



ENERG

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1007984101

alpha innotec

Jersey 5-1



Two icons showing sound power levels. The top icon shows a speaker inside a house with the value **40 dB**. The bottom icon shows a speaker outside a house with the value **51 dB**.



Legend for power consumption: a dark blue square for 6 kW, a medium blue square for 5 kW, and a light blue square for 5 kW.

Icon representing energy saving, showing a clock face with a dashed line and a coin with an arrow pointing to it.

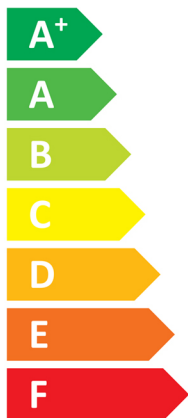
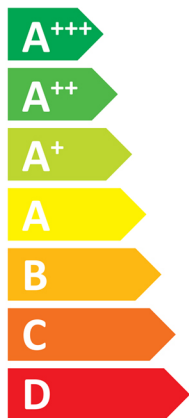


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Two icons showing sound power levels. The top icon shows a speaker inside a house with the value **40 dB**. The bottom icon shows a speaker outside a house with the value **51 dB**.



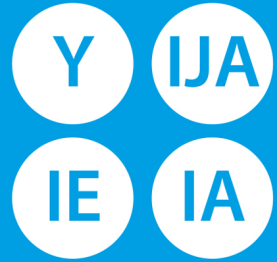
- 6 kW
- 5 kW
- 5 kW

An icon showing a clock face with a dashed line indicating a cycle, and a stack of coins with an arrow pointing down towards it, representing time and cost.



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Jersey 5-1 + HPC

Energy label for heating system showing a radiator icon, a black arrow pointing left with 'A++', a radiator icon, a black arrow pointing left with 'A', a tap icon, and the letter 'M'.

Energy scale for heating system with a radiator icon at the top. The scale consists of horizontal bars of increasing length from G (red) to A+++ (green). A black arrow on the right points to the A++ level.

Energy label for water heating system showing four categories: solar panel (+), hot water tank (+), tap (+), and boiler (+). Each category has a blue square checkbox, with the tap category having an 'X' in the box.

Energy scale for water heating system with a tap icon and the letter 'M' at the top. The scale consists of horizontal bars of increasing length from G (red) to A+++ (green). A black arrow on the right points to the A level.

package (heat pumps and combination heater with heat pump) Jersey 5-1 + HPC

Seasonal space heating energy efficiency of heat pump (η_s) ① 134 %

Rated heat output of the heat pump (P_{rated} kW) 5

Temperature control Class II (Table 1) + ② 2 %

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})

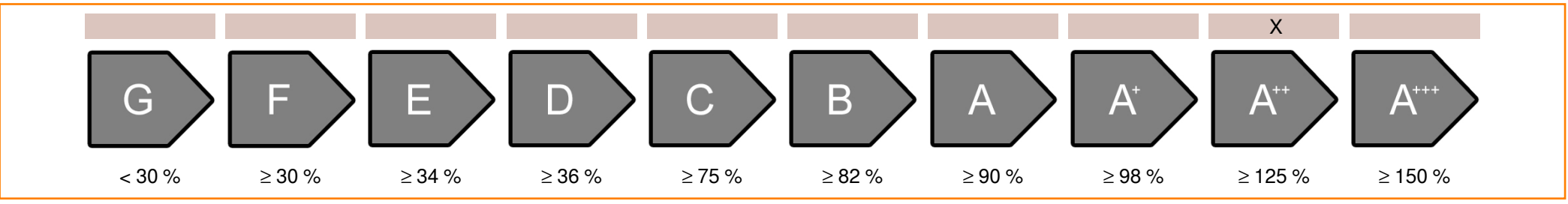
solar contribution $(A_{Koll} m^2)$ $(\eta_{Koll} \%)$
 $(V_{Sp} m^3)$ $(standstill\ heat\ loss\ of\ the\ hot\ water\ storage\ tank\ in\ W)$
 $(\eta_{Sp}: Table\ 2)$

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

Seasonal space heating energy efficiency of package ⑤ 136 %

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 110 %

Seasonal space heating energy efficiency of the heat pump (η_s) under warmer climate conditions 168 %

colder ⑤ 136 -V 24 = 112 warmer ⑤ 136 +VI 34 = 170

heatpump datasheet:			
manufacturer:	alpha innotec		
model:	Jersey 5-1		
Information concerning energy efficiency class and rated heat output:			
load profile water heating	M		-
	average / low	average / medium	
energy efficiency class space heater:	A+++	A++	-
energy efficiency class waterheating	A		-
rated heat output:	6	5	kW
annual final energy consumption space heater	2551	3257	kWh
annual electricity consumption waterheating	647		kWh
energy efficiency space heater:	178	134	%
energy efficiency waterheating	79		%
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 colder climate	4	6	kW
rated heat output warmer climate	5	5	kW
annual energy consumption space heater colder climate	2683	4852	kWh
annual energy consumption space heater warmer climate	1169	1559	kWh
ann. Electricity consumption waterheating colder climate	708		kWh
ann. Electricity consumption waterheating warmer climate	562		kWh
energy efficiency space heater colder climate	144	110	%
energy efficiency space heater warmer climate	236	168	%
energy efficiency waterheating colder climate	72		%
energy efficiency DHWwarmer climate	91		%
sound power level outdoors	51		dB

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

Model				Jersey 5-1			
Air-to-water heat pump: (yes/no)				yes			
Brine-to-water heat pump: (yes/no)				no			
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	5	kW	Seasonal space heating energy efficiency	η_S	134,0	%
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	4,7	kW	Tj = -7°C	COPd	1,94	-
Tj = +2°C	Pdh	2,8	kW	Tj = +2°C	COPd	3,34	-
Tj = +7°C	Pdh	1,9	kW	Tj = +7°C	COPd	4,68	-
Tj = +12°C	Pdh	1,7	kW	Tj = +12°C	COPd	6,35	-
Tj = bivalent temperature	Pdh	4,7	kW	Tj = bivalent temperature	COPd	1,94	-
Tj = operation limit temperature	Pdh	4,8	kW	Tj = operation limit temperature	COPd	1,84	-
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	58	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0,005	kW	Rated heat output	P _{sup}	0,6	kW
Thermostat-off mode	P _{TO}	0,013	kW	Type of energy input	electrical		
Standby mode	P _{SB}	0,013	kW				
Crankcase heater mode	P _{CK}	-	kW				
Other items							
Capacity control	variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	2.526	m ³ /h
sound power level, indoors/outdoors	L _{WA}	40 / 51	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	-	m ³ /h
Emissions of nitrogen oxides	NO _x	-	mg/kWh				
For heat pump combination heater:							
Declared load profile	M			Water heating energy efficiency	η_{wh}	79	%
Daily electricity consumption	Q _{elec}	3,194	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				Jersey 5-1			
Air-to-water heat pump: (yes/no)				yes			
Brine-to-water heat pump: (yes/no)				no			
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	6	kW	Seasonal space heating energy efficiency	η_S	178,4	%
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	4,9	kW	Tj = -7°C	COPd	2,68	-
Tj = +2°C	Pdh	2,9	kW	Tj = +2°C	COPd	4,37	-
Tj = +7°C	Pdh	1,9	kW	Tj = +7°C	COPd	6,38	-
Tj = +12°C	Pdh	1,8	kW	Tj = +12°C	COPd	7,67	-
Tj = bivalent temperature	Pdh	4,9	kW	Tj = bivalent temperature	COPd	2,68	-
Tj = operation limit temperature	Pdh	4,9	kW	Tj = operation limit temperature	COPd	2,58	-
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	58	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0,005	kW	Rated heat output	P _{sup}	0,7	kW
Thermostat-off mode	P _{TO}	0,013	kW	Type of energy input	electrical		
Standby mode	P _{SB}	0,013	kW				
Crankcase heater mode	P _{CK}	-	kW				
Other items							
Capacity control	variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	2.526	m ³ /h
sound power level, indoors/outdoors	L _{WA}	40 / 51	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	-	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.							