



ENERG

енергия · ενεργεια



10066942

alpha innotec

WZS 122K3M



A++



A

43 dB

- dB



- 12 kW
- 12 kW**
- 13 kW

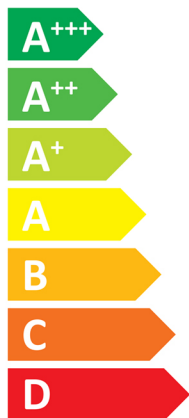


ENERGY

10066942

alpha innotec

WZS 122K3M



A++



A

Two icons showing sound power level: a speaker inside a house and a house with a speaker. The first icon is labeled "43 dB" and the second is labeled "- dB".



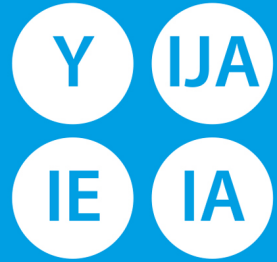
- 12 kW
- 12 kW**
- 13 kW

An icon showing a clock face with a dashed line and a stack of coins with an arrow pointing down, representing energy savings or time efficiency.



ENERG

енергия · ενεργεια



10066942

alpha innotec

WZS 122K3M + Luxtronik 2.1

Energy label for heating system showing a boiler icon, a radiator icon, and a tap icon with 'XL' label. The label includes two black arrow-shaped boxes: the top one contains 'A++' and the bottom one contains 'A'.

Energy efficiency scale for heating system. It features a radiator icon at the top and a black arrow-shaped box on the right containing 'A++'. The scale consists of horizontal bars of varying lengths, colored from green (top) to red (bottom), labeled A+++ through G.

Energy label for hot water system. It features four rows, each with a plus sign, an icon, and a square box. The icons from top to bottom are: a solar panel, a hot water tank, a hand touching a keypad, and a boiler. The square boxes are empty, except for the second one from the bottom which contains an 'X'.

Energy efficiency scale for hot water system. It features a tap icon with 'XL' label at the top and a black arrow-shaped box on the right containing 'A'. The scale consists of horizontal bars of varying lengths, colored from green (top) to red (bottom), labeled A+++ through G.

package (heat pumps and combination heater with heat pump) WZS 122K3M + Luxtronik 2.1

Seasonal space heating energy efficiency of heat pump (η_s) ① 146 %

Rated heat output of the heat pump (P_{rated} kW) 12

Temperature control Class VII (Table 1) + ② 3,5 %

Supplementary boiler
package with hot water storage tank no P_{sup} kW (rated heat output of supplementary heater)

η_s % (σ_{π}) $(\eta_s \% (sup) - ①) \times (\alpha_{WP}) =$ - ③

(α_{WE} : see Table 3) (α_{WE})

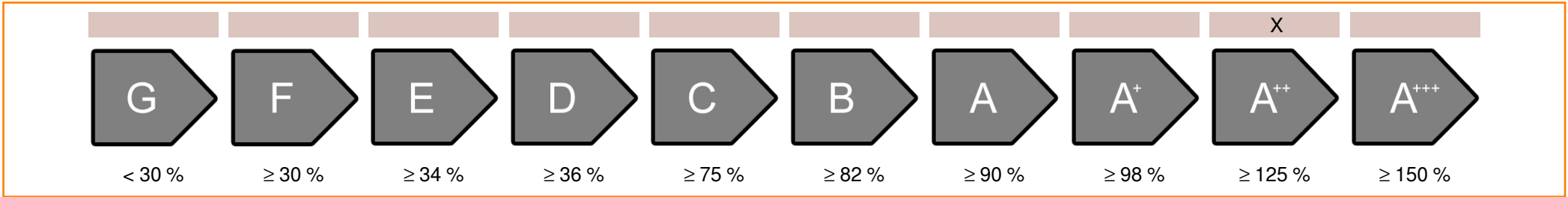
solar contribution $(A_{Koll} m^2)$ $(\eta_{Koll} \%)$
 $(V_{Sp} m^3)$ $(standstill\ heat\ loss\ of\ the\ hot\ water\ storage\ tank\ in\ W)$
 $(\eta_{Sp}: Table\ 2)$

$((294/P_{rated} \times 11) \times (A_{Koll} m^2) + (115/P_{rated} \times 11) \times (V_{Sp} m^3)) \times 0,45 \times ((\eta_{Koll} \%) / 100) \times (\eta_{Sp}) =$ + ④

Seasonal space heating energy efficiency of package ⑤ 149 %

rounded to the nearest integer

Seasonal space heating energy efficiency class of package



Seasonal space heating energy efficiency under colder or warmer climate conditions

Seasonal space heating energy efficiency of the heat pump (η_s) under colder climate conditions 151 %

Seasonal space heating energy efficiency of the heat pump (η_s) under warmer climate conditions 146 %

colder ⑤ 149 -V -5 = 154 warmer ⑤ 149 +VI 1 = 150

heatpump datasheet:			
manufacturer:	alpha innotec		
model:	WZS 122K3M		
Information concerning energy efficiency class and rated heat output:			
load profile water heating	XL		-
	average / low	average / medium	
energy efficiency class space heater:	A+++	A++	-
energy efficiency class waterheating	A		-
rated heat output:	14	12	kW
annual final energy consumption space heater	5325	6603	kWh
annual electricity consumption waterheating	1709		kWh
energy efficiency space heater:	207	146	%
energy efficiency waterheating	98		%
sound power level indoors	43		dB
special precautions concerning assembly, installation or maintenance			
All instructional work in this manual may only be carried out by qualified specialist personnel in compliance with local regulations.			
additional information	low	medium	
rated heat output colder climate	14	12	kW
rated heat output warmer climate	14	13	kW
annual energy consumption space heater colder climate	6108	7577	kWh
annual energy consumption space heater warmer climate	3541	4405	kWh
ann. Electricity consumption waterheating colder climate	1709		kWh
ann. Electricity consumption waterheating warmer climate	1709		kWh
energy efficiency space heater colder climate	214	151	%
energy efficiency space heater warmer climate	209	146	%
energy efficiency waterheating colder climate	98		%
energy efficiency DHWwarmer climate	98		%
sound power level outdoors	-		dB

technical data of the temperature controller		
manufacturer:	alpha innotec	
model:	Luxtronik 2.1	
controller class	VII	-
contribution of the controller to the energy efficiency space heater	3,5	%

Model				WZS 122K3M			
Air-to-water heat pump: (yes/no)				no			
Brine-to-water heat pump: (yes/no)				yes			
Water-to-water heat pump: (yes/no)				no			
Low-temperature heat pump: (yes/no)				no			
Equipped with supplementary heater: (yes/no)				yes			
combination heater with: (yes/no)				yes			
application: (low/medium)				medium			
climate: (colder/average/warmer)				average			
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output	Prated	12	kW	Seasonal space heating energy efficiency	η_S	145,7	%
Declared coefficient of performance 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	10,9	kW	Tj = -7°C	COPd	3,19	-
Tj = +2°C	Pdh	11,5	kW	Tj = +2°C	COPd	3,85	-
Tj = +7°C	Pdh	11,8	kW	Tj = +7°C	COPd	4,34	-
Tj = +12°C	Pdh	12,2	kW	Tj = +12°C	COPd	4,86	-
Tj = bivalent temperature	Pdh	10,9	kW	Tj = bivalent temperature	COPd	3,19	-
Tj = operation limit temperature	Pdh	10,6	kW	Tj = operation limit temperature	COPd	2,97	-
For air-to-water heat pumps: Tj = -15°C (if TOL < -20°C)	Pdh	-	kW	For air-to-water heat pumps: Tj = -15°C (if TOL < -20°C)	COPd	-	-
Bivalent temperature	T _{biv}	-7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	P _{cyh}	-	kW	Cycling interval efficiency	COP _{cyh}	-	-
Degradation co-efficient (**)	Cdh	1,0	-	Heating water operating limit temperature	WTOL	60	°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	electrical		
Standby mode	P _{SB}	0,015	kW				
Crankcase heater mode	P _{CK}	-	kW				
Other items							
Capacity control	fixed			For air-to-water heat pumps: Rated air flow rate, outdoors	-	-	m ³ /h
sound power level, indoors/outdoors	L _{WA}	43 / -	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	3	m ³ /h
Emissions of nitrogen oxides	NO _x	-	mg/kWh				
For heat pump combination heater:							
Declared load profile	XL			Water heating energy efficiency	η_{wh}	98	%
Daily electricity consumption	Q _{elec}	7,784	kWh	Daily fuel consumption	Q _{fuel}	-	kWh
Contact details	ait deutschland GmbH Industriestr. 3 95359 Kasendorf Germany						
(*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).							
(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.							

Model				WZS 122K3M			
Air-to-water heat pump: (yes/no)				no			
Brine-to-water heat pump: (yes/no)				yes			
Water-to-water heat pump: (yes/no)				no			
Low-temperature heat pump: (yes/no)				no			
Equipped with supplementary heater: (yes/no)				yes			
combination heater with: (yes/no)				yes			
application: (low/medium)				low			
climate: (colder/average/warmer)				average			
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output	Prated	14	kW	Seasonal space heating energy efficiency	η_S	207,1	%
Declared coefficient of performance 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	12,3	kW	Tj = -7°C	COPd	5,15	-
Tj = +2°C	Pdh	12,4	kW	Tj = +2°C	COPd	5,45	-
Tj = +7°C	Pdh	12,6	kW	Tj = +7°C	COPd	5,74	-
Tj = +12°C	Pdh	12,7	kW	Tj = +12°C	COPd	5,96	-
Tj = bivalent temperature	Pdh	12,3	kW	Tj = bivalent temperature	COPd	5,15	-
Tj = operation limit temperature	Pdh	12,2	kW	Tj = operation limit temperature	COPd	5,00	-
For air-to-water heat pumps: Tj = -15°C (if TOL < -20°C)	Pdh	-	kW	For air-to-water heat pumps: Tj = -15°C (if TOL < -20°C)	COPd	-	-
Bivalent temperature	T _{biv}	-7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	P _{cyh}	-	kW	Cycling interval efficiency	COP _{cyh}	-	-
Degradation co-efficient (**)	Cdh	1,0	-	Heating water operating limit temperature	WTOL	60	°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	electrical		
Standby mode	P _{SB}	0,015	kW				
Crankcase heater mode	P _{CK}	-	kW				
Other items							
Capacity control	fixed			For air-to-water heat pumps: Rated air flow rate, outdoors	-	-	m ³ /h
sound power level, indoors/outdoors	L _{WA}	43 / -	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	3	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 details	ait deutschland GmbH Industriestr. 3 95359 Kasendorf Germany						
(*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).							
(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.							