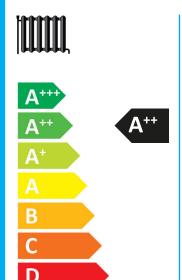
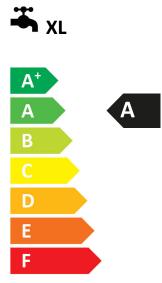


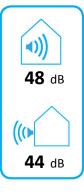
100772HSV941

alpha innotec

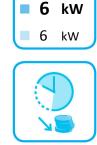
LWV 82R1/3-HSV 9M1/3











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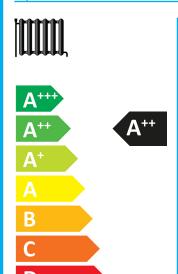
kW

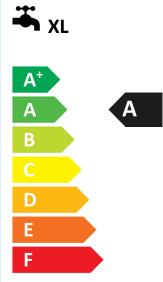


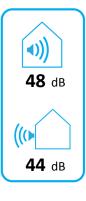
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LWV 82R1/3-HSV 9M1/3











5

kW

2019

811/2013

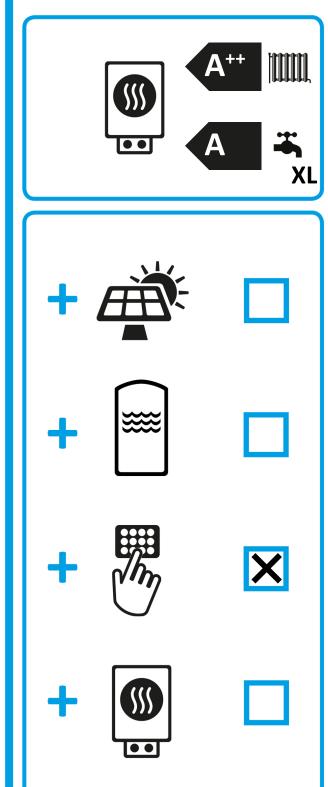


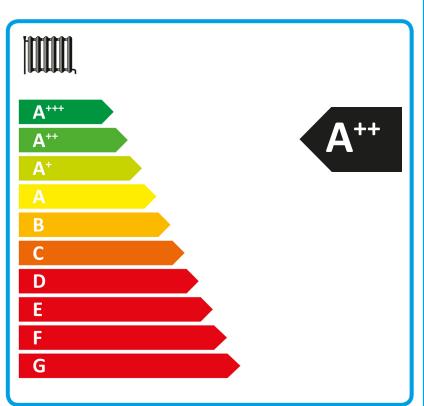
## ENERG Y UA ehepγua · ενεργεια (Ε) (Α)

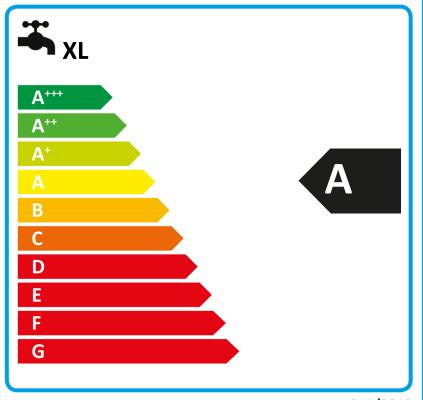
100772HSV941

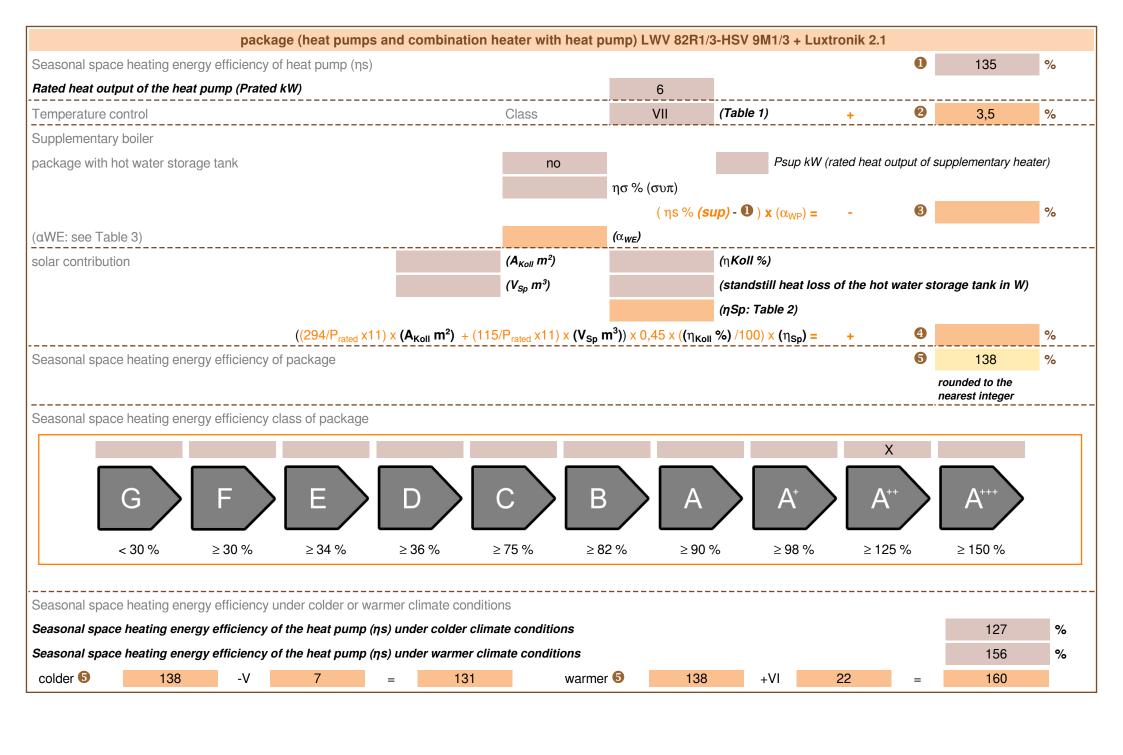
alpha innotec

LWV 82R1/3-HSV 9M1/3 + Luxtronik 2.1









heatpump datasheet:					
manufacturer:	alpha innotec				
model:	LWV 82R1/3-HSV 9M1/				
	======================================				
Information concerning energy efficiency class and rated	heat output:				
load profile water heating	XL		-		
<u> </u>	I		•		
	average / low	average / medium			
energy efficiency class space heater:	A+++	A++	-		
energy efficiency class waterheating		Ā	-		
rated heat output:	7	6	kW		
annual final energy consumption space heater	3029	3390	kWh		
annual electricity consumption waterheating	1948	•	kWh		
energy efficiency space heater:	180	135	%		
energy efficiency waterheating	86	<u>'</u>	%		
sound power level indoors		48	dB		
special precautions concerning assembly, installation or r	naintenance				
All instructional work in this manual may only be carried out by qu	ualified specialist personnel in c	ompliance with local regulations	S.		
additional information	low	medium			
rated heat output colder climate	7	5	kW		
rated heat output warmer climate	4	6	kW		
annual energy consumption space heater colder climate	4339	3781	kWh		
annual energy consumption space heater warmer climate	1009	1844	kWh		
ann. Electricity consumption waterheating colder climate	2148		kWh		
ann. Electricity consumption waterheating warmer climate	1692		kWh		
energy effiency space heater colder climate	145	127	%		
energy effiency space heater warmer climate	214	156	%		
energy efficiency waterheating colder climate	78		%		
energy efficiency DHWwarmer climate	99		%		
sound power level outdoors		44	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		3,5	%		

Value-to-water heat pump: (yes/no)	Model				LWV 82R1/3-HSV 9M1/3				
Value   Content   Conten	Air-to-water heat pump: (yes/no)				yes				
convertemperature heat pumps: (yes/no) coulpped with supplementary heater: (yes/no) pplication: (low/medium) limate: (colder/average/warmer) term Symbol Value Unit Item Symbol Value Seasonal space heating nS 134,7 % lated heat output Prated 6 kW Seasonal space heating nS 134,7 % lated heat output Prated 5,0 kW Seasonal space heating nS 134,7 % lated heat output Prated 5,0 kW Tj = -7°C COPd 2,31 - Tj = -7°C Pdh 3,5 kW Tj = +2°C COPd 3,43 - Tj = +2°C COPd 4,86 - Tj = +12°C COPd 4,86 - Tj = bivalent temperature Pdh 5,0 kW Tj = bivalent temperature COPd 2,31 - Tj = 5°C (if TOL < 20°C) Tj = bivalent temperature Pdh 4,2 kW Tj = operation limit temperature COPd 2,12 - To cari-to-water heat pumps: Tj = -15°C (if TOL < -20°C) To cari-to-water heat pumps: Tj - 15°C (if TOL < -20°C) To cari-to-water heat pumps: Tj - 15°C (if TOL < -20°C) To cari-to-water heat pumps: Tj - 15°C (if TOL < -20°C) To cari-to-water heat pumps: Tj - 15°C (if TOL < -20°C) To cari-to-water heat pumps: Tj - 15°C (if TOL < -20°C) To cari-to-water heat pumps: Tj - 15°C (if TOL < -20°C) To cari-to-water heat pumps: Tj - 15°C (if TOL < -20°C) To cari-to-water heat pumps: Tj - 15°C (if TOL < -20°C) To cari-to-water heat pumps: Tj - 15°C (if TOL < -20°C) To cari-to-water heat pumps: Tj - 15°C (if TOL < -20°C) To cari-to-water heat pumps: Tj - 15°C (if TOL < -20°C) To cari-to-water heat pumps: Tj - 15°C (if TOL < -20°C) To cari-to-water heat pumps: Tj - 15°C (if TOL < -20°C) To cari-to-water heat pumps: Tj - 15°C (if TOL < -20°C) To cari-to-water heat pumps: Tj - 15°C (if TOL < -20°C) To cari-to-water heat pumps: Tj - 15°C (if TOL < -20°C) To cari-to-water heat pumps: Tj - 15°C (if TOL < -20°C) To cari-to-water heat pumps: Tj - 15°C (if TOL < -20°C) To cari-to-water heat pumps: Tj - 15°C (if TOL < -20°C) To cari-to-water heat pumps: Tj - 15°C (if TOL < -20°C) To cari-to-water heat pumps: Tj - 15°C (if TOL < -20°C) To cari-to-water heat pumps: Tj - 15°C (if TOL < -20°C)	Brine-to-water heat pump: (yes/no)			no					
guipped with supplementary heater: (yes/no) ombination heater with: (yes/no) yes publication: (low/medium) limate: (colder/average/warmer) tem Symbol Value Unit lated heat output lated heat output lated coefficient of performance for part load at indoor emperature 20°C and outdoor temperature T j = -7°C Pdh 5.0 kW T j = -7°C CPd 2.31 - j = +2°C Pdh 3.5 kW T j = +2°C COPd 3.43 - j = +2°C Pdh 3.0 kW T j = +2°C COPd 4.86 - j = bivalent temperature Pdh 5.0 kW T j = operation limit temperature Pdh 5.0 kW T j = operation limit temperature Pdh 4.2 kW T j = operation limit temperature Pdh 4.2 kW T j = operation limit temperature COPd 2.31 - j - operation limit temperature Pdh 4.2 kW T j = operation limit temperature Pdh 4.2 kW T j = operation limit temperature Pdh 4.2 kW T j = operation limit temperature Pdh 4.2 kW T j = operation limit temperature COPd 2.12 - over consumption on modes other than active mode  Differed Poper	Water-to-water heat pump: (yes/no)			no					
yes   ye	Low-temperature heat pump: (ye	s/no)			no	no			
projectation: (tow/medium)    Ilmate: (colder/average/warmer)   waverage	Equipped with supplementary he	ater: (yes/no	o)		yes				
Image: (colder/average/warmer)   average	combination heater with: (yes/no)	,			yes				
Symbol   Value   Unit   Item   Symbol   Value   Unit   Item   Symbol   Value   Unit   Item   Seasonal space heating   ηS   134,7   %   %   %   %   Seasonal space heating energy efficient of performance for part load at indoor temperature   To   134,14   %   Seasonal space heating energy efficient of performance for part load at indoor temperature   To   134,14   %   Seasonal space heating energy efficient of performance for part load at indoor temperature   To   134,14   %   Seasonal space heating energy efficient of performance for part load at indoor temperature   To   134,14   %   Seasonal space heating energy efficient of performance for part load at indoor temperature   To   134,14   %   Seasonal space heatin	application: (low/medium)				medium				
Rated heat output Prated 6 kW Seasonal space heating energy efficiency are load at indoor temperature 20°C and outdoor temperature Tj sp-7°C Pdh 5,0 kW Tj=-7°C CPd 2.31 - Tj=+2°C Pdh 3,5 kW Tj=+2°C CPd 3.43 - Tj=+2°C CPdh 3,5 kW Tj=+2°C CPd 4.86 - Tj=+12°C Pdh 3,4 kW Tj=+12°C CPd 4.86 - Tj=+12°C Pdh 3,4 kW Tj=+12°C CPd 4.86 - Tj=+12°C Pdh 3,4 kW Tj=+12°C CPd 4.86 - Tj=+12°C Pdh 5,0 kW Tj=-bivalent temperature Pdh 5,0 kW Tj=-bivalent temperature Pdh 4.2 kW Tj=-poperation limit temperature Pdh 4.2 kW Tj=-poperation limit temperature Pdh 4.2 kW Tj=-poperation limit temperature CPd 2.12 - To rot airt-o-water heat pumps: Tj Pdh - KW Por airt-o-water heat pumps: Tj Pdh - Ts°C (if TOL <-20°C) Por airt-o-water heat pumps: Tj Pdh - Ts°C (if TOL <-20°C) Por airt-o-water heat pumps: Tj Pdh Poperation limit temperature Pdh 4.2 kW Tj=-ts°C (if TOL <-20°C) Poperation limit temperature Pdh 4.2 kW Tj=-ts°C (if TOL <-20°C) Poperation limit temperature Pdh 4.2 kW Tj=-ts°C (if TOL <-20°C) Poperation limit temperature Pdh 4.2 kW Tj=-ts°C (if TOL <-20°C) Poperation limit temperature Pdh 4.2 kW Tj=-ts°C (if TOL <-20°C) Poperation limit temperature Pdh 4.2 kW Tj=-ts°C (if TOL <-20°C) Poperation limit temperature Pdh 4.2 kW Tj=-ts°C (if TOL <-20°C) Poperation limit temperature Pdh 4.2 kW Tj=-ts°C (if TOL <-20°C) Poperation limit temperature Pdh 4.2 kW Tj=-ts°C (if TOL <-20°C) Poperation limit temperature Pdh 4.2 kW Tj=-ts°C (if TOL <-20°C) Poperation limit temperature Pdh 4.2 kW Tj=-ts°C (if TOL <-20°C) Poperation limit temperature Pdh 4.2 kW Tj=-ts°C (if TOL <-20°C) Poperation limit temperature Pdh 4.2 kW Tj=-ts°C (if TOL <-20°C) Poperation limit temperature Pdh 4.2 kW Tj=-ts°C (if TOL <-20°C) Poperation limit temperature Pdh 4.2 kW Tj=-ts°C (if TOL <-20°C) Poperation limit temperature Pdh 4.2 kW Tj=-ts°C (if TOL <-20°C) Poperation limit temperature Pdh 4.2 kW Tj=-ts°C (if TOL <-20°C) Pdh 4.2 kW Tj=-ts°C (if TOL <-2	climate: (colder/average/warmer)	1			average				
Declared coefficient of performance for part load at indoor temperature 20°C and outdoor temperature Tj	Item	Symbol	Value	Unit	Item	Symbol	Value	Unit	
	Rated heat output	Prated	6	kW		ηS	134,7	%	
j = +2°C				indoor				indoor	
For air-to-water heat pumps:   COPcycling interval capacity for eating begradation co-efficient (**)   Cdh   1,0   -   Heating water operature   Psup   1,4   kW   Type of energy input   CoPcycling interval capacity control   Pck   -   kW   Type of energy influence   Psup   1,4   kW   Type of energy efficiency   Psup   1,4   kW   Type of heat pumps:   CoPcycling interval capacity control   Pck   -   kW   Type of energy efficiency   Psup   1,4   kW   Type of heat pumps:   COPcycling interval capacity control   Pck   -   kW   Type of energy efficiency   Psup   1,4   kW   Type of heat pumps:   COPcycling interval capacity control   Pck   -   kW   Type of energy efficiency   Psup   1,4   kW   Type of heat pumps:   Psup   Type of energy input   Psup   Type of energy input	Tj = -7°C	Pdh	5,0	kW	Tj = -7°C	COPd	2,31	-	
j = +12°C	Tj = +2°C	Pdh	3,5	kW	Tj = +2°C	COPd	3,43	-	
j = bivalent temperature Pdh 5,0 kW Tj = bivalent temperature COPd 2,31 - rj = operation limit temperature Pdh 4,2 kW Tj = operation limit temperature COPd 2,12 - ror air-to-water heat pumps: Tj	Tj = +7°C	Pdh	3,0	kW	Tj = +7°C	COPd	4,86	-	
For air-to-water heat pumps: Tj	Tj = +12°C	Pdh	3,4	kW	Tj = +12°C	COPd	6,56	-	
For air-to-water heat pumps: Tj	Tj = bivalent temperature	Pdh	5,0	kW	Tj = bivalent temperature	COPd	2,31	-	
a-15°C (if TOL <-20°C)   a   a-15°C (if TOL <-20°C)   a   a   a   b   compared to   a   a   b   compared to   a   a   b   compared to   a   a   a   a   a   a   a   a   a	Tj = operation limit temperature	Pdh	4,2	kW	Tj = operation limit temperature	COPd	2,12	-	
Operation limit temperature  Cycling interval capacity for eating  Degradation co-efficient (**)  Degradation co-efficient (	For air-to-water heat pumps: Tj = -15°C (if TOL < -20°C)	Pdh	-	kW		COPd	-	-	
Pegradation co-efficient (**)  Codh  1,0  - Heating water operating limit temperature  Supplementary heater  Psup 1,4 kW  Type of energy input electrical  Supplementary heater  Supplementary heater  Supplementary heater  Psup 1,4 kW  Strankcase heater mode Psus 0,031 kW  Strankcase heater mode Pcus 1 kW  Supplementary heater  Su	Bivalent temperature	T <sub>biv</sub>	-7	°C		TOL	-10	°C	
temperature  Supplementary heater  Psup 1,4 kW  Type of energy input electrical  Standby mode PsB 0,031 kW  Standby mode PsB 0,031 kW  Standby mode PcK - kW  Standby mod	Cycling interval capacity for heating	Pcych	-	kW	Cycling interval efficiency	COPcyc	-	-	
Diff mode	Degradation co-efficient (**)	Cdh	1,0	-		WTOL	60	°C	
Thermostat-off mode	Power consumption in modes	other than	active mod	e	Supplementary heater				
Thermostat-off mode	Off mode	P <sub>OFF</sub>	0,031	kW	Rated heat output	Psup	1,4	kW	
Standby mode	Thermostat-off mode		-	kW	Type of energy input		electrical	•	
Capacity control variable For air-to-water heat pumps: - 2.500 m³/h  Capacity control Variable For air-to-water heat pumps: - 2.500 m³/h  Capacity control Variable For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoors heat exchanger  Capacity control Variable For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger  Capacity control Variable For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger  Capacity control Variable For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger  Capacity control Variable For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger  Capacity control Variable Variable For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger  Capacity control Variable	Standby mode		0,031	kW					
Capacity control variable For air-to-water heat pumps:  Ound power level,  Ound power lev	Crankcase heater mode	P <sub>CK</sub>	-	kW					
Rated air flow rate, outdoors  ound power level, ndoors/outdoors  LwA 48 / 44 dB For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger  Emissions of nitrogen oxides NO <sub>X</sub> - mg/kWh  For heat pump combination heater:  Declared load profile XL Water heating energy efficiency $\eta_{wh}$ 86 %	Other items								
pumps: Rated brine or water flow rate, outdoor heat exchanger  missions of nitrogen oxides NO <sub>X</sub> - mg/kWh  for heat pump combination heater:  Declared load profile XL Water heating energy efficiency $\eta_{wh}$ 86 %	Capacity control	variable			• •	-	2.500	m <sup>3</sup> /h	
For heat pump combination heater:  Declared load profile  XL  Water heating energy efficiency  \$\eta_{wh}\$  86  %	sound power level, indoors/outdoors	L <sub>WA</sub>	48 / 44	dB	pumps: Rated brine or water flow rate, outdoor heat	-	-	m <sup>3</sup> /h	
Declared load profile XL Water heating energy efficiency η <sub>wh</sub> 86 %	Emissions of nitrogen oxides	NO <sub>X</sub>	-	mg/kWh					
	For heat pump combination h	eater:							
Silve destricity consumption 0 0.070 Living Delty field account of the Columbia	Declared load profile		XL		Water heating energy efficiency	$\eta_{wh}$	86	%	
$r$ ally electricity consumption   $Q_{ m elec}$   8,870   KWN     Dally tuel consumption   Qtuel   -   KWN	Daily electricity consumption	Q <sub>elec</sub>	8,870	kWh	Daily fuel consumption	Qfuel	-	kWh	
Contact details ait deutschland GmbH Industriestr. 3 95359 Kasendorf Germany	Contact details	ait deutsch	land GmbH Ir	dustriestr. 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 designh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).								eating	
**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.	<u> </u>						<del></del>		

Model				LWV 82R1/3-HSV 9M1/3			
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: (ye	s/no)			no			
Equipped with supplementary he	ater: (yes/no	o)		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	7	kW	Seasonal space heating energy efficiency	ηS	179,8	%
Declared coefficient of perfor temperature 20°C and outdoo			indoor	Declared coefficient of perfor temperature 20°C and outdoor			indoor
Tj = -7°C	Pdh	5,9	kW	Tj = -7°C	COPd	3,26	-
Tj = +2°C	Pdh	3,8	kW	Tj = +2°C	COPd	4,70	-
Tj = +7°C	Pdh	3,3	kW	Tj = +7°C	COPd	5,97	-
Tj = +12°C	Pdh	3,4	kW	Tj = +12°C	COPd	7,92	-
Tj = bivalent temperature	Pdh	5,9	kW	Tj = bivalent temperature	COPd	3,26	-
Tj = operation limit temperature	Pdh	5,1	kW	Tj = operation limit temperature	COPd	3,18	-
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>	-7	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	Pcych	-	kW	Cycling interval efficiency	COPcyc	-	-
Degradation co-efficient (**)	Cdh	1,0	-	Heating water operating limit temperature	WTOL	60	°C
Power consumption in modes	other thai	n active mod	e	Supplementary heater			<u>.</u>
Off mode	P <sub>OFF</sub>	0,031	kW	Rated heat output	Psup	1,6	kW
Thermostat-off mode	P <sub>TO</sub>	-	kW	Type of energy input		electrical	•
Standby mode	P <sub>SB</sub>	0,031	kW				
Crankcase heater mode	P <sub>CK</sub>	-	kW				
Other items							
Capacity control	variable			For air-to-water heat pumps: Rated air flow rate, outdoors	-	2.500	m <sup>3</sup> /h
sound power level, indoors/outdoors	L <sub>WA</sub>	48 / 44	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	-	m <sup>3</sup> /h
Emissions of nitrogen oxides	NO <sub>X</sub>	-	mg/kWh				
For heat pump combination h	eater:						
Declared load profile		-		Water heating energy efficiency	$\eta_{wh}$	-	%
Daily electricity consumption	Q <sub>elec</sub>	-	kWh	Daily fuel consumption	Qfuel	-	kWh
Contact details	ait deutsch	land GmbH Ir	dustriestr. 3	95359 Kasendorf Germany			
				the rated heat output Prated is equ equal to the supplementary capac			eating
(**) If Cdh is not determined by m	neasuremen	t then the defa	ault degrada	tion coefficient is Cdh = 0,9.			