

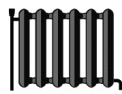


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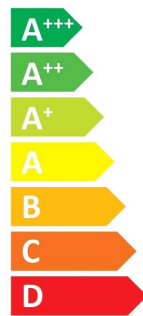
100750LUXP02

ALPHA INNOTEC LWP 450-LUX



55°C

35°C



A⁺

A⁺



- dB



63 dB

■ 40
■ **38**
■ 25
kW

■ 38
■ **36**
■ 27
kW



2019

811/2013



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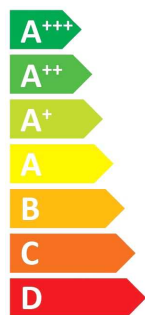
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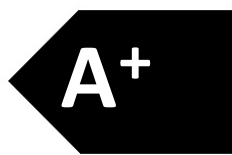
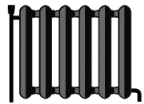


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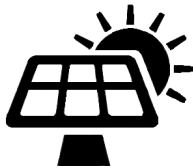


100750LUXP02

alpha innotec LWP 450-LUX + Luxtronik 2.1-P



+



+



+



+



package (heat pumps and combination heater with heat pump) - LWP 450-LUX + Luxtronik 2.1-P

Seasonal space heating energy efficiency of heat pump (η_s)

① 121 %

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

38

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 % (sup)

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

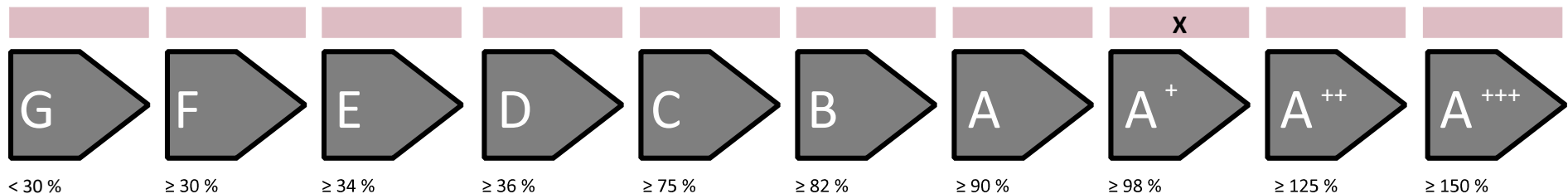
(η_{Sp} : Table 2)

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

Seasonal space heating energy efficiency of package

⑤ 124 %
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

117 %

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

141 %

colder ⑤ 124 -V 3 = 121

warmer ⑤ 124 +VI 20 = 144

heatpump datasheet:			
manufacturer:	alpha innotec		
model:	LWP 450-LUX		
Information concerning energy efficiency class and rated heat output:			
	average / low	average / medium	
energy efficiency class space heater:	A+	A+	
rated heat output:	36	38	kW
energy efficiency space heater:	147	121	%
annual final energy consumption space heater	19924	25529	kWh
sound power level indoors		-	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	38	40	kW
rated heat output under warmer climate conditions	27	25	kW
energy efficiency space heater under colder climate conditions	139	117	%
energy efficiency space heater under warmer climate conditions	164	141	%
annual energy consumption space heater under colder climate conditions	26449	32793	kWh
annual energy consumption space heater under warmer climate conditions	8710	9296	kWh
sound power level outdoors		63	dB

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

Model				LWP 450-LUX			
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)				no			
combination heater with				no			
application: (low/medium)				medium			
climate: (colder/average/warmer)				average			
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output	Prated	38	kW	Seasonal space heating energy efficiency	η_s	120,7	%
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	40,4	kW	Tj = -7°C	COPd	2,28	-
Tj = +2°C	Pdh	26,7	kW	Tj = +2°C	COPd	3,27	-
Tj = +7°C	Pdh	24,9	kW	Tj = +7°C	COPd	3,31	-
Tj = +12°C	Pdh	35,3	kW	Tj = +12°C	COPd	4,82	-
Tj = bivalent temperature	Pdh	38,2	kW	Tj = bivalent temperature	COPd	2,15	-
Tj = operation limit temperature	Pdh	38,2	kW	Tj = operation limit temperature	COPd	2,15	-
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	P _{cyh}		kW	Cycling interval efficiency	COP _{cyh}		-
Degradation co-efficient (**)	Cdh	1,0	-	Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P _{OFF}	0,107	kW	Rated heat output	P _{sup}	0	kW
Thermostat-off mode	P _{TO}	0,122	kW	Type of energy input	electrical		
Standby mode	P _{SB}	0,107	kW				
Crankcase heater mode	P _{CK}	0,000	kW				
Other items				For air-to-water heat pumps: Rated air flow rate, outdoors			
Capacity control	fixed			For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	9000	m³/h	m³/h
sound power level, indoors/outdoors	L _{WA}	-/63	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}	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				LWP 450-LUX			
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)				no			
combination heater with				no			
application: (low/medium)				low			
climate: (colder/average/warmer)				average			
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output	Prated	36	kW	Seasonal space heating energy efficiency	η_s	146,7	%
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	39,3	kW	Tj = -7°C	COPd	2,97	-
Tj = +2°C	Pdh	24,8	kW	Tj = +2°C	COPd	3,72	-
Tj = +7°C	Pdh	28,4	kW	Tj = +7°C	COPd	4,49	-
Tj = +12°C	Pdh	36,6	kW	Tj = +12°C	COPd	5,74	-
Tj = bivalent temperature	Pdh	36,1	kW	Tj = bivalent temperature	COPd	2,81	-
Tj = operation limit temperature	Pdh	36,1	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	-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	-	Heating water operating limit temperature	WTOL	65	°C
Power consumption in modes other than active mode				Supplementary heater			
Off mode	P OFF	0,107	kW	Rated heat output	Psup	0	kW
Thermostat-off mode	P TO	0,122	kW	Type of energy input	electrical		
Standby mode	P SB	0,107	kW				
Crankcase heater mode	P CK	0,000	kW				
Other items				For air-to-water heat pumps: Rated air flow rate, outdoors			
Capacity control	fixed			For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	9000	m³/h	m³/h
sound power level, indoors/outdoors	L WA	-/63	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.							