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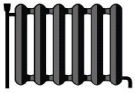
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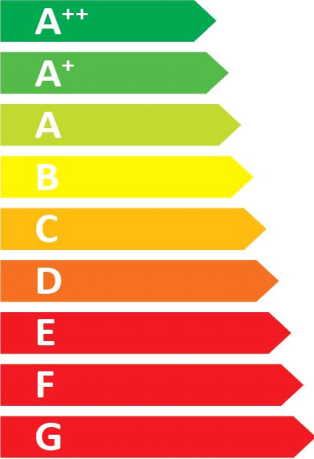
CTA

127529 Aeroheat AH CI 12i-CI HMI 12



55 °C

35 °C



A++

A++

47 dB

49 dB

| | |
|------------|-------------|
| ■ 7 | ■ 9 |
| ■ 9 | ■ 10 |
| ■ 7 | ■ 7 |
| kW | kW |

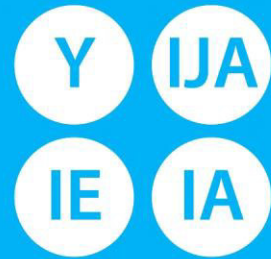
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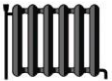




55°C





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127529 Aeroheat AH CI 12i-CI HMI 12










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| Package (heat pumps and combination heater with heat pump) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------------------------------------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|----------|-----------|-----------------------------------------------------|--------------------------------|-----|---|--|--|--|--|--|--|---|--|----------|----------|----------|----------|----------|----------|----------|-----------|------------|-------------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|
| Seasonal space heating energy efficiency of heat pump (η_S) | | | | | | | 1 | 133 | % | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rated output of the heat pump (P_{rated} kW) | | | | | | | 8.80 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Temperature control | | Class | | VII | (Table 1) | + | 2 | 3.5 | % | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Supplementary boiler | | Package with hot water storage tank | | no | | | | P_{sup} kW (rated output of supplementary heater) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | 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 | 137 | % | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | 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 | 114 | % | | colder | 5 | 137 | -V | 19 | = | 118 | % | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| warmer | 153 | % | | warmer | 5 | 137 | +VI | 20 | = | 157 | % | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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 | |  AC Cooling Heating | |
| Manufacturer | CTA AG | | |
| Model | AH CI 12i and HMI 12 | | |
| Information on energy efficiency class and rated output | | | |
| | Average / Low temperature | Average / Medium temperature | |
| Space heating energy efficiency class | A++ | A++ | - |
| Rated heat output | 10.00 | 8.80 | kW |
| Seasonal space heating energy efficiency | 175 | 133 | % |
| Annual final energy consumption space heating | 4648 | 5362 | kWh |
| Sound power level indoors | 47 | | dB |
| Special precautions during assembly, installation or maintenance | | | |
| see installation and maintenance instructions | | | |
| Additional information | | | |
| | Low temperature | Medium temperature | |
| Rated heat output colder climate | 8.60 | 7.00 | kW |
| Rated heat output warmer climate | 6.50 | 6.50 | kW |
| Seasonal space heating energy efficiency colder climate | 133 | 114 | % |
| Seasonal space heating energy efficiency warmer climate | 185 | 153 | % |
| Annual final energy consumption colder climate | 6209 | 5915 | kWh |
| Annual final energy consumption warmer climate | 1849 | 2230 | kWh |
| Sound power level outdoors | 49 | | dB |
| Technical data of the temperature controller | | | |
| Manufacturer | ait | | |
| Model | Aeroplus 2.1 | | |
| 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 | | |

| | | | | | | | | | | |
|----------------------------------------------------------------------------------------------------------|----------------------------------------------|--------------|-------------|----------------------------------------------------------------------------------------------------------------|-------------------|--------------|-------------------|-------------------------------------------------------------------------------------|--|--|
| Model | | | | AH CI 12i and HMI 12 | | | |  | | |
| Brine-to-water heat pump: (Yes/No) | | | | No | | | | | | |
| Water-to-water heat pump: (Yes/No) | | | | No | | | | | | |
| Air-to-water heat pump: (Yes/No) | | | | Yes | | | | | | |
| 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 | Item | Symbol | Value | Unit | | | |
| Rated heat output | Prated | 8.80 | kW | Seasonal space heating energy efficiency | η_S | 133 | % | | | |
| 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 | 8.30 | kW | Tj = -7°C | COPd | 2.18 | - | | | |
| Tj = +2°C | Pdh | 4.80 | kW | Tj = +2°C | COPd | 3.28 | - | | | |
| Tj = +7°C | Pdh | 5.20 | kW | Tj = +7°C | COPd | 4.54 | - | | | |
| Tj = +12°C | Pdh | 6.00 | kW | Tj = +12°C | COPd | 6.15 | - | | | |
| Tj = biv | Pdh | 8.30 | kW | Tj = biv | COPd | 2.18 | - | | | |
| Tj = TOL | Pdh | 6.70 | kW | Tj = TOL | COPd | 1.94 | - | | | |
| Tj = -15°C (if TOL < -20°C) | Pdh | - | kW | Tj = -15°C if TOL < -20°C) | COPd | - | - | | | |
| Bivalent temperature | T _{biv} | -7 | °C | Operation limit temperature | TOL | -10 | °C | | | |
| Cycling interval capacity for heating | P _{cy} | - | kW | Cycling interval efficiency | COP _{cy} | - | - | | | |
| Degradation co-efficient | Cdh | 1 | - | Heating water operating limit temperature | WTOL | 60 | °C | | | |
| Power consumption in modes other than active mode | | | | Supplementary heater | | | | | | |
| Off mode | P _{OFF} | 0.02 | kW | Rated heat output | P _{sup} | 2.1 | kW | | | |
| Thermostat-off mode | P _{TO} | 0.02 | kW | Type of energy input | electric | | | | | |
| Standby mode | P _{SB} | 0.02 | kW | | | | | | | |
| Crankcase heater mode | P _{CK} | 0 | kW | | | | | | | |
| Other items | | | | | | | | | | |
| Capacity control | variable | | | Rated air flow rate, outdoors | - | 2900 | m ³ /h | | | |
| Sound power level, indoors/outdoors | L _{WA} | 47/49 | dB | Rated brine or water flow rate, outdoor heat exchanger | - | - | 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 | | | | AH CI 12i and HMI 12 | | | |  | | |
| Brine-to-water heat pump: (Yes/No) | | | | No | | | | | | |
| Water-to-water heat pump: (Yes/No) | | | | No | | | | | | |
| Air-to-water heat pump: (Yes/No) | | | | Yes | | | | | | |
| 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 | 10.00 | kW | Seasonal space heating energy efficiency | η_S | 175 | % | | | |
| 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 | 8.50 | kW | Tj = -7°C | COPd | 2.60 | - | | | |
| Tj = +2°C | Pdh | 5.30 | kW | Tj = +2°C | COPd | 4.52 | - | | | |
| Tj = +7°C | Pdh | 6.30 | kW | Tj = +7°C | COPd | 6.04 | - | | | |
| Tj = +12°C | Pdh | 6.70 | kW | Tj = +12°C | COPd | 7.34 | - | | | |
| Tj = biv | Pdh | 8.50 | kW | Tj = biv | COPd | 2.60 | - | | | |
| Tj = TOL | Pdh | 7.50 | kW | Tj = TOL | COPd | 2.58 | - | | | |
| Tj = -15°C (if TOL < -20°C) | Pdh | - | kW | Tj = -15°C if TOL < -20°C) | COPd | - | - | | | |
| Bivalent temperature | T _{biv} | -7 | °C | Operation limit temperature | TOL | -10 | °C | | | |
| Cycling interval capacity for heating | P _{cy} | - | kW | Cycling interval efficiency | COP _{cy} | - | - | | | |
| Degradation co-efficient | Cdh | 1 | - | Heating water operating limit temperature | WTOL | 60 | °C | | | |
| Power consumption in modes other than active mode | | | | Supplementary heater | | | | | | |
| Off mode | P _{OFF} | 0.02 | kW | Rated heat output | P _{sup} | 2.5 | kW | | | |
| Thermostat-off mode | P _{TO} | 0.02 | kW | Type of energy input | electric | | | | | |
| Standby mode | P _{SB} | 0.02 | kW | | | | | | | |
| Crankcase heater mode | P _{CK} | 0 | kW | | | | | | | |
| Other items | | | | | | | | | | |
| Capacity control | variable | | | Rated air flow rate, outdoors | - | 2900 | m ³ /h | | | |
| Sound power level, indoors/outdoors | L _{WA} | 47/49 | dB | Rated brine or water flow rate, outdoor heat exchanger | - | - | 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 | | | | | | | | | |