



# ENERG

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107607HMD02

CTA

127586 Aeroheat AH CN 5ar-HM1R-230V

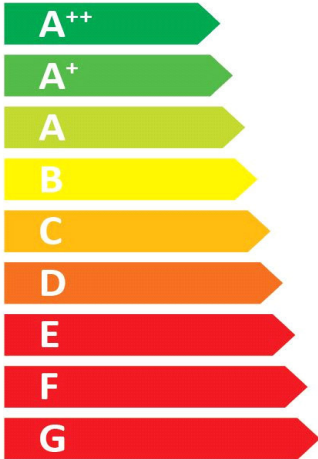


55 °C

35 °C

A++

A++



44 dB

58 dB

■ 5	■ 5
■ 6	■ 6
■ 7	■ 7
kW	kW

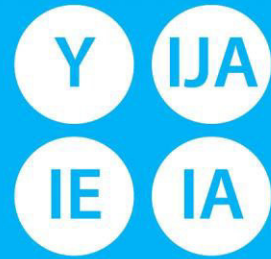
2015

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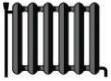




55°C


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127586 Aeroheat AH CN 5ar-HM1R-230V








+ 


+ 


+ 


+ 

Package (heat pumps and combination heater with heat pump)																																							
Seasonal space heating energy efficiency of heat pump ( $\eta_S$ )								1	128	%																													
Rated output of the heat pump ( $P_{rated}$ kW)									5.91																														
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)																															
				$\eta_S$ % (sup)																																			
				$(\eta_S \text{ % (sup)} - 1) \times (\alpha_{WE})$		=	-	3	%																														
				$(\alpha_{WE})$																																			
Solar contribution				$(A_{Koll} \text{ m}^2)$				$(\eta_{Koll} \text{ %})$																															
				$(V_{Sp} \text{ m}^3)$				(standstill heat loss of the storage tank in W)																															
								$(\eta_{Sp})$																															
				$((294/(P_{rated} \times 11)) \times (A_{Koll} \text{ m}^2) + (115/(P_{rated} \times 11)) \times (V_{Sp} \text{ m}^3)) \times 0.45 \times ((\eta_{Koll} \text{ %}) / 100) \times (\eta_{Sp})$		=	+	4	%																														
Seasonal space heating energy efficiency of package under average climate								5	132	%																													
									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><b>G</b></td><td><b>F</b></td><td><b>E</b></td><td><b>D</b></td><td><b>C</b></td><td><b>B</b></td><td><b>A</b></td><td><b>A+</b></td><td><b>A++</b></td><td><b>A+++</b></td> </tr> <tr> <td>&lt; 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		<b>G</b>	<b>F</b>	<b>E</b>	<b>D</b>	<b>C</b>	<b>B</b>	<b>A</b>	<b>A+</b>	<b>A++</b>	<b>A+++</b>	< 30 %	≥ 30 %	≥ 34 %	≥ 36 %	≥ 75 %	≥ 82 %	≥ 90 %	≥ 98 %	≥ 125 %	≥ 150 %
								X																															
<b>G</b>	<b>F</b>	<b>E</b>	<b>D</b>	<b>C</b>	<b>B</b>	<b>A</b>	<b>A+</b>	<b>A++</b>	<b>A+++</b>																														
< 30 %	≥ 30 %	≥ 34 %	≥ 36 %	≥ 75 %	≥ 82 %	≥ 90 %	≥ 98 %	≥ 125 %	≥ 150 %																														
Seasonal space heating energy efficiency under colder and warmer climate conditions																																							
colder	116	%		colder	5	132	-V	12	=	120	%																												
warmer	157	%		warmer	5	132	+VI	29	=	161	%																												

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.

<b>Product fiche</b>		 <b>AC Cooling Heating</b>	
<b>Manufacturer</b>	CTA AG		
<b>Model</b>	AH CN 5ar 230V and HM		
<b>Information on energy efficiency class and rated output</b>			
	Average / Low temperature	Average / Medium temperature	
Space heating energy efficiency class	A++	A++	-
Rated heat output	6.37	5.91	kW
Seasonal space heating energy efficiency	154	128	%
Annual final energy consumption space heating	3353	3727	kWh
Sound power level indoors	44		dB
<b>Special precautions during assembly, installation or maintenance</b>			
see installation and maintenance instructions			
<b>Additional information</b>			
	Low temperature	Medium temperature	
Rated heat output colder climate	5.43	4.98	kW
Rated heat output warmer climate	7.07	6.54	kW
Seasonal space heating energy efficiency colder climate	136	116	%
Seasonal space heating energy efficiency warmer climate	190	157	%
Annual final energy consumption colder climate	3847	4143	kWh
Annual final energy consumption warmer climate	1952	2182	kWh
Sound power level outdoors	58		dB
<b>Technical data of the temperature controller</b>			
<b>Manufacturer</b>	ait		
<b>Model</b>	Aeroplus 2.1		
Class of the controller	VII		-
Contribution of the controller to seasonal space heating energy efficiency	3.5		%
<b>Contact</b>	CTA AG, Hunzigenstrasse 2, CH-3110 Münsingen		

<b>Model</b>				<b>AH CN 5ar 230V and HM</b>						
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						
<b>Item</b>	<b>Symbol</b>	<b>Value</b>	<b>Unit</b>	<b>Item</b>	<b>Symbol</b>	<b>Value</b>	<b>Unit</b>			
<b>Rated heat output</b>	Prated	5.91	kW	<b>Seasonal space heating energy efficiency</b>	$\eta_S$	128	%			
<b>Declared capacity for heating for part load at indoor temperature 20°C and outdoor temperature Tj</b>				<b>Declared coefficient of performance for part load at indoor temperature 20°C and outdoor temperature Tj</b>						
Tj = -7°C	Pdh	4.10	kW	Tj = -7°C	COPd	2.28	-			
Tj = +2°C	Pdh	5.40	kW	Tj = +2°C	COPd	3.23	-			
Tj = +7°C	Pdh	6.80	kW	Tj = +7°C	COPd	4.32	-			
Tj = +12°C	Pdh	7.50	kW	Tj = +12°C	COPd	5.36	-			
Tj = biv	Pdh	4.60	kW	Tj = biv	COPd	2.57	-			
Tj = TOL	Pdh	3.70	kW	Tj = TOL	COPd	2.05	-			
Tj = -15°C (if TOL < -20°C)	Pdh	3.10	kW	Tj = -15°C if TOL < -20°C)	COPd	1.69	-			
Bivalent temperature	T <sub>biv</sub>	-4	°C	Operation limit temperature	TOL	-20	°C			
Cycling interval capacity for heating	P <sub>cy</sub>	-	kW	Cycling interval efficiency	COP <sub>cy</sub>	-	-			
Degradation co-efficient	Cdh	1	-	Heating water operating limit temperature	WTOL	62	°C			
<b>Power consumption in modes other than active mode</b>				<b>Supplementary heater</b>						
Off mode	P <sub>OFF</sub>	0.01	kW	Rated heat output	P <sub>sup</sub>	2.2	kW			
Thermostat-off mode	P <sub>TO</sub>	0.01	kW	Type of energy input	electric					
Standby mode	P <sub>SB</sub>	0.01	kW							
Crankcase heater mode	P <sub>CK</sub>	0	kW							
<b>Other items</b>										
Capacity control	fixed			Rated air flow rate, outdoors	-	3000	m <sup>3</sup> /h			
Sound power level, indoors/outdoors	L <sub>WA</sub>	44/58	dB	Rated brine or water flow rate, outdoor heat exchanger	-	-	m <sup>3</sup> /h			
Emissions of nitrogen oxides	NO <sub>x</sub>	-	mg/kWh							
<b>For heat pump combination heater</b>										
Declared load profile	-			Water heating energy efficiency	$\eta_{wh}$	-	%			
Daily electricity consumption	Q <sub>elec</sub>	-	kWh	Daily fuel consumption	Q <sub>fuel</sub>	-	kWh			
<b>Contact</b>	CTA AG, Hunzigenstrasse 2, CH-3110 Münsingen									

<b>Model</b>				<b>AH CN 5ar 230V and HM</b>						
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						
<b>Item</b>	<b>Symbol</b>	<b>Value</b>	<b>Unit</b>	<b>Item</b>	<b>Symbol</b>	<b>Value</b>	<b>Unit</b>			
<b>Rated heat output</b>	Prated	6.37	kW	<b>Seasonal space heating energy efficiency</b>	$\eta_S$	154	%			
<b>Declared capacity for heating for part load at indoor temperature 20°C and outdoor temperature Tj</b>				<b>Declared coefficient of performance for part load at indoor temperature 20°C and outdoor temperature Tj</b>						
Tj = -7°C	Pdh	4.60	kW	Tj = -7°C	COPd	3.04	-			
Tj = +2°C	Pdh	5.50	kW	Tj = +2°C	COPd	3.94	-			
Tj = +7°C	Pdh	7.00	kW	Tj = +7°C	COPd	4.87	-			
Tj = +12°C	Pdh	7.50	kW	Tj = +12°C	COPd	5.54	-			
Tj = biv	Pdh	4.90	kW	Tj = biv	COPd	3.35	-			
Tj = TOL	Pdh	4.20	kW	Tj = TOL	COPd	2.81	-			
Tj = -15°C (if TOL < -20°C)	Pdh	3.50	kW	Tj = -15°C if TOL < -20°C)	COPd	2.43	-			
Bivalent temperature	T <sub>biv</sub>	-4	°C	Operation limit temperature	TOL	-20	°C			
Cycling interval capacity for heating	P <sub>cy</sub>	-	kW	Cycling interval efficiency	COP <sub>cy</sub>	-	-			
Degradation co-efficient	Cdh	1	-	Heating water operating limit temperature	WTOL	62	°C			
<b>Power consumption in modes other than active mode</b>				<b>Supplementary heater</b>						
Off mode	P <sub>OFF</sub>	0.01	kW	Rated heat output	P <sub>sup</sub>	2.2	kW			
Thermostat-off mode	P <sub>TO</sub>	0.01	kW	Type of energy input	electric					
Standby mode	P <sub>SB</sub>	0.01	kW							
Crankcase heater mode	P <sub>CK</sub>	0	kW							
<b>Other items</b>										
Capacity control	fixed			Rated air flow rate, outdoors	-	3000	m <sup>3</sup> /h			
Sound power level, indoors/outdoors	L <sub>WA</sub>	44/58	dB	Rated brine or water flow rate, outdoor heat exchanger	-	-	m <sup>3</sup> /h			
Emissions of nitrogen oxides	NO <sub>x</sub>	-	mg/kWh							
<b>For heat pump combination heater</b>										
Declared load profile	-			Water heating energy efficiency	$\eta_{wh}$	-	%			
Daily electricity consumption	Q <sub>elec</sub>	-	kWh	Daily fuel consumption	Q <sub>fuel</sub>	-	kWh			
<b>Contact</b>	CTA AG, Hunzigenstrasse 2, CH-3110 Münsingen									