



# ENERG

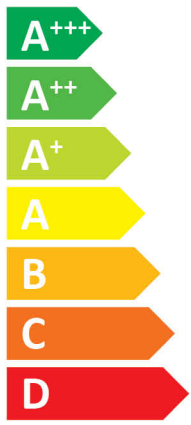
енергия · ενεργεια



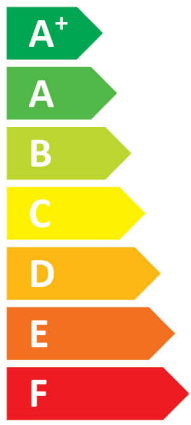
10076341

alpha innotec

WZSV 92H3M



A++



A

47 dB

- dB



- 9 kW
- 8 kW
- 9 kW

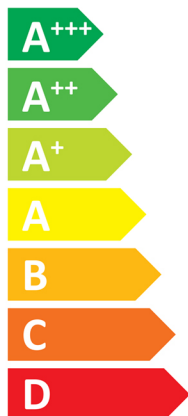


# ENERGY

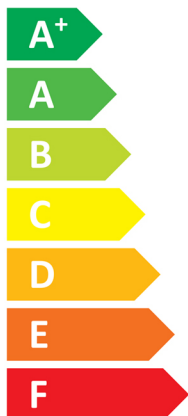
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alpha innotec

WZSV 92H3M



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# ENERG

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Y

IJA

IE

IA

10076341

alpha innotec

WZSV 92H3M + Luxtronik 2.1

Energy label for heating system showing a radiator icon, an A++ energy class arrow, a radiator icon, an A energy class arrow, and a tap icon with XL.

Energy scale for heating system with a radiator icon at the top. The scale shows energy classes from A+++ (green) to G (red). A large black arrow on the right points to the A+++ class.

Energy label for water heating system showing four features: solar panel (+), hot water tank (+), touch control (+), and boiler (+). Each feature is accompanied by a square checkbox, with the touch control checkbox marked with an X.

Energy scale for water heating system with a tap icon and XL. The scale shows energy classes from A+++ (green) to G (red). A large black arrow on the right points to the A class.

package (heat pumps and combination heater with heat pump) WZSV 92H3M + Luxtronik 2.1

Seasonal space heating energy efficiency of heat pump ( $\eta_s$ )

① 148 %

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

8

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)

$\eta_s$  % ( $\sigma_{sup}$ )

$$(\eta_s \% (sup) - ①) \times (\alpha_{WP}) = -$$

③ %

( $\alpha_{WE}$ : see Table 3)

( $\alpha_{WE}$ )

solar contribution

( $A_{Koll}$  m<sup>2</sup>)

( $\eta_{Koll}$  %)

( $V_{Sp}$  m<sup>3</sup>)

(standstill heat loss of the hot water storage tank in W)

( $\eta_{Sp}$ : Table 2)

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

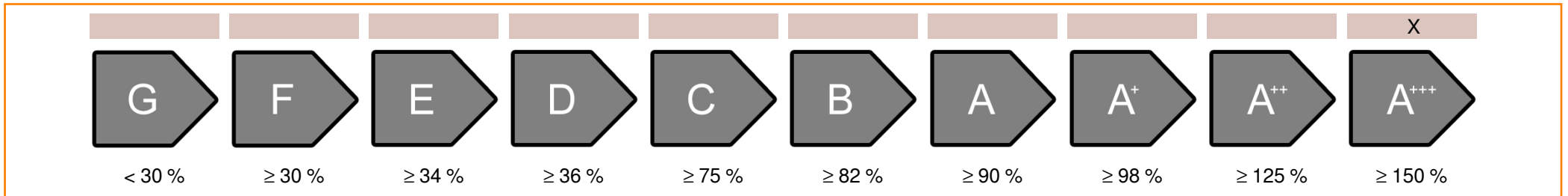
④ %

Seasonal space heating energy efficiency of package

⑤ 152 %

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 ( $\eta_s$ ) under colder climate conditions**

161 %

**Seasonal space heating energy efficiency of the heat pump ( $\eta_s$ ) under warmer climate conditions**

156 %

colder ⑤ 152 -V -12 = 164

warmer ⑤ 152 +VI 8 = 160

<b>heatpump datasheet:</b>			
<b>manufacturer:</b>	alpha innotec		
<b>model:</b>	WZSV 92H3M		
<b>Information concerning energy efficiency class and rated heat output:</b>			
load profile water heating	XL		-
	average / low	average / medium	
energy efficiency class space heater:	A+++	A++	-
energy efficiency class waterheating	A		-
rated heat output:	9	8	kW
annual final energy consumption space heater	3337	3963	kWh
annual electricity consumption waterheating	1642		kWh
energy efficiency space heater:	203	148	%
energy efficiency waterheating	102		%
sound power level indoors	47		dB
<b>special precautions concerning assembly, installation or maintenance</b>			
All instructional work in this manual may only be carried out by qualified specialist personnel in compliance with local regulations.			
<b>additional information</b>	low	medium	
rated heat output colder climate	9	9	kW
rated heat output warmer climate	9	9	kW
annual energy consumption space heater colder climate	3964	4967	kWh
annual energy consumption space heater warmer climate	2257	2763	kWh
ann. Electricity consumption waterheating colder climate	1642		kWh
ann. Electricity consumption waterheating warmer climate	1642		kWh
energy efficiency space heater colder climate	203	161	%
energy efficiency space heater warmer climate	193	156	%
energy efficiency waterheating colder climate	102		%
energy efficiency DHWarmer climate	102		%
sound power level outdoors	-		dB

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

<b>Model</b>				<b>WZSV 92H3M</b>			
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			
<b>Item</b>	<b>Symbol</b>	<b>Value</b>	<b>Unit</b>	<b>Item</b>	<b>Symbol</b>	<b>Value</b>	<b>Unit</b>
<b>Rated heat output</b>	Prated	8	kW	<b>Seasonal space heating energy efficiency</b>	$\eta_S$	148,4	%
<b>Declared coefficient of performance for part load at indoor temperature 20°C and outdoor temperature Tj</b>				<b>Declared coefficient of performance for part load at indoor temperature 20°C and outdoor temperature Tj</b>			
Tj = -7°C	Pdh	6,6	kW	Tj = -7°C	COPd	2,96	-
Tj = +2°C	Pdh	4,1	kW	Tj = +2°C	COPd	3,95	-
Tj = +7°C	Pdh	2,6	kW	Tj = +7°C	COPd	4,55	-
Tj = +12°C	Pdh	1,8	kW	Tj = +12°C	COPd	4,91	-
Tj = bivalent temperature	Pdh	6,9	kW	Tj = bivalent temperature	COPd	2,86	-
Tj = operation limit temperature	Pdh	6,9	kW	Tj = operation limit temperature	COPd	2,82	-
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 <sub>biv</sub>	-8	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	P <sub>cyh</sub>	-	kW	Cycling interval efficiency	COP <sub>cyh</sub>	-	-
Degradation co-efficient (**)	Cdh	1,0	-	Heating water operating limit temperature	WTOL	65	°C
<b>Power consumption in modes other than active mode</b>				<b>Supplementary heater</b>			
Off mode	P <sub>OFF</sub>	0,012	kW	Rated heat output	P <sub>sup</sub>	-	kW
Thermostat-off mode	P <sub>TO</sub>	0,019	kW	Type of energy input	electrical		
Standby mode	P <sub>SB</sub>	0,012	kW				
Crankcase heater mode	P <sub>CK</sub>	-	kW				
<b>Other items</b>							
Capacity control	variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	-	m <sup>3</sup> /h
sound power level, indoors/outdoors	L <sub>WA</sub>	47 / -	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	1	m <sup>3</sup> /h
Emissions of nitrogen oxides	NO <sub>x</sub>	-	mg/kWh				
<b>For heat pump combination heater:</b>							
Declared load profile	XL			Water heating energy efficiency	$\eta_{wh}$	102	%
Daily electricity consumption	Q <sub>elec</sub>	7,478	kWh	Daily fuel consumption	Q <sub>fuel</sub>	-	kWh
<b>Contact details</b>	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.							

<b>Model</b>				<b>WZSV 92H3M</b>			
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			
<b>Item</b>	<b>Symbol</b>	<b>Value</b>	<b>Unit</b>	<b>Item</b>	<b>Symbol</b>	<b>Value</b>	<b>Unit</b>
<b>Rated heat output</b>	Prated	9	kW	<b>Seasonal space heating energy efficiency</b>	$\eta_S$	202,5	%
<b>Declared coefficient of performance for part load at indoor temperature 20°C and outdoor temperature Tj</b>				<b>Declared coefficient of performance for part load at indoor temperature 20°C and outdoor temperature Tj</b>			
Tj = -7°C	Pdh	7,5	kW	Tj = -7°C	COPd	4,01	-
Tj = +2°C	Pdh	4,6	kW	Tj = +2°C	COPd	5,33	-
Tj = +7°C	Pdh	3,0	kW	Tj = +7°C	COPd	6,11	-
Tj = +12°C	Pdh	1,7	kW	Tj = +12°C	COPd	6,64	-
Tj = bivalent temperature	Pdh	7,9	kW	Tj = bivalent temperature	COPd	3,82	-
Tj = operation limit temperature	Pdh	7,9	kW	Tj = operation limit temperature	COPd	3,78	-
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 <sub>biv</sub>	-8	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	P <sub>cyh</sub>	-	kW	Cycling interval efficiency	COP <sub>cyh</sub>	-	-
Degradation co-efficient (**)	Cdh	1,0	-	Heating water operating limit temperature	WTOL	65	°C
<b>Power consumption in modes other than active mode</b>				<b>Supplementary heater</b>			
Off mode	P <sub>OFF</sub>	0,012	kW	Rated heat output	P <sub>sup</sub>	-	kW
Thermostat-off mode	P <sub>TO</sub>	0,019	kW	Type of energy input	electrical		
Standby mode	P <sub>SB</sub>	0,012	kW				
Crankcase heater mode	P <sub>CK</sub>	-	kW				
<b>Other items</b>							
Capacity control	variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	-	m <sup>3</sup> /h
sound power level, indoors/outdoors	L <sub>WA</sub>	47 / -	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	1	m <sup>3</sup> /h
Emissions of nitrogen oxides	NO <sub>x</sub>	-	mg/kWh				
<b>For heat pump combination heater:</b>							
Declared load profile	-			Water heating energy efficiency	$\eta_{wh}$	-	%
Daily electricity consumption	Q <sub>elec</sub>	-	kWh	Daily fuel consumption	Q <sub>fuel</sub>	-	kWh
<b>Contact details</b>	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.							