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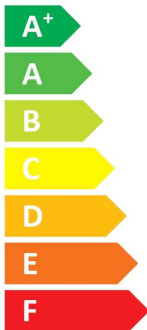
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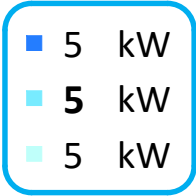
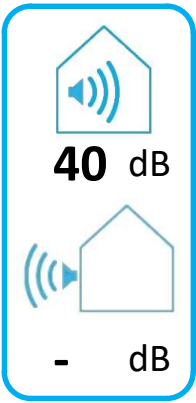
ALPHA INNOTEC WZSV 63H1/3M



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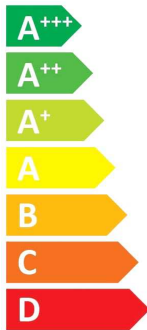
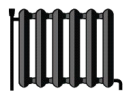
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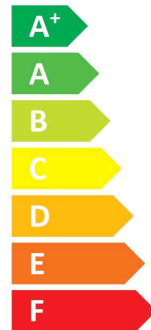
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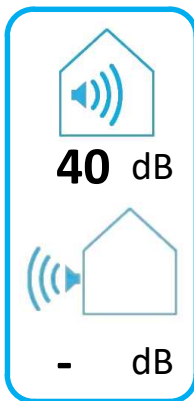
ALPHA INNOTECH WZSV 63H1/3M



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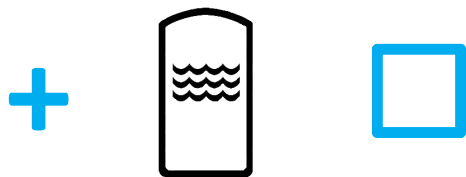
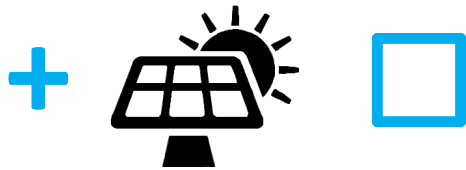
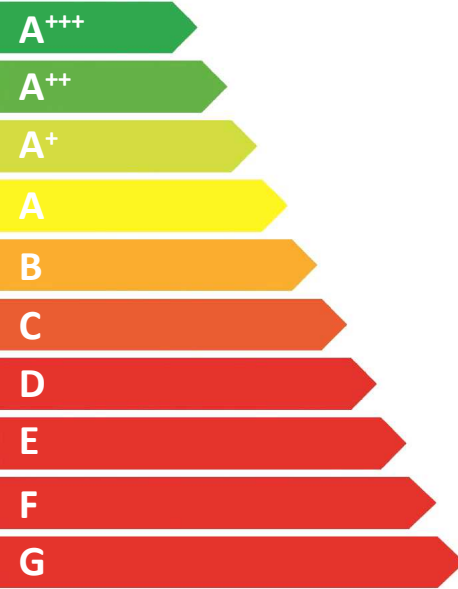
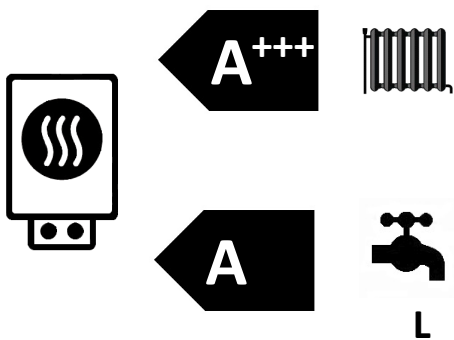
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alpha innotec WZSV 63H1/3M + Luxtronik 2.1



package (heat pumps and combination heater with heat pump) - WZSV 63H1/3M + Luxtronik 2.1

Seasonal space heating energy efficiency of heat pump (η_s)

① 150 %

Rated heat output of the heat pump (Prated kW)

5

Temperature control

Class

VII

(Table 1)

② 2,0 %

Supplementary boiler

package with hot water storage tank

no

Psup kW (rated heat output of supplementary heater)

η_s % (sup)

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

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)

(η_{Sp} : Table 2)

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

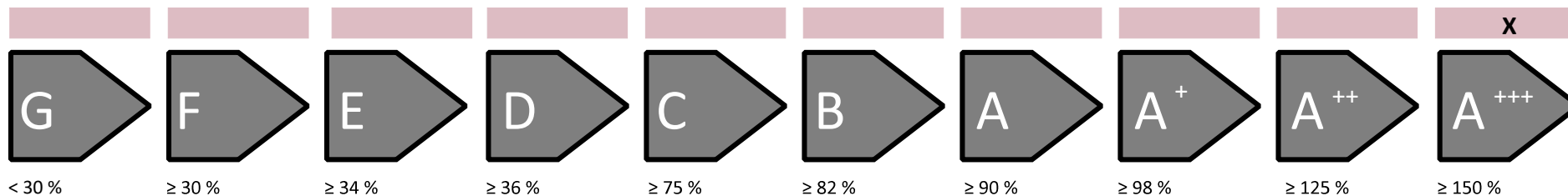
④ %

Seasonal space heating energy efficiency of package

⑤ 152 %

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 (η_s) under colder climate conditions

145 %

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

140 %

colder

⑤

152

-V

5

=

147

warmer

⑤

152

+VI

-11

=

141

heatpump datasheet:			
manufacturer:		alpha innotec	
model:		WZSV 63H1/3M	
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 water heating	A		
rated heat output:	6	5	kW
annual final energy consumption space heater	2409	2610	kWh
annual electricity consumption water heating	1016		kWh
energy efficiency space heater:	198	150	%
energy efficiency water heating	101		%
sound power level indoors		40	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 under colder climate conditions	6	5	kW
rated heat output under warmer climate conditions	6	5	kW
annual energy consumption space heater under colder climate conditions	2803	3217	kWh
annual energy consumption space heater under warmer climate conditions	1630	1810	kWh
annual electricity consumption water heating under colder climate conditions	1016		kWh
annual electricity consumption water heating under warmer climate conditions	1016		kWh
energy efficiency space heater under colder climate conditions	203	145	%
energy efficiency space heater under warmer climate conditions	189	140	%
energy efficiency water heating under colder climate conditions	101		%
energy efficiency water heating under warmer climate conditions	101		%
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	2,0	%

Model				WZSV 63H1/3M			
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			
application: (low/medium)				medium			
climate: (colder/average/warmer)				average			
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output	Prated	5	kW	Seasonal space heating energy efficiency	η_s	150,3	%
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	4,5	kW	Tj = -7°C	COPd	3,04	-
Tj = +2°C	Pdh	2,7	kW	Tj = +2°C	COPd	4,01	-
Tj = +7°C	Pdh	1,8	kW	Tj = +7°C	COPd	4,57	-
Tj = +12°C	Pdh	0,9	kW	Tj = +12°C	COPd	4,83	-
Tj = bivalent temperature	Pdh	5,1	kW	Tj = bivalent temperature	COPd	2,75	-
Tj = operation limit temperature	Pdh	5,1	kW	Tj = operation limit temperature	COPd	2,75	-
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}	-10,0	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10,00	°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	70,00	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0,009	kW	Rated heat output	P _{sup}	0	kW
Thermostat-off mode	P _{TO}	0,008	kW	Type of energy input	electrical		
Standby mode	P _{SB}	0,008	kW				
Crankcase heater mode	P _{CK}	0,000	kW				
Other items				For air-to-water heat pumps: Rated air flow rate, outdoors			
Capacity control	variable			For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	1	m³/h	m³/h
sound power level, indoors/outdoors	L _{WA}	40/-	dB				
Emissions of nitrogen oxides	NO _x	-	mg/kWh				
For heat pump combination heater:							
Declared load profile	L			Water heating energy efficiency	η_{wh}	101	%
Daily electricity consumption	Q _{elec}	4,617	kWh	Daily fuel consumption	Q _{fuel}	0	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 s							
(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.							

Model				WZSV 63H1/3M			
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			
application: (low/medium)				low			
climate: (colder/average/warmer)				average			
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output	Prated	6	kW	Seasonal space heating energy efficiency	η_s	197,8	%
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	5,4	kW	Tj = -7°C	COPd	4,03	-
Tj = +2°C	Pdh	3,3	kW	Tj = +2°C	COPd	5,20	-
Tj = +7°C	Pdh	2,0	kW	Tj = +7°C	COPd	5,95	-
Tj = +12°C	Pdh	1,0	kW	Tj = +12°C	COPd	6,04	-
Tj = bivalent temperature	Pdh	5,9	kW	Tj = bivalent temperature	COPd	3,79	-
Tj = operation limit temperature	Pdh	5,9	kW	Tj = operation limit temperature	COPd	3,79	-
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	-10,0	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10,00	°C
Cycling interval capacity for heating	Pcych		kW	Cycling interval efficiency	COPcyc		-
Degradation co-efficient (**)	Cdh	1,0	-	Heating water operating limit temperature	WTOL	70,00	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P OFF	0,009	kW	Rated heat output	Psup	0	kW
Thermostat-off mode	P TO	0,008	kW	Type of energy input	electrical		
Standby mode	P SB	0,008	kW				
Crankcase heater mode	P CK	0,000	kW				
Other items				For air-to-water heat pumps: Rated air flow rate, outdoors			
Capacity control	variable			For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	1		m³/h
sound power level, indoors/outdoors	L WA	40/-	dB				
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 s							
(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.							