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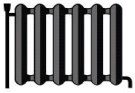
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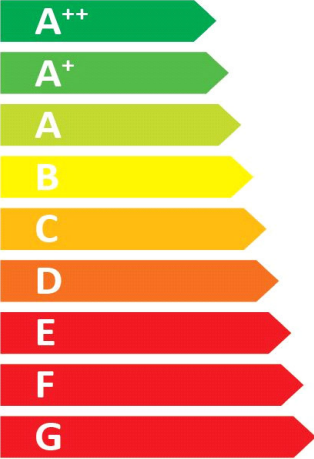
CTA

127535 Aeroheat AH CI 8a-CI HMI 9



55 °C

35 °C



A++

A++

44 dB

50 dB

■ 5	■ 7
■ 6	■ 7
■ 6	■ 4
kW	kW

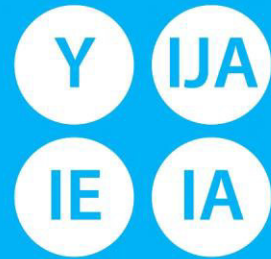
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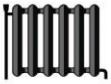




55°C


107776HV941


CTA


127535 Aeroheat AH CI 8a-CI HMI 9








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Package (heat pumps and combination heater with heat pump)

Seasonal space heating energy efficiency of heat pump (η_S) ① 137 %

Rated output of the heat pump (P_{rated} kW) 5.70

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 %

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

(α_{WE})

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

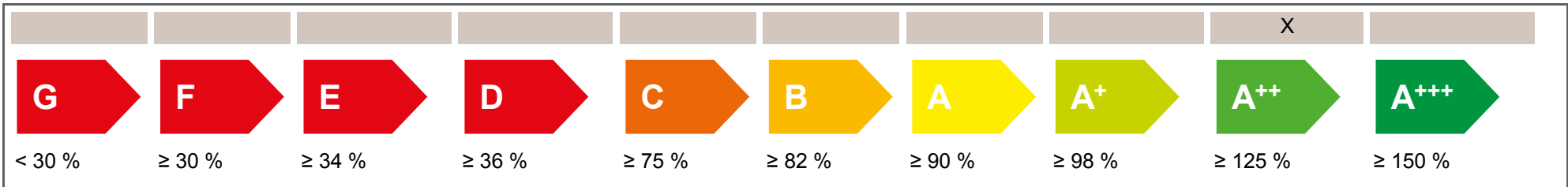
$(V_{Sp} m^3)$ **(standstill heat loss of the storage tank in W)**

(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 ⑤ 141 %
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	95 %		colder	⑤	141	-V	42	=	99 %
warmer	164 %		warmer	⑤	141	+VI	27	=	168 %

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 8a and CI HMI 9		
Information on energy efficiency class and rated output			
	Average / Low temperature	Average / Medium temperature	
Space heating energy efficiency class	A++	A++	-
Rated heat output	6.70	5.70	kW
Seasonal space heating energy efficiency	183	137	%
Annual final energy consumption space heating	2949	3321	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	6.50	5.00	kW
Rated heat output warmer climate	4.10	5.50	kW
Seasonal space heating energy efficiency colder climate	160	95	%
Seasonal space heating energy efficiency warmer climate	236	164	%
Annual final energy consumption colder climate	3945	5036	kWh
Annual final energy consumption warmer climate	915	1761	kWh
Sound power level outdoors	50		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 8a and CI HMI 9																											
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																		
Rated heat output				Prated				5.70				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				137				%															
Tj = -7°C				Pd _h				5.00				kW				Tj = -7°C				COP _d				2.31				-			
Tj = +2°C				Pd _h				3.50				kW				Tj = +2°C				COP _d				3.43				-			
Tj = +7°C				Pd _h				3.00				kW				Tj = +7°C				COP _d				4.86				-			
Tj = +12°C				Pd _h				3.40				kW				Tj = +12°C				COP _d				6.56				-			
Tj = biv				Pd _h				5.00				kW				Tj = biv				COP _d				2.31				-			
Tj = TOL				Pd _h				4.20				kW				Tj = TOL				COP _d				2.12				-			
Tj = -15°C (if TOL < -20°C)				Pd _h				-				kW				Tj = -15°C if TOL < -20°C)				COP _d				-				-			
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				C _{dh}				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}				1.5				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				-				2500				m ³ /h											
Sound power level, indoors/outdoors				L _{WA}				44/50				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 CI 8a and CI HMI 9						
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	6.70	kW	Seasonal space heating energy efficiency	η_S	183	%			
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	5.90	kW	Tj = -7°C	COPd	3.26	-			
Tj = +2°C	Pdh	3.80	kW	Tj = +2°C	COPd	4.70	-			
Tj = +7°C	Pdh	3.30	kW	Tj = +7°C	COPd	5.96	-			
Tj = +12°C	Pdh	3.40	kW	Tj = +12°C	COPd	7.92	-			
Tj = biv	Pdh	5.90	kW	Tj = biv	COPd	3.26	-			
Tj = TOL	Pdh	5.10	kW	Tj = TOL	COPd	3.18	-			
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}	1.6	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	-	2500	m ³ /h			
Sound power level, indoors/outdoors	L _{WA}	44/50	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									