



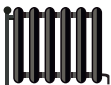
ENERG

енергия · ενεργεια



I - Klima - Kälte - Wärme

II OH 1-72e Duo - W/W Art.Nr.: B11123



55 °C

35 °C



72 dB



--- dB


■ 85
■ **85**
■ 85
kW


■ 95
■ **95**
■ 95
kW




Package (heat pumps and combination heater with heat pump)																																							
Seasonal space heating energy efficiency of heat pump (η_S)							1	163	%																														
Rated output of the heat pump (P_{rated} kW)								84.40																															
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	167	%																														
									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></td><td>X</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	165	%		colder	5	167	-V	-2	=	169	%																												
warmer	164	%		warmer	5	167	+VI	1	=	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	OH 1-72e Duo W/W		
Information on energy efficiency class and rated output			
	Average / Low temperature	Average / Medium temperature	
Space heating energy efficiency class	A++	A++	-
Rated heat output	94.30	84.40	kW
Seasonal space heating energy efficiency	229	163	%
Annual final energy consumption space heating	32901	40751	kWh
Sound power level indoors	72		dB
Special precautions during assembly, installation or maintenance			
see installation and maintenance instructions			
Additional information			
	Low temperature	Medium temperature	
Rated heat output colder climate	94.30	84.40	kW
Rated heat output warmer climate	94.30	84.40	kW
Seasonal space heating energy efficiency colder climate	231	165	%
Seasonal space heating energy efficiency warmer climate	231	164	%
Annual final energy consumption colder climate	38800	48162	kWh
Annual final energy consumption warmer climate	21010	26251	kWh
Sound power level outdoors		-	dB
Technical data of the temperature controller			
Manufacturer	Siemens		
Model	RVS 61		
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				OH 1-72e Duo W/W						
Brine-to-water heat pump: (Yes/No)				No						
Water-to-water heat pump: (Yes/No)				Yes						
Air-to-water heat pump: (Yes/No)				No						
Low temperature heat pump: (Yes/No)				No						
Equipped with supplementary heater: (Yes/No)				No						
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	84.40	kW	Seasonal space heating energy efficiency	η_S	163	%			
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	85.60	kW	Tj = -7°C	COPd	3.82	-			
Tj = +2°C	Pdh	90.30	kW	Tj = +2°C	COPd	4.79	-			
Tj = +7°C	Pdh	93.70	kW	Tj = +7°C	COPd	5.61	-			
Tj = +12°C	Pdh	97.10	kW	Tj = +12°C	COPd	6.66	-			
Tj = biv	Pdh	84.40	kW	Tj = biv	COPd	3.59	-			
Tj = TOL	Pdh	84.40	kW	Tj = TOL	COPd	3.59	-			
Tj = -15°C (if TOL < -20°C)	Pdh	-	kW	Tj = -15°C if TOL < -20°C)	COPd	-	-			
Bivalent temperature	T _{biv}	-10	°C	Operation limit temperature	TOL	-10	°C			
Cycling interval capacity for heating	P _{cy}	-	kW	Cycling interval efficiency	COP _{cy}	-	-			
Degradation co-efficient	Cdh	0.9	-	Heating water operating limit temperature	WTOL	63	°C			
Power consumption in modes other than active mode				Supplementary heater						
Off mode	P _{OFF}	0.003	kW	Rated heat output	P _{sup}	-	kW			
Thermostat-off mode	P _{TO}	0.012	kW	Type of energy input	-					
Standby mode	P _{SB}	0.003	kW							
Crankcase heater mode	P _{CK}	0.003	kW							
Other items										
Capacity control	fixed			Rated air flow rate, outdoors	-	-	m ³ /h			
Sound power level, indoors/outdoors	L _{WA}	72 / -	dB	Rated brine or water flow rate, outdoor heat exchanger	-	19.8	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				OH 1-72e Duo W/W						
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Water-to-water heat pump: (Yes/No)				Yes						
Air-to-water heat pump: (Yes/No)				No						
Low temperature heat pump: (Yes/No)				No						
Equipped with supplementary heater: (Yes/No)				No						
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	94.30	kW	Seasonal space heating energy efficiency	η_S	229	%			
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	94.80	kW	Tj = -7°C	COPd	5.92	-			
Tj = +2°C	Pdh	97.10	kW	Tj = +2°C	COPd	6.66	-			
Tj = +7°C	Pdh	98.80	kW	Tj = +7°C	COPd	7.31	-			
Tj = +12°C	Pdh	100.00	kW	Tj = +12°C	COPd	7.80	-			
Tj = biv	Pdh	94.30	kW	Tj = biv	COPd	5.76	-			
Tj = TOL	Pdh	94.30	kW	Tj = TOL	COPd	5.76	-			
Tj = -15°C (if TOL < -20°C)	Pdh	-	kW	Tj = -15°C if TOL < -20°C)	COPd	-	-			
Bivalent temperature	T _{biv}	-10	°C	Operation limit temperature	TOL	-10	°C			
Cycling interval capacity for heating	P _{cy}	-	kW	Cycling interval efficiency	COP _{cy}	-	-			
Degradation co-efficient	Cdh	0.9	-	Heating water operating limit temperature	WTOL	63	°C			
Power consumption in modes other than active mode				Supplementary heater						
Off mode	P _{OFF}	0.003	kW	Rated heat output	P _{sup}	-	kW			
Thermostat-off mode	P _{TO}	0.012	kW	Type of energy input	-					
Standby mode	P _{SB}	0.003	kW							
Crankcase heater mode	P _{CK}	0.003	kW							
Other items										
Capacity control	fixed			Rated air flow rate, outdoors	-	-	m ³ /h			
Sound power level, indoors/outdoors	L _{WA}	72 / -	dB	Rated brine or water flow rate, outdoor heat exchanger	-	19.8	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									