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107605HMD02

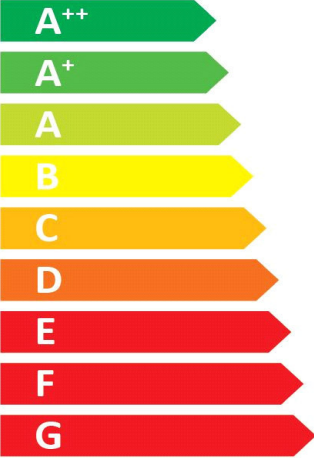
CTA

127582 Aeroheat CN 5ar-HM1R



55 °C

35 °C



A⁺⁺

A⁺⁺

44 dB

57 dB

■ 5	■ 5
■ 5	■ 6
■ 7	■ 7
kW	kW

2015

811/2013



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55°C

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127582 Aeroheat CN 5ar-HM1R

CTA



A++

A+++

A++

A++

A+

A

B

C

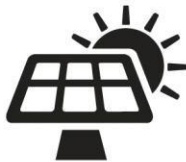
D

E

F

G

+



+



+



+



Package (heat pumps and combination heater with heat pump)

Seasonal space heating energy efficiency of heat pump (η_S) ① 127 %

Rated output of the heat pump (P_{rated} kW) 5.41

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) - ③

$(\eta_S \% (sup) - ①) \times (\alpha_{WE}) = - ③$ %

(α_{WE})

Solar contribution $(A_{Koll} m^2)$ $(\eta_{Koll} \%)$

$(V_{Sp} m^3)$ $(standstill\ heat\ loss\ of\ the\ storage\ tank\ in\ W)$

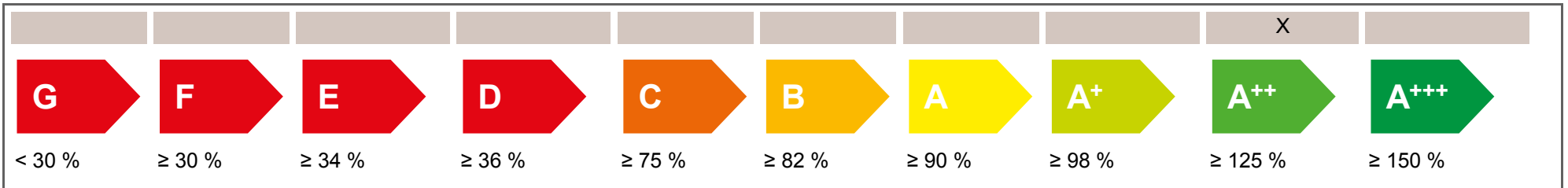
(η_{Sp})

$((294/(P_{rated} \times 11)) \times (A_{Koll} m^2) + (115/(P_{rated} \times 11)) \times (V_{Sp} m^3)) \times 0.45 \times ((\eta_{Koll} \%) / 100) \times (\eta_{Sp}) = + ④$ %

Seasonal space heating energy efficiency of package under average climate ⑤ 131 %

rounded to the nearest integer


Seasonal space heating energy efficiency class of package under average climate





Seasonal space heating energy efficiency under colder and warmer climate conditions

colder	166 %		colder ⑤	131	-V	-39	=	170 %
warmer	154 %		warmer ⑤	131	+VI	27	=	158 %

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 CN 5ar and HM		
Information on energy efficiency class and rated output			
	Average / Low temperature	Average / Medium temperature	
Space heating energy efficiency class	A++	A++	-
Rated heat output	5.78	5.41	kW
Seasonal space heating energy efficiency	154	127	%
Annual final energy consumption space heating	3036	3435	kWh
Sound power level indoors	44		dB
Special precautions during assembly, installation or maintenance			
see installation and maintenance instructions			
Additional information			
	Low temperature	Medium temperature	
Rated heat output colder climate	5.38	5.04	kW
Rated heat output warmer climate	6.95	6.51	kW
Seasonal space heating energy efficiency colder climate	137	166	%
Seasonal space heating energy efficiency warmer climate	187	154	%
Annual final energy consumption colder climate	3781	4190	kWh
Annual final energy consumption warmer climate	1949	2219	kWh
Sound power level outdoors	57		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 CN 5ar and HM						
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	5.41	kW	Seasonal space heating energy efficiency	η_S	127	%			
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	4.10	kW	Tj = -7°C	COPd	2.28	-			
Tj = +2°C	Pdh	5.30	kW	Tj = +2°C	COPd	3.19	-			
Tj = +7°C	Pdh	6.70	kW	Tj = +7°C	COPd	4.29	-			
Tj = +12°C	Pdh	7.60	kW	Tj = +12°C	COPd	5.19	-			
Tj = biv	Pdh	4.40	kW	Tj = biv	COPd	2.46	-			
Tj = TOL	Pdh	3.80	kW	Tj = TOL	COPd	2.06	-			
Tj = -15°C (if TOL < -20°C)	Pdh	3.30	kW	Tj = -15°C if TOL < -20°C)	COPd	1.75	-			
Bivalent temperature	T _{biv}	-5	°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	62	°C			
Power consumption in modes other than active mode				Supplementary heater						
Off mode	P _{OFF}	0.015	kW	Rated heat output	P _{sup}	1.6	kW			
Thermostat-off mode	P _{TO}	0.015	kW	Type of energy input	electric					
Standby mode	P _{SB}	0.015	kW							
Crankcase heater mode	P _{CK}	0	kW							
Other items										
Capacity control	fixed			Rated air flow rate, outdoors	-	3000	m ³ /h			
Sound power level, indoors/outdoors	L _{WA}	44/57	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 CN 5ar and HM						
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	5.78	kW	Seasonal space heating energy efficiency	η_S	154	%			
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	4.50	kW	Tj = -7°C	COPd	3.13	-			
Tj = +2°C	Pdh	5.40	kW	Tj = +2°C	COPd	3.90	-			
Tj = +7°C	Pdh	6.90	kW	Tj = +7°C	COPd	4.88	-			
Tj = +12°C	Pdh	7.60	kW	Tj = +12°C	COPd	5.36	-			
Tj = biv	Pdh	4.70	kW	Tj = biv	COPd	3.33	-			
Tj = TOL	Pdh	4.10	kW	Tj = TOL	COPd	2.85	-			
Tj = -15°C (if TOL < -20°C)	Pdh	3.60	kW	Tj = -15°C if TOL < -20°C)	COPd	2.42	-			
Bivalent temperature	T _{biv}	-5	°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	62	°C			
Power consumption in modes other than active mode				Supplementary heater						
Off mode	P _{OFF}	0.015	kW	Rated heat output	P _{sup}	1.7	kW			
Thermostat-off mode	P _{TO}	0.015	kW	Type of energy input	electric					
Standby mode	P _{SB}	0.015	kW							
Crankcase heater mode	P _{CK}	0	kW							
Other items										
Capacity control	fixed			Rated air flow rate, outdoors	-	3000	m ³ /h			
Sound power level, indoors/outdoors	L _{WA}	44/57	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									