



ENERG

енергия · ενεργεια



I - Klima - Kälte - Wärme || OH 1-8es - 230 V - S/W Art.Nr.: B10994



55 °C

35 °C



43 dB



--- dB


■ 7.1
■ **7.1**
■ 7.1
kW


■ 7.7
■ **7.7**
■ 7.7
kW




| Package (heat pumps and combination heater with heat pump) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|----------|----------|--------------------------|----------|---|---|-----------|------------|--------------------------------|-----|---|--|--|--|--|--|--|---|--|----------|----------|----------|----------|----------|----------|----------|-----------|------------|-------------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|
| Seasonal space heating energy efficiency of heat pump (η_S) | | | | | | | 1 | 123 | % | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rated output of the heat pump (P_{rated} kW) | | | | | | | | 7.10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Temperature control | | | Class | VII | (Table 1) | + | 2 | 3.5 | % | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Supplementary boiler | | | no | | | P_{sup} kW (rated output of supplementary heater) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Package with hot water storage tank | | | η_S % (sup) | | | $(\eta_S \text{ % (sup)} - 1) \times (\alpha_{WE})$ | | = | - | 3 | % | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | (α_{WE}) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Solar contribution | | | $(A_{Koll} \text{ m}^2)$ | | $(\eta_{Koll} \text{ %})$ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | $(V_{Sp} \text{ m}^3)$ | | (standstill heat loss of the storage tank in W) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | (η_{Sp}) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| $((294/(P_{rated} \times 11)) \times (A_{Koll} \text{ m}^2) + (115/(P_{rated} \times 11)) \times (V_{Sp} \text{ m}^3)) \times 0.45 \times ((\eta_{Koll} \text{ %}) / 100) \times (\eta_{Sp})$ | | | | | | | = | + | 4 | % | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Seasonal space heating energy efficiency of package under average climate | | | | | | | 5 | 127 | rounded to the nearest integer | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Seasonal space heating energy efficiency class of package under average climate | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>X</td><td></td> </tr> <tr> <td>G</td><td>F</td><td>E</td><td>D</td><td>C</td><td>B</td><td>A</td><td>A+</td><td>A++</td><td>A+++</td> </tr> <tr> <td>< 30 %</td><td>≥ 30 %</td><td>≥ 34 %</td><td>≥ 36 %</td><td>≥ 75 %</td><td>≥ 82 %</td><td>≥ 90 %</td><td>≥ 98 %</td><td>≥ 125 %</td><td>≥ 150 %</td> </tr> </table> | | | | | | | | | | | | | | | | | | X | | G | F | E | D | C | B | A | A+ | A++ | A+++ | < 30 % | ≥ 30 % | ≥ 34 % | ≥ 36 % | ≥ 75 % | ≥ 82 % | ≥ 90 % | ≥ 98 % | ≥ 125 % | ≥ 150 % |
| | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| G | F | E | D | C | B | A | A+ | A++ | A+++ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| < 30 % | ≥ 30 % | ≥ 34 % | ≥ 36 % | ≥ 75 % | ≥ 82 % | ≥ 90 % | ≥ 98 % | ≥ 125 % | ≥ 150 % | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Seasonal space heating energy efficiency under colder and warmer climate conditions | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| colder | 125 | % | | colder | 5 | 127 | -V | -2 | = | 129 | % | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| warmer | 123 | % | | warmer | 5 | 127 | +VI | 0 | = | 127 | % | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

The energy efficiency of the package of products provided for in this fiche may not correspond to its actual energy efficiency once installed in a building, as the efficiency is influenced by further factors such as heat loss in the distribution system and the dimensioning of the products in relation to building size and characteristics.

| | | | | |
|--|--|---|-----|--|
| Product fiche | |  | | |
| Manufacturer | CTA AG | | | |
| Model | OH 1-8es 230V B/W | | | |
| Information on energy efficiency class and rated output | | | | |
| | Average / Low temperature | Average / Medium temperature | | |
| Space heating energy efficiency class | A++ | A+ | - | |
| Rated heat output | 7.70 | 7.10 | kW | |
| Seasonal space heating energy efficiency | 180 | 123 | % | |
| Annual final energy consumption space heating | 3339 | 4451 | kWh | |
| Sound power level indoors | | 48 | dB | |
| Special precautions during assembly, installation or maintenance | | | | |
| see installation and maintenance instructions | | | | |
| Additional information | | | | |
| | Low temperature | Medium temperature | | |
| Rated heat output colder climate | 7.70 | 7.10 | kW | |
| Rated heat output warmer climate | 7.70 | 7.10 | kW | |
| Seasonal space heating energy efficiency colder climate | 185 | 125 | % | |
| Seasonal space heating energy efficiency warmer climate | 183 | 123 | % | |
| Annual final energy consumption colder climate | 3907 | 5245 | kWh | |
| Annual final energy consumption warmer climate | 2125 | 2861 | kWh | |
| Sound power level outdoors | | - | dB | |
| Technical data of the temperature controller | | | | |
| Manufacturer | Siemens | | | |
| Model | RVS 61 | | | |
| Class of the controller | | VII | - | |
| Contribution of the controller to seasonal space heating energy efficiency | | 3.5 | % | |
| Contact | CTA AG, Hunzigenstrasse 2, CH-3110 Münsingen | | | |

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|--|--|--|--|--|--|--|--|---|--|--|--------------|-------------|--|--|--|---|--|-------------------|--|-------------------|--|------|--|--|--|-------------------|--|--|--|
| Model | | | | OH 1-8es 230V B/W | | | |  | | | | | | | | | | | | | | | | | | | | | |
| Brine-to-water heat pump: (Yes/No) | | | | Yes | | | | | | | | | | | | | | | | | | | | | | | | | |
| Water-to-water heat pump: (Yes/No) | | | | No | | | | | | | | | | | | | | | | | | | | | | | | | |
| Air-to-water heat pump: (Yes/No) | | | | No | | | | | | | | | | | | | | | | | | | | | | | | | |
| Low temperature heat pump: (Yes/No) | | | | No | | | | | | | | | | | | | | | | | | | | | | | | | |
| Equipped with supplementary heater: (Yes/No) | | | | Yes | | | | | | | | | | | | | | | | | | | | | | | | | |
| Heat pump combination heater: (Yes/No) | | | | No | | | | | | | | | | | | | | | | | | | | | | | | | |
| Application: (Low temperature/Medium temperature) | | | | Medium temperature | | | | | | | | | | | | | | | | | | | | | | | | | |
| Climate: (Colder/Average/Warmer) | | | | Average | | | | | | | | | | | | | | | | | | | | | | | | | |
| Item | | | | Symbol | | | | | | | Value | | | Unit | | | | | | | | | | | | | | | |
| Rated heat output | | | | Prated | | | | 7.10 | | | kW | | | | | | | | | | | | | | | | | | |
| Declared capacity for heating for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance for part load at indoor temperature 20°C and outdoor temperature Tj | | | | η_S | | | 123 | | | % | | | | | | | | | | | | | | | |
| Tj = -7°C | | | | Pd _h | | | | 7.10 | | | kW | | | Tj = -7°C | | | | COP _d | | | | 2.84 | | | | - | | | |
| Tj = +2°C | | | | Pd _h | | | | 7.40 | | | kW | | | Tj = +2°C | | | | COP _d | | | | 3.65 | | | | - | | | |
| Tj = +7°C | | | | Pd _h | | | | 7.60 | | | kW | | | Tj = +7°C | | | | COP _d | | | | 4.34 | | | | - | | | |
| Tj = +12°C | | | | Pd _h | | | | 7.80 | | | kW | | | Tj = +12°C | | | | COP _d | | | | 5.31 | | | | - | | | |
| Tj = biv | | | | Pd _h | | | | 7.10 | | | kW | | | Tj = biv | | | | COP _d | | | | 2.66 | | | | - | | | |
| Tj = TOL | | | | Pd _h | | | | 7.10 | | | kW | | | Tj = TOL | | | | COP _d | | | | 2.66 | | | | - | | | |
| Tj = -15°C (if TOL < -20°C) | | | | Pd _h | | | | - | | | kW | | | Tj = -15°C if TOL < -20°C) | | | | COP _d | | | | - | | | | - | | | |
| Bivalent temperature | | | | T _{biv} | | | | -10 | | | °C | | | Operation limit temperature | | | | TOL | | | | -10 | | | | °C | | | |
| Cycling interval capacity for heating | | | | P _{cy} | | | | - | | | kW | | | Cycling interval efficiency | | | | COP _{cy} | | | | - | | | | - | | | |
| Degradation co-efficient | | | | C _{dh} | | | | 0.9 | | | - | | | Heating water operating limit temperature | | | | WTOL | | | | 65 | | | | °C | | | |
| Power consumption in modes other than active mode | | | | | | | | Supplementary heater | | | | | | | | | | | | | | | | | | | | | |
| Off mode | | | | P _{OFF} | | | | 0.003 | | | kW | | | Rated heat output | | | | P _{sup} | | | | - | | | | kW | | | |
| Thermostat-off mode | | | | P _{TO} | | | | 0.012 | | | kW | | | Type of energy input | | | | - | | | | | | | | | | | |
| Standby mode | | | | P _{SB} | | | | 0.003 | | | kW | | | | | | | | | | | | | | | | | | |
| Crankcase heater mode | | | | P _{CK} | | | | 0.003 | | | kW | | | | | | | | | | | | | | | | | | |
| Other items | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capacity control | | | | fixed | | | | Rated air flow rate, outdoors | | | | - | | | | - | | | | m ³ /h | | | | | | | | | |
| Sound power level, indoors/outdoors | | | | L _{WA} | | | | 48 / - | | | dB | | | Rated brine or water flow rate, outdoor heat exchanger | | | | - | | | | 1.6 | | | | m ³ /h | | | |
| Emissions of nitrogen oxides | | | | NO _x | | | | - | | | mg/kWh | | | | | | | | | | | | | | | | | | |
| For heat pump combination heater | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Declared load profile | | | | - | | | | Water heating energy efficiency | | | | η_{wh} | | | | - | | | | % | | | | | | | | | |
| Daily electricity consumption | | | | Q _{elec} | | | | - | | | kWh | | | Daily fuel consumption | | | | Q _{fuel} | | | | - | | | | kWh | | | |
| Contact | | | | CTA AG, Hunzigenstrasse 2, CH-3110 Münsingen | | | | | | | | | | | | | | | | | | | | | | | | | |

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|--|--|--------------|-------------|--|-------------------|--------------|-------------------|---|--|--|
| Model | | | | OH 1-8es 230V B/W | | | |  | | |
| Brine-to-water heat pump: (Yes/No) | | | | Yes | | | | | | |
| Water-to-water heat pump: (Yes/No) | | | | No | | | | | | |
| Air-to-water heat pump: (Yes/No) | | | | No | | | | | | |
| Low temperature heat pump: (Yes/No) | | | | No | | | | | | |
| Equipped with supplementary heater: (Yes/No) | | | | Yes | | | | | | |
| Heat pump combination heater: (Yes/No) | | | | No | | | | | | |
| Application: (Low temperature/Medium temperature) | | | | Low temperature | | | | | | |
| Climate: (Colder/Average/Warmer) | | | | Average | | | | | | |
| Item | Symbol | Value | Unit | Item | Symbol | Value | Unit | | | |
| Rated heat output | Prated | 7.70 | kW | Seasonal space heating energy efficiency | η_S | 180 | % | | | |
| Declared capacity for heating for part load at indoor temperature 20°C and outdoor temperature Tj | | | | Declared coefficient of performance for part load at indoor temperature 20°C and outdoor temperature Tj | | | | | | |
| Tj = -7°C | Pdh | 7.70 | kW | Tj = -7°C | COPd | 4.63 | - | | | |
| Tj = +2°C | Pdh | 7.80 | kW | Tj = +2°C | COPd | 5.31 | - | | | |
| Tj = +7°C | Pdh | 7.90 | kW | Tj = +7°C | COPd | 5.94 | - | | | |
| Tj = +12°C | Pdh | 8.00 | kW | Tj = +12°C | COPd | 6.44 | - | | | |
| Tj = biv | Pdh | 7.70 | kW | Tj = biv | COPd | 4.48 | - | | | |
| Tj = TOL | Pdh | 7.70 | kW | Tj = TOL | COPd | 4.48 | - | | | |
| Tj = -15°C (if TOL < -20°C) | Pdh | - | kW | Tj = -15°C if TOL < -20°C) | COPd | - | - | | | |
| Bivalent temperature | T _{biv} | -10 | °C | Operation limit temperature | TOL | -10 | °C | | | |
| Cycling interval capacity for heating | P _{cy} | - | kW | Cycling interval efficiency | COP _{cy} | - | - | | | |
| Degradation co-efficient | Cdh | 0.9 | - | Heating water operating limit temperature | WTOL | 65 | °C | | | |
| Power consumption in modes other than active mode | | | | Supplementary heater | | | | | | |
| Off mode | P _{OFF} | 0.003 | kW | Rated heat output | P _{sup} | - | kW | | | |
| Thermostat-off mode | P _{TO} | 0.012 | kW | Type of energy input | - | | | | | |
| Standby mode | P _{SB} | 0.003 | kW | | | | | | | |
| Crankcase heater mode | P _{CK} | 0.003 | kW | | | | | | | |
| Other items | | | | | | | | | | |
| Capacity control | fixed | | | Rated air flow rate, outdoors | - | - | m ³ /h | | | |
| Sound power level, indoors/outdoors | L _{WA} | 48 / - | dB | Rated brine or water flow rate, outdoor heat exchanger | - | 1.6 | m ³ /h | | | |
| Emissions of nitrogen oxides | NO _x | - | mg/kWh | | | | | | | |
| For heat pump combination heater | | | | | | | | | | |
| Declared load profile | - | | | Water heating energy efficiency | η_{wh} | - | % | | | |
| Daily electricity consumption | Q _{elec} | - | kWh | Daily fuel consumption | Q _{fuel} | - | kWh | | | |
| Contact | CTA AG, Hunzigenstrasse 2, CH-3110 Münsingen | | | | | | | | | |