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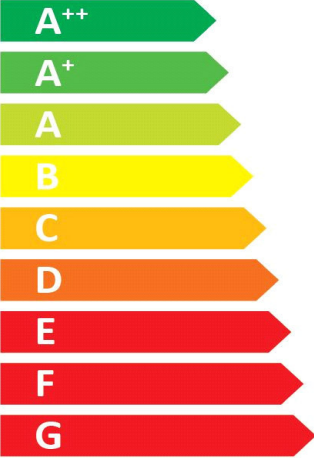
CTA

121290 Aeroheat CS 1-31i-L



55 °C

35 °C



A+

A++

68 dB

55 dB

■ 28	■ 30
■ 27	■ 28
■ 29	■ 31
kW	kW

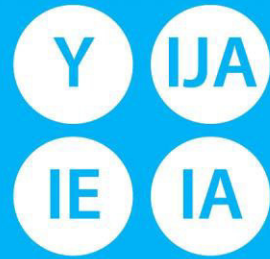
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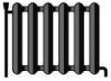




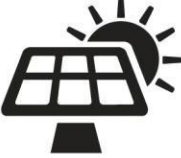



55°C

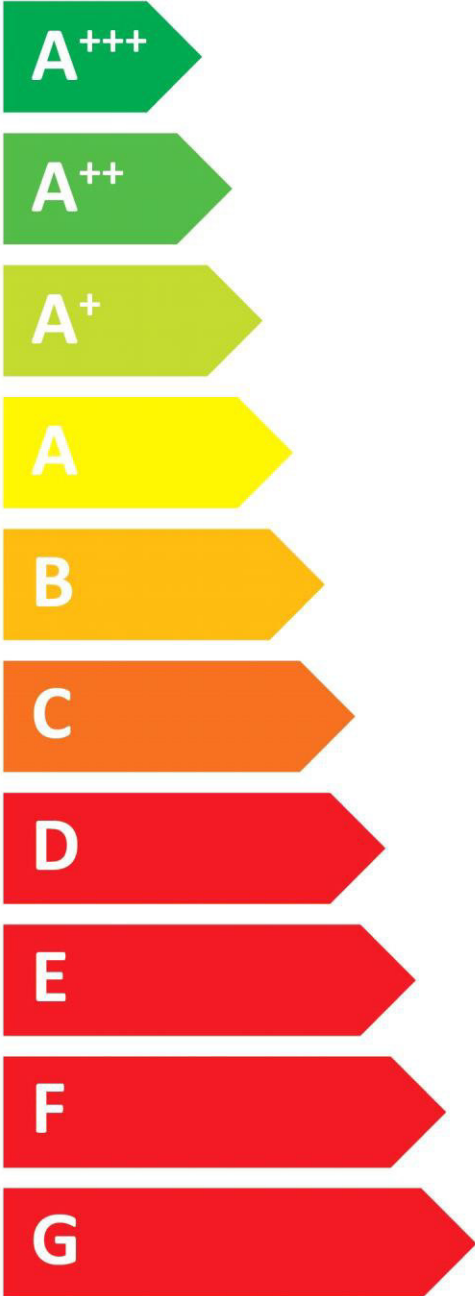
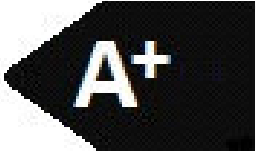
CTA

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121290 Aeroheat CS 1-31i-L







+		<input type="checkbox"/>
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+		<input type="checkbox"/>





Package (heat pumps and combination heater with heat pump)																																							
Seasonal space heating energy efficiency of heat pump (η_S)							1	122	%																														
Rated output of the heat pump (P_{rated} kW)							26.86																																
Temperature control		Class		III	(Table 1)	+	2	1.5	%																														
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	124	%																														
									rounded to the nearest integer																														
Seasonal space heating energy efficiency class of package under average climate																																							
<table border="1"> <thead> <tr> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>X</th> <th></th> <th></th> </tr> </thead> <tbody> <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> </tbody> </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	108	%		colder	5	124	-V	14	=	110	%																												
warmer	145	%		warmer	5	124	+VI	23	=	147	%																												

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 CS 1-31i-L		
Information on energy efficiency class and rated output			
	Average / Low temperature	Average / Medium temperature	
Space heating energy efficiency class	A++	A+	-
Rated heat output	28.28	26.86	kW
Seasonal space heating energy efficiency	151	122	%
Annual final energy consumption space heating	15254	17711	kWh
Sound power level indoors	68		dB
Special precautions during assembly, installation or maintenance			
see installation and maintenance instructions			
Additional information			
	Low temperature	Medium temperature	
Rated heat output colder climate	29.62	28.06	kW
Rated heat output warmer climate	30.72	29.47	kW
Seasonal space heating energy efficiency colder climate	131	108	%
Seasonal space heating energy efficiency warmer climate	185	145	%
Annual final energy consumption colder climate	21689	24994	kWh
Annual final energy consumption warmer climate	8728	10663	kWh
Sound power level outdoors	55		dB
Technical data of the temperature controller			
Manufacturer	ait		
Model	Aeroplus 2.0		
Class of the controller	III		-
Contribution of the controller to seasonal space heating energy efficiency	1.5		%
Contact	CTA AG, Hunzigenstrasse 2, CH-3110 Münsingen		

Model				AH CS 1-31i-L						
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	26.86	kW	Seasonal space heating energy efficiency	η_S	122	%			
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	23.80	kW	Tj = -7°C	COPd	2.03	-			
Tj = +2°C	Pdh	30.50	kW	Tj = +2°C	COPd	3.02	-			
Tj = +7°C	Pdh	19.10	kW	Tj = +7°C	COPd	4.05	-			
Tj = +12°C	Pdh	21.10	kW	Tj = +12°C	COPd	4.92	-			
Tj = biv	Pdh	23.80	kW	Tj = biv	COPd	2.03	-			
Tj = TOL	Pdh	21.50	kW	Tj = TOL	COPd	1.76	-			
Tj = -15°C (if TOL < -20°C)	Pdh	17.80	kW	Tj = -15°C if TOL < -20°C)	COPd	1.37	-			
Bivalent temperature	T _{biv}	-7	°C	Operation limit temperature	TOL	-20	°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	58	°C			
Power consumption in modes other than active mode				Supplementary heater						
Off mode	P _{OFF}	0.01	kW	Rated heat output	P _{sup}	5.4	kW			
Thermostat-off mode	P _{TO}	0.01	kW	Type of energy input	electric					
Standby mode	P _{SB}	0.01	kW							
Crankcase heater mode	P _{CK}	0	kW							
Other items										
Capacity control	fixed			Rated air flow rate, outdoors	-	6000	m ³ /h			
Sound power level, indoors/outdoors	L _{WA}	68/55	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									

Model				AH CS 1-31i-L						
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	28.28	kW	Seasonal space heating energy efficiency	η_S	151	%			
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	25.00	kW	Tj = -7°C	COPd	2.92	-			
Tj = +2°C	Pdh	31.10	kW	Tj = +2°C	COPd	3.67	-			
Tj = +7°C	Pdh	19.40	kW	Tj = +7°C	COPd	4.86	-			
Tj = +12°C	Pdh	21.20	kW	Tj = +12°C	COPd	5.26	-			
Tj = biv	Pdh	25.00	kW	Tj = biv	COPd	2.92	-			
Tj = TOL	Pdh	22.90	kW	Tj = TOL	COPd	2.63	-			
Tj = -15°C (if TOL < -20°C)	Pdh	19.50	kW	Tj = -15°C if TOL < -20°C)	COPd	2.17	-			
Bivalent temperature	T _{biv}	-7	°C	Operation limit temperature	TOL	-20	°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	58	°C			
Power consumption in modes other than active mode				Supplementary heater						
Off mode	P _{OFF}	0.01	kW	Rated heat output	P _{sup}	5.4	kW			
Thermostat-off mode	P _{TO}	0.01	kW	Type of energy input	electric					
Standby mode	P _{SB}	0.01	kW							
Crankcase heater mode	P _{CK}	0	kW							
Other items										
Capacity control	fixed			Rated air flow rate, outdoors	-	6000	m ³ /h			
Sound power level, indoors/outdoors	L _{WA}	68/55	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									