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alpha innotec

WZSV 42K3M



A++



A

42 dB

- dB



- 4 kW
- 4 kW
- 4 kW

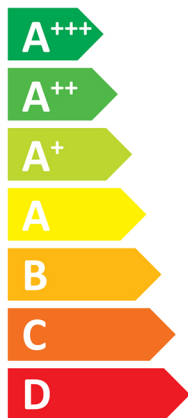


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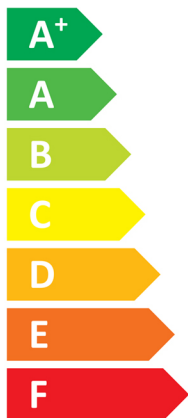
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WZSV 42K3M



A++



A

42 dB

- dB

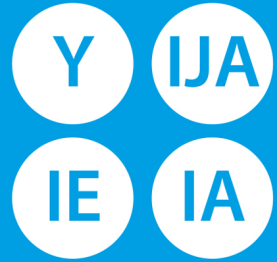


- 4 kW
- 4 kW
- 4 kW



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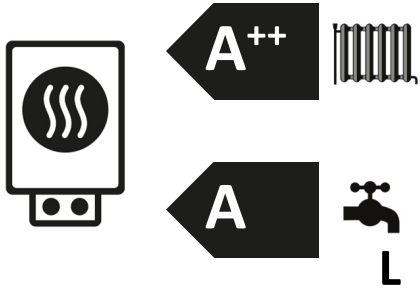
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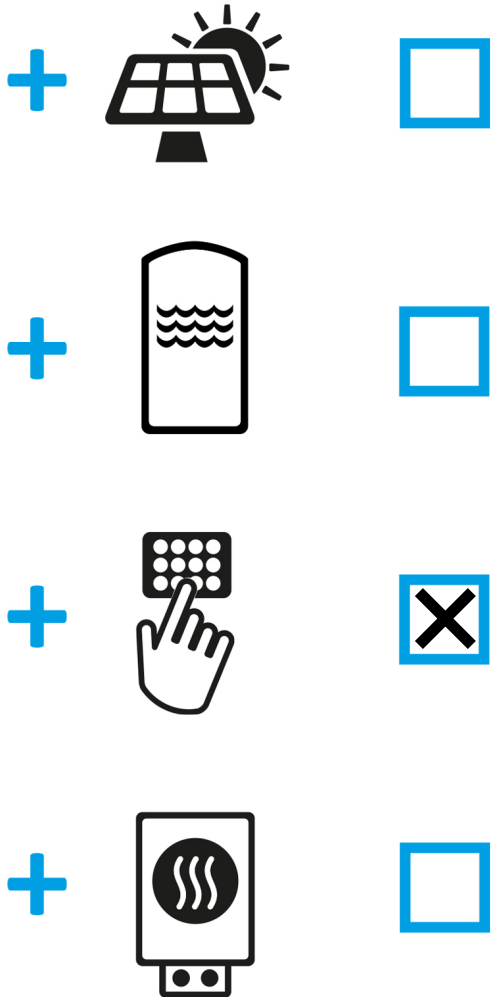
WZSV 42K3M + Lux 2.1



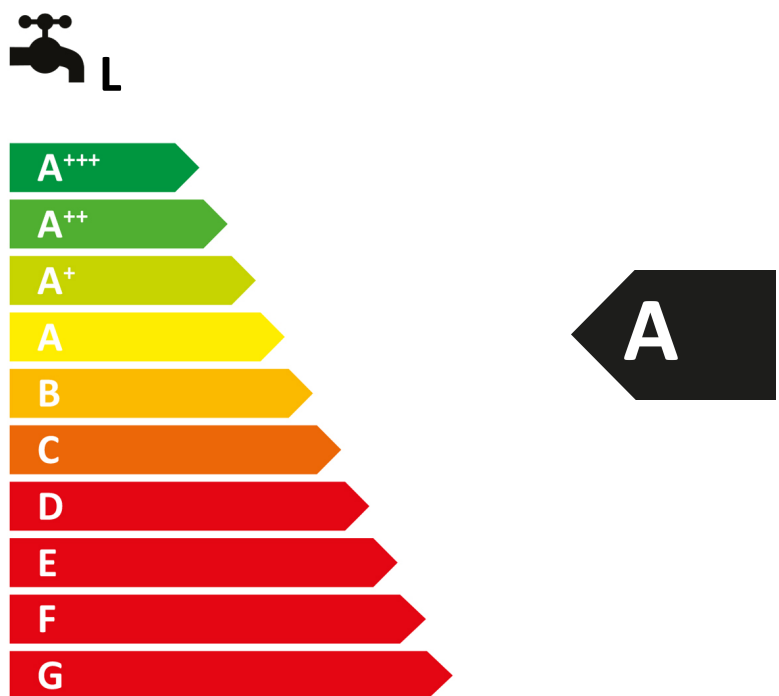
Energy label for a boiler with a radiator icon. The label shows a black arrow pointing left with 'A++' and a radiator icon. Below it, a black arrow points left with 'A' and a tap icon with an 'L' below it.



Energy label for a radiator with a radiator icon. The label shows a black arrow pointing left with 'A++' and a radiator icon. To the left is a vertical scale of energy efficiency classes from A+++ (green) to G (red).



Energy label for a water heater with solar panel, water tank, and control panel icons. The label shows four rows of icons: a plus sign, a solar panel, a water tank, a plus sign, a control panel, a plus sign, and a boiler. To the right are four square boxes: the first three are empty, and the second is marked with an 'X'.



Energy label for a tap with a tap icon. The label shows a black arrow pointing left with 'A' and a tap icon with an 'L' below it. To the left is a vertical scale of energy efficiency classes from A+++ (green) to G (red).

package (heat pumps and combination heater with heat pump) WZSV 42K3M + Lux 2.1

Seasonal space heating energy efficiency of heat pump (η_s)

① 135 %

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

4

Temperature control

Class

II (Table 1)

+

② 2,0 %

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} m²)

(η_{Koll} %)

(V_{Sp} m³)

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

(η_{Sp} : Table 2)

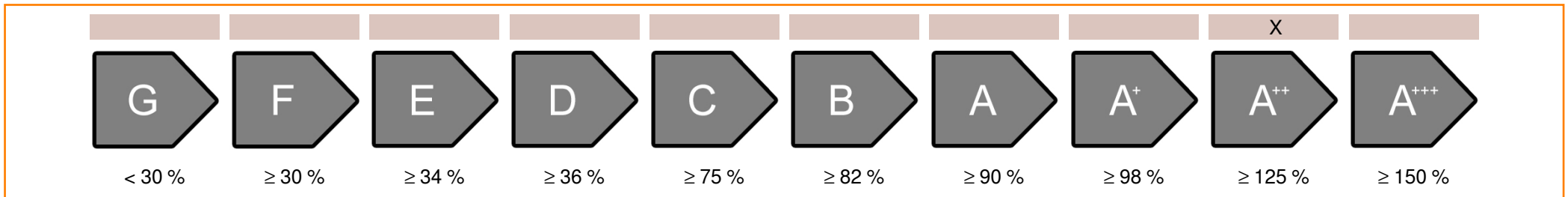
$((294/P_{rated} \times 11) \times (A_{Koll} \text{ m}^2) + (115/P_{rated} \times 11) \times (V_{Sp} \text{ m}^3)) \times 0,45 \times ((\eta_{Koll} \%)/100) \times (\eta_{Sp}) = +$ ④ %

Seasonal space heating energy efficiency of package

⑤ 137 %

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

142 %

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

131 %

colder ⑤ 137 -V -7 = 144 warmer ⑤ 137 +VI -4 = 133

heatpump datasheet:			
manufacturer:	alpha innotec		
model:	WZSV 42K3M		
Information concerning energy efficiency class and rated heat output:			
load profile water heating	L		-
	average / low	average / medium	
energy efficiency class space heater:	A+++	A++	-
energy efficiency class waterheating	A		-
rated heat output:	4	4	kW
annual final energy consumption space heater	1610	2436	kWh
annual electricity consumption waterheating	1119		kWh
energy efficiency space heater:	192	135	%
energy efficiency waterheating	92		%
sound power level indoors	42		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	4	4	kW
rated heat output warmer climate	4	4	kW
annual energy consumption space heater colder climate	1846	2377	kWh
annual energy consumption space heater warmer climate	1096	1388	kWh
ann. Electricity consumption waterheating colder climate	1119		kWh
ann. Electricity consumption waterheating warmer climate	1119		kWh
energy efficiency space heater colder climate	198	142	%
energy efficiency space heater warmer climate	180	131	%
energy efficiency waterheating colder climate	92		%
energy efficiency DHWarmer climate	92		%
sound power level outdoors	-		dB

technical data of the temperature controller		
manufacturer:	alpha innotec	
model:	Lux 2.1	
controller class	II	-
contribution of the controller to the energy efficiency space heater	2,0	%

Model				WZSV 42K3M			
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	4	kW	Seasonal space heating energy efficiency	η_S	134,5	%
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	3,6	kW	Tj = -7°C	COPd	3,04	-
Tj = +2°C	Pdh	2,2	kW	Tj = +2°C	COPd	3,60	-
Tj = +7°C	Pdh	1,5	kW	Tj = +7°C	COPd	3,98	-
Tj = +12°C	Pdh	1,4	kW	Tj = +12°C	COPd	4,72	-
Tj = bivalent temperature	Pdh	3,6	kW	Tj = bivalent temperature	COPd	3,04	-
Tj = operation limit temperature	Pdh	3,5	kW	Tj = operation limit temperature	COPd	2,81	-
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	Pcyc	-	kW	Cycling interval efficiency	COPcyc	-	-
Degradation co-efficient (**)	Cdh	1,0	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0,012	kW	Rated heat output	P _{sup}	0,7	kW
Thermostat-off mode	P _{TO}	0,044	kW	Type of energy input	electrical		
Standby mode	P _{SB}	0,012	kW				
Crankcase heater mode	P _{CK}	-	kW				
Other items							
Capacity control	variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	-	m ³ /h
sound power level, indoors/outdoors	L _{WA}	42 / -	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	1	m ³ /h
Emissions of nitrogen oxides	NO _x	-	mg/kWh				
For heat pump combination heater:							
Declared load profile	L			Water heating energy efficiency	η_{wh}	92	%
Daily electricity consumption	Q _{elec}	5,250	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				WZSV 42K3M			
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	4	kW	Seasonal space heating energy efficiency	η_S	192,2	%
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	3,5	kW	Tj = -7°C	COPd	4,44	-
Tj = +2°C	Pdh	2,1	kW	Tj = +2°C	COPd	5,18	-
Tj = +7°C	Pdh	1,4	kW	Tj = +7°C	COPd	5,59	-
Tj = +12°C	Pdh	1,4	kW	Tj = +12°C	COPd	5,85	-
Tj = bivalent temperature	Pdh	3,9	kW	Tj = bivalent temperature	COPd	4,34	-
Tj = operation limit temperature	Pdh	3,9	kW	Tj = operation limit temperature	COPd	4,34	-
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}	-10	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	Pcyc	-	kW	Cycling interval efficiency	COPcyc	-	-
Degradation co-efficient (**)	Cdh	1,0	-	Heating water operating limit temperature	WTOL	55	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0,012	kW	Rated heat output	P _{sup}	-	kW
Thermostat-off mode	P _{TO}	0,044	kW	Type of energy input	electrical		
Standby mode	P _{SB}	0,012	kW				
Crankcase heater mode	P _{CK}	-	kW				
Other items							
Capacity control	variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	-	m ³ /h
sound power level, indoors/outdoors	L _{WA}	42 / -	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	1	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.							