------------------------------|---------|
| <b>Manufacturer:</b>                  | Ochsner |
| <b>Model:</b>                         | AIR 23  |
| <b>Air - to-water heat pump</b>       |         |
| Low-temperature heat pump:            | no      |
| Equipped with a supplementary heater: | no      |
| Heat pump combination heater:         | no      |
| Application:                          | medium  |
| Climate:                              | average |

| Item                                                                                                  | Symbol        | Value | Unit |
|-------------------------------------------------------------------------------------------------------|---------------|-------|------|
| <b>Rated heat output *</b>                                                                            | <i>Prated</i> | 16    | kW   |
| Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature $T_j$ |               |       |      |
| $T_j = -7\text{ °C}$                                                                                  | <i>Pdh</i>    | 13,2  | kW   |
| $T_j = +2\text{ °C}$                                                                                  | <i>Pdh</i>    | 16,9  | kW   |
| $T_j = +7\text{ °C}$                                                                                  | <i>Pdh</i>    | 20,5  | kW   |
| $T_j = +12\text{ °C}$                                                                                 | <i>Pdh</i>    | 24,1  | kW   |
| $T_j = \text{bivalent temperature}$                                                                   | <i>Pdh</i>    | 13,6  | kW   |
| $T_j = \text{operation limit}$                                                                        | <i>Pdh</i>    | 11,9  | kW   |
| For air-to-water heat pumps: $T_j = -15\text{ °C}$ (if $TOL < -20\text{ °C}$ )                        | <i>Pdh</i>    | 9,8   | kW   |
| Bivalent temperature                                                                                  | $T_{biv}$     | -6    | °C   |
| Power input "compressor off"                                                                          |               | 0     | W    |
| Power consumption in modes other than active mode                                                     |               |       |      |
| Off mode                                                                                              | $P_{OFF}$     | 20    | W    |
| Thermostat-off mode                                                                                   | $P_{TO}$      | 20    | W    |
| Standby mode                                                                                          | $P_{SB}$      | 20    | W    |
| Crankcase heater mode                                                                                 | $P_{CK}$      | 0     | W    |
| Other items                                                                                           |               |       |      |
| Capacity control                                                                                      | fixed         |       |      |
| Sound power level, indoors/outdoors                                                                   | $L_{WA}$      | 49,5  | dB   |
|                                                                                                       |               | 54    |      |
| Annual energy consumption                                                                             | $Q_{HE}$      | 9600  | kWh  |

| Item                                                                                                                                | Symbol      | Value | Unit |
|-------------------------------------------------------------------------------------------------------------------------------------|-------------|-------|------|
| Seasonal space heating energy efficiency                                                                                            | $\eta_S$    | 136   | %    |
| Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature $T_j$ |             |       |      |
| $T_j = -7\text{ °C}$                                                                                                                | $COP_d$     | 2,55  |      |
| $T_j = +2\text{ °C}$                                                                                                                | $COP_d$     | 3,47  |      |
| $T_j = +7\text{ °C}$                                                                                                                | $COP_d$     | 4,08  |      |
| $T_j = +12\text{ °C}$                                                                                                               | $COP_d$     | 4,94  |      |
| $T_j =$ bivalent temperature                                                                                                        | $COP_d$     | 2,66  |      |
| $T_j =$ operation limit                                                                                                             | $COP_d$     | 2,24  |      |
| For air-to-water heat pumps: $T_j = -15\text{ °C}$ (if $TOL < -20\text{ °C}$ )                                                      | $COP_d$     | 1,76  |      |
| For air-to-water heat pumps: Operation limit temperature                                                                            | $TOL$       | -15   | °C   |
| Heating water operating limit temperature                                                                                           | $WTOL$      | 65    | °C   |
| Supplementary heater                                                                                                                |             |       |      |
| Rated heat output *                                                                                                                 | $P_{sup}$   | 4,15  | kW   |
| Type of energy input                                                                                                                | electricity |       |      |
|                                                                                                                                     |             |       |      |
| For air-to-water heat pumps: Rated air flow rate, outdoors                                                                          | -           | 8000  | m³/h |
| For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger                                        | -           |       | l/h  |

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|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| Contact details:                                                                                                                                                                                                                                                                                   | Ochsner, |
| * For heat pump space heaters and heat pump combination heaters, the rated heat output <i>Prated</i> is equal to the design load for heating <i>Pdesignh</i> , and the rated heat output of a supplementary heater <i>Psup</i> is equal to the supplementary capacity for heating <i>sup(Tj)</i> . |          |

The calculation tool was made by Bundesverband Wärmepumpe BWP e.V.