



ENERG

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I - Klima - Kälte - Wärme || OH 1-85e Duo - W/W Art.Nr.: B11124



55 °C

35 °C



73 dB



--- dB


■ 100
■ **100**
■ 100
kW


■ 111
■ **111**
■ 111
kW




Package (heat pumps and combination heater with heat pump)																																							
Seasonal space heating energy efficiency of heat pump (η_S)								1	161	%																													
Rated output of the heat pump (P_{rated} kW)									99.30																														
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	165	%																													
									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	162	%		colder	5	165	-V	-1	=	166	%																												
warmer	162	%		warmer	5	165	+VI	1	=	166	%																												

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 1-85e 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	110.80	99.30	kW
Seasonal space heating energy efficiency	223	161	%
Annual final energy consumption space heating	39656	48511	kWh
Sound power level indoors	73		dB
Special precautions during assembly, installation or maintenance			
see installation and maintenance instructions			
Additional information			
	Low temperature	Medium temperature	
Rated heat output colder climate	110.80	99.30	kW
Rated heat output warmer climate	110.80	99.30	kW
Seasonal space heating energy efficiency colder climate	226	162	%
Seasonal space heating energy efficiency warmer climate	225	162	%
Annual final energy consumption colder climate	46597	57419	kWh
Annual final energy consumption warmer climate	25351	31232	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 1-85e 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	99.30	kW	Seasonal space heating energy efficiency	η_S	161	%			
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	100.70	kW	Tj = -7°C	COPd	3.82	-			
Tj = +2°C	Pdh	106.10	kW	Tj = +2°C	COPd	4.74	-			
Tj = +7°C	Pdh	110.10	kW	Tj = +7°C	COPd	5.51	-			
Tj = +12°C	Pdh	114.20	kW	Tj = +12°C	COPd	6.50	-			
Tj = biv	Pdh	99.30	kW	Tj = biv	COPd	3.60	-			
Tj = TOL	Pdh	99.30	kW	Tj = TOL	COPd	3.60	-			
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 _{psych}	-	kW	Cycling interval efficiency	COP _{psych}	-	-			
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}	73 / -	dB	Rated brine or water flow rate, outdoor heat exchanger	-	23.2	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									

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Application: (Low temperature/Medium temperature)				Low temperature						
Climate: (Colder/Average/Warmer)				Average						
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit			
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Tj = -7°C	Pdh	111.50	kW	Tj = -7°C	COPd	5.82	-			
Tj = +2°C	Pdh	114.20	kW	Tj = +2°C	COPd	6.50	-			
Tj = +7°C	Pdh	116.20	kW	Tj = +7°C	COPd	7.10	-			
Tj = +12°C	Pdh	117.60	kW	Tj = +12°C	COPd	7.55	-			
Tj = biv	Pdh	110.80	kW	Tj = biv	COPd	5.66	-			
Tj = TOL	Pdh	110.80	kW	Tj = TOL	COPd	5.66	-			
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 _{psych}	-	kW	Cycling interval efficiency	COP _{psych}	-	-			
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}	73 / -	dB	Rated brine or water flow rate, outdoor heat exchanger	-	23.2	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									