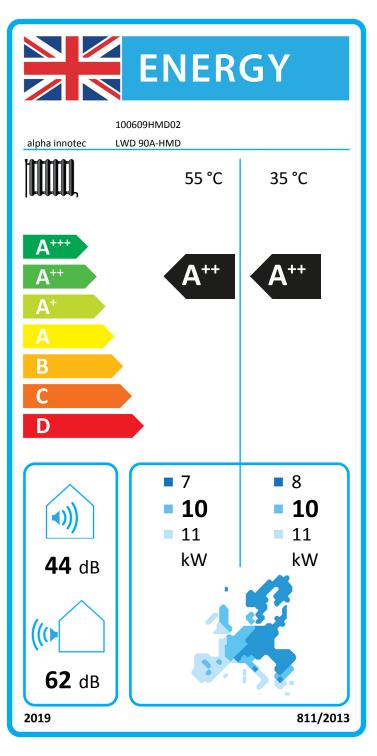


ЕNERG У ИА енергия · ενεργεια (Ε) (А

100609HMD02 alpha innotec LWD 90A-HMD 55 °C 35 °C A+++ \mathbf{A}^{+} B C D 7 8 10 10 **(**)) 11 11 kW kW **44** dB (() **62** dB 2019 811/2013



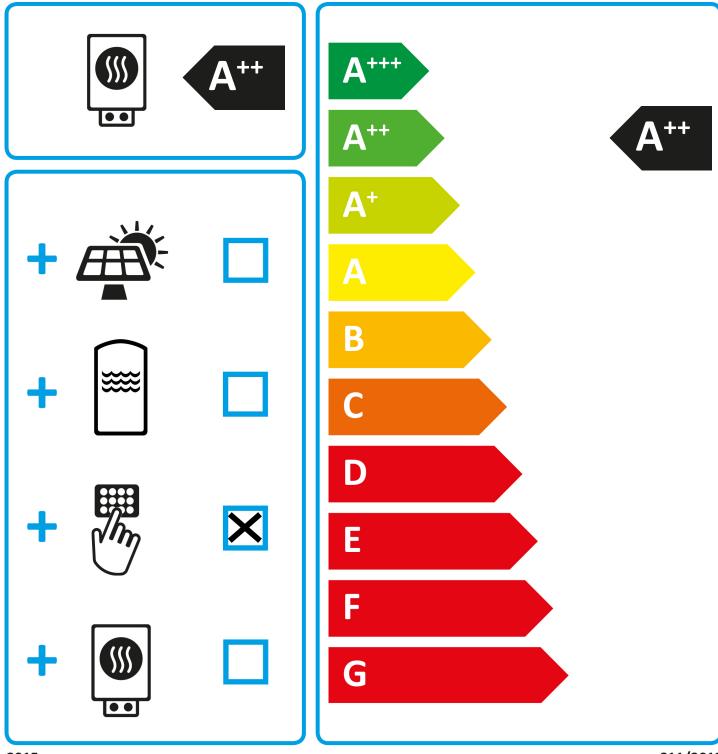


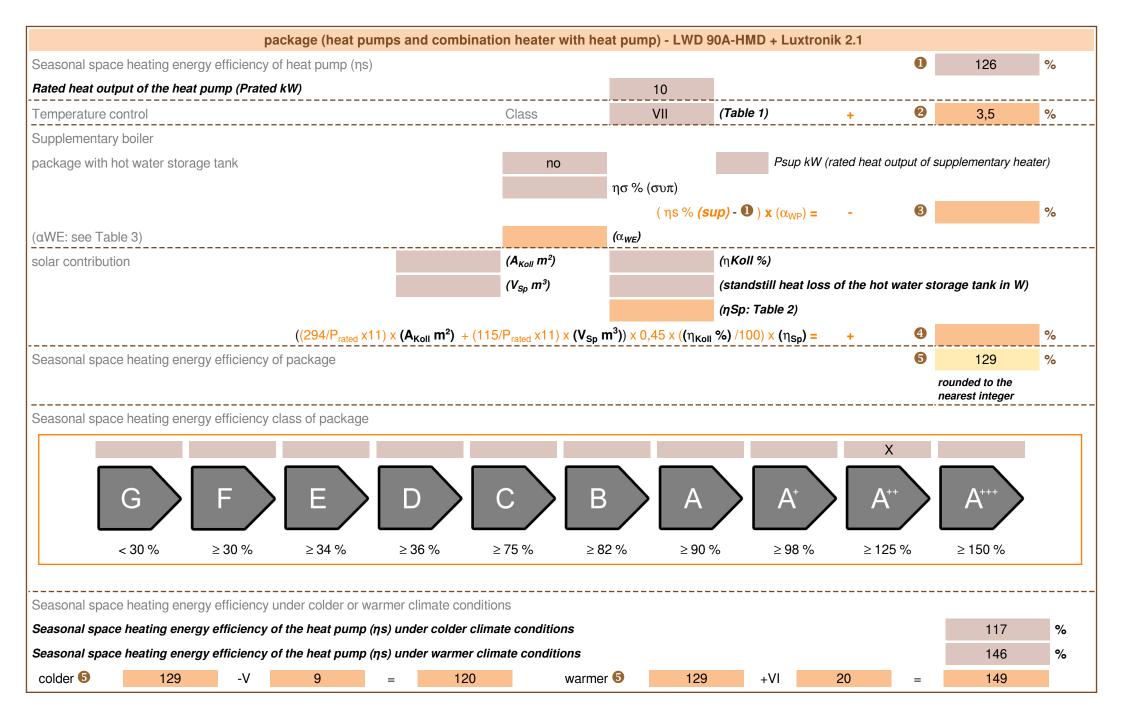


100609HMD02

alpha innotec

LWD 90A-HMD + Luxtronik 2.1





heatpump datasheet:		
manufacturer:	alpha innotec	
model:	LWD 90A-HMD	

Information concerning energy efficiency class and rated heat output:

	average / low	average / medium	
energy efficiency class space heater:	A++	A++	-
rated heat output:	10	10	kW
energy efficiency space heater:	150	126	%
annual final energy consumption space heater	5628	6557	kWh

44

dB

sound power level indoors

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	8	7	kW
rated heat output warmer climate	11	11	kW
energy effiency space heater colder climate	139	117	%
energy effiency space heater warmer climate	179	146	%
annual energy consumption space heater colder climate	5325	5770	kWh
annual energy consumption space heater warmer climate	3237	3852	kWh
·		-	-
sound power level outdoors		62	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	%				

Brine-to-water heat pump: (yes/no) no Atler-to-water heat pump: (yes/no) no .ow-temperature heat pump: (yes/no) no .ow-temperature heat pump: (yes/no) no .om-temperature heat pump: (yes/no) no .om-temperature heat pump: (yes/no) yes .om-temperature heat pump: (yes/no) no .om-temperature heat output Symbol Value Unit Tated heat output Prated 10 kW Seasonal space heating energy efficiency ns 125,7 % Declared coefficient of performance for part load at indoor temperature 20°C and outdoor temperature Tj medium 125,7 % Tij = -7°C Pdh 7,2 KW Tij = -7°C COPd 2,35 - Tij = +7°C Pdh 10,1 KW Tij = +7°C COPd 3,21 - Tij = +7°C Pdh 10,1 KW Tij = +7°C COPd 4,03 - Tij = +2°C Pdh 7,8 KW Tij = +2°C COPd 2,53 - Tij = operation limit temperature Pdh 6,6 KW Tij = opera	Model				LWD 90A-HMD			
National construction of the set pumps: (yes/mo) no cow-lemperature fleat pumps: (yes/mo) no cow-lemperature fleat pumps: (yes/mo) yes com/lempton into intervent (yes/mo) medium paplication: (dow/medium) medium innate: (colder/average/warmer) average term Symbol Value Unit Item Symbol Value Unit Tated heat output Prated 10 k/W Seasonal space heating energy efficiency ns 125,7 % Declared coefficient of performance for part load at indoor memperature 20°C and outdoor temperature Tj Declared coefficiency COPd 2,35 - Tj = +2°C Pdh 7,2 k/W Tj = +7°C COPd 2,35 - Tj = +12°C Pdh 12,0 k/W Tj = +7°C COPd 2,33 - Tj = berain tomaterize Pdh 12,0 k/W Tj = +12°C COPd 2,63 - Tj = berain tomaterize Pdh 12,0 k/W Tj = operation limit temperature COPd 2,63 - Tj = operation limit temperature	Air-to-water heat pump: (yes/no)				yes			
cov-temperature heat pump: (yes/no) no Guipped with supplementary heater: (yes/no) yes combination heater with: (yes/no) no poplication: (low/medium) medium average average tem Symbol Value Unit Rated heat output Prated 10 k/W Seasonal space heating energy efficiency ns 125,7 % Declared coefficient of performance for part load at indoor emperature 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 COPd 2,32 - Tj = -7°C Pdn 9,0 KW Tj = +2°C COPd 2,32 - Tj = +7°C Pdn 10,1 KW Tj = +2°C COPd 2,33 - Tj = +7°C Pdn 10,1 KW Tj = +12°C COPd 4,03 - Tj = +7°C Pdn 10,1 KW Tj = e12°C COPd 2,83 - Tj = +2°C Pdn 10,1 KW Tj = e12°C COPd 2,83 - Tj = bvalent temp	Brine-to-water heat pump: (yes/n	o)			no			
Equipped with supplementary heater: (yes/no) yes combination heater with: (yes/no) no application: (low/medum) ned/um intrade: (cold/er/average/warmer) average tem Symbol Value Unit Item Symbol Value Unit Rated heat output Prated 10 KW Seasonal space heating energy efficiency ns 125.7 % Declared coefficient of performance for part load at indoor temperature Tj Ti = -7*C Pdn 7.2 KW Tj = -7*C COPd 2.35 - Tj = +2*C Pdn 9.0 KW Tj = +7*C COPd 3.21 - Tj = +2*C Pdn 10.0 KW Tj = +7*C COPd 4.03 - Tj = +2*C Pdn 17.8 KW Tj = +7*C COPd 2.30 - Tj = operation limit temperature Pdn 7.8 KW Tj = operation limit temperature COPd 2.33 - Tj = operation limit temperature Pdn KW KT = -15*C (TOL < -20*C)	Water-to-water heat pump: (yes/	no)			no			
no no application leater with: (yesho) no application: (low/medium) medium attrate: (colder/average/warmer) average tem Symbol Value Unit Rated heat output Prated 10 kW Seasonal space heating energy efficiency ns 125,7 % Declared coefficient of performance for part load at indoor emperature 20°C and outdoor temperature 71 Declared coefficient of performance for part load at indoor temperature 20°C and outdoor temperature 71 Tij = .7*°C COPd 2,35 - Tj = .7*°C Pdh 7,2 KW Tj = .7*°C COPd 4,32 - Tj = .4?2*°C Pdh 10,0 kW Tj = .4?2*°C COPd 2,35 - Tj = .4?2*°C Pdh 12,0 kW Tj = .4?2*°C COPd 2,33 - Tj = .4?2*°C Pdh 7,8 KW Tj = operation limit temperature COPd 2,83 - Tj = .0 eartion kmath temperature Pdh 7,8 KW Tj = operation limit temperature COPd 2,11 - Sorai to-watthenat pumps: Tj	Low-temperature heat pump: (ye	s/no)						
application: (low/medium) nedium application: (low/medium) average tem Symbol Value Unit Rated heat output Prated 10 kW Seasonal space heating energy efficiency n/S 125.7 % Declared coefficient of performance for part load at indoor emperature 20°C and outdoor temperature Tj 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 Ti = -7°C COPd 2,35 - Tj = +2°C Pdh 9,0 KW Tj = +2°C COPd 3,21 - Tj = +2°C Pdh 10,1 KW Tj = +2°C COPd 2,33 - Tj = peration limit temperature Pdh 7,8 KW Tj = +12°C COPd 2,63 - Tj = bivalent temperature Pdh 7,8 KW Tj = overation limit temperature COPd 2,63 - Tj = operation limit temperature Pdh 7,8 KW Tj = ovaration limit temperature COPd 2,61 - Svalalent temperature Tpv	Equipped with supplementary heater: (yes/no)				yes			
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	combination heater with: (yes/no))			no			
tem Symbol Value Unit tem Symbol Value Unit Rated heat output Prated 10 kW Seasonal space heating energy efficiency ηS 125.7 % Declared coefficient of performance for part load at indoor emperature 20°C and outdoor temperature TI Declared coefficient of performance for part load at indoor temperature 20°C and outdoor temperature TI Declared coefficient of performance for part load at indoor temperature 20°C and outdoor temperature TI Tj = +2°C Pdh 9.0 kW Tj = +2°C COPd 2.35 - Tj = +2°C Pdh 10.1 kW Tj = +2°C COPd 4.03 - Tj = +2°C Pdh 10.1 kW Tj = +2°C COPd 5.30 - Tj = +12°C Pdh 12.0 kW Tj = iparaircb COPd 2.63 - Tj = bovalent temperature Pdh 6.6 kW Tj = operation limit temperature COPd 2.61 - - - - - - - - - - -	application: (low/medium)				medium			
Rated heat output Prated 10 kW Seasonal space heating energy efficiency nS 125,7 % Declared coefficient of performance for part load at indoor temperature 20°C and outdoor temperature Tj Image: temperature 20°C and outdoor temperature Tj Image: temperature 20°C and outdoor temperature Tj Tj = +2°C Pdh 7,2 kW Tj = +7°C COPd 2,35 - Tj = +2°C Pdh 10,1 kW Tj = +7°C COPd 4,30 - Tj = +2°C Pdh 10,1 kW Tj = +7°C COPd 4,30 - Tj = +12°C Pdh 12,0 kW Tj = +7°C COPd 4,30 - Tj = operation limit temperature Pdh 7,8 KW Tj = operation limit temperature COPd 2,11 - To ablent temperature Pdh 7,8 KW Tj = operation limit temperature COPd 2,11 - - - - - - - - - - - - - - -	climate: (colder/average/warmer)				average			
Declared coefficient of performance for part load at indoor temperature 20°C and outdoor temperature T] Declared coefficient of performance for part load at indoor temperature 20°C and outdoor temperature T] Tj = -7°C Pdh 7.2 KW Tj = -7°C COPd 2.35 - Tj = +2°C Pdh 9.0 KW Tj = +2°C COPd 3.21 - Tj = +12°C Pdh 10.1 KW Tj = +2°C COPd 4.03 - Tj = +12°C Pdh 12.0 KW Tj = +12°C COPd 2.03 - Tj = bivalent temperature Pdh 7.8 KW Tj = operation limit temperature COPd 2.63 - Tj = operation limit temperature Pdh 6.6 KW For arto-water heat pumps: Tj COPd 2.11 - svalent temperature Tbw -4 °C For arto-water heat pumps: Tj COPd - - Svalent temperature Tbw -4 °C Cycling interval efficiency COPcrept - - Svalent temperature <td< td=""><td>Item</td><td>Symbol</td><td>Value</td><td>Unit</td><td>Item</td><td>Symbol</td><td>Value</td><td>Unit</td></td<>	Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
temperature 20°C and outdoor temperature Tj Tj = 7°C Pdh 7,2 KW Tj = -7°C COPd 2,35 - Tj = +2°C Pdh 9,0 kW Tj = +7°C COPd 2,35 - Tj = +2°C Pdh 10,1 kW Tj = +2°C COPd 4,03 - Tj = ty 2°C Pdh 10,1 kW Tj = +12°C COPd 4,03 - Tj = byalent temperature Pdh 12,0 kW Tj = +12°C COPd 2,63 - Tj = operation limit temperature Pdh 6.6 kW Tj = operation limit temperature COPd 2,11 - or air to-water heat pumps: Tj =-05°C (if TOL < -20°C)	Rated heat output	Prated	10	kW	• •	ηS	125,7	%
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $				indoor				ndoor
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Tj = -7°C	Pdh	7,2	kW	Tj = -7°C	COPd	2,35	-
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Tj = +2°C	Pdh	9,0	kW	Tj = +2°C	COPd	3,21	-
Tj = bivalent temperature Pdh 7,8 kW Tj = bivalent temperature COPd 2,63 - Tj = operation limit temperature Pdh 6,6 kW Tj = operation limit temperature COPd 2,11 - For air-to-water heat pumps: Tj = -15°C (if TOL < -20°C)	Tj = +7°C	Pdh	10,1	kW	Tj = +7°C	COPd	4,03	-
Tj = operation limit temperature Pdh 6,6 kW Tj = operation limit temperature COPd 2,11 - For air-to-water heat pumps: Tj Pdh - kW For air-to-water heat pumps: Tj COPd - - Bivalent temperature T _{bv} -4 °C For air-to-water heat pumps: 0-15 °C (if TOL < -20 °C)	Tj = +12°C	Pdh	12,0	kW	Tj = +12°C	COPd	5,30	-
Or air-to-water heat pumps: Tj Pdh - kW For air-to-water heat pumps: Tj COPd - - 15°C (if TOL < -20°C)	Tj = bivalent temperature	Pdh	7,8	kW	Tj = bivalent temperature	COPd	2,63	-
$ = -15 ^{\circ} C (if TOL < -20 ^{\circ} C) $ $ = -15 ^{\circ} C (if TOL < -20 ^{\circ} C) $ $ = -15 ^{\circ} C (if TOL < -20 ^{\circ} C) $ $ = -15 ^{\circ} C (if TOL < -20 ^{\circ} C) $ $ = -10 ^{\circ} C $ $ = -15 ^{\circ} C (if TOL < -20 ^{\circ} C) $ $ = -10 ^{\circ} C $ $ = -10 ^{\circ} C$	Tj = operation limit temperature	Pdh	6,6	kW	Tj = operation limit temperature	COPd	2,11	-
And Operation limit temperature Image: Constraint of the second sec	For air-to-water heat pumps: Tj = -15°C (if TOL < -20°C)	Pdh	-	kW		COPd	-	-
neating Image: Construction of the second of the secon	Bivalent temperature	T _{biv}	-4	°C		TOL	-10	°C
Power consumption in modes other than active mode Supplementary heater Diff mode PoFF 0,015 kW Rated heat output Psup 3,6 kW Thermostat-off mode PTO 0,015 kW Rated heat output Psup 3,6 kW Standby mode PSB 0,015 kW Type of energy input electrical Standby mode PSB 0,015 kW Type of energy input electrical Other items Crankcase heater mode PCK - kW Rated air flow rate, outdoors - 3.500 m³/h Capacity control fixed for water-/brine-to-water heat pumps: Rated air flow rate, outdoors - - m³/h Sound power level, ndoors/outdoors LwA 44 / 62 dB For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger - - m³/h Emissions of nitrogen oxides NO _X - mg/kWh - % Declared load profile - KWh Daily fuel consumption Qfuel - kWh Daily electricity consumption Qelec	Cycling interval capacity for heating	Pcych	-	kW	Cycling interval efficiency	COPcyc	-	-
Dff mode P _{OFF} 0,015 kW Rated heat output Psup 3,6 kW Thermostat-off mode P _{TO} 0,015 kW Type of energy input electrical Standby mode P _{SB} 0,015 kW Type of energy input electrical Chankcase heater mode P _{CK} - kW Type of energy input electrical Other items Capacity control fixed For air-to-water heat pumps: Rated air flow rate, outdoors - 3.500 m³/h Sound power level, ndoors/outdoors L _{WA} 44 / 62 dB For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger - - m³/h Emissions of nitrogen oxides NO _X - mg/kWh - - - m³/h Celared load profile - - kWh Daily fuel consumption Qfuel - kWh Daily electricity consumption Q _{elec} - kWh Daily fuel consumption Qfuel - kWh Contact details ait deutschland GmbH Industriestr. 3 95359 Kasendorf Germany - kWh C	Degradation co-efficient (**)	Cdh	1,0	-	o	WTOL	70	°C
Thermostat-off mode PTO 0,015 kW Type of energy input electrical Standby mode PSB 0,015 kW Type of energy input electrical Crankcase heater mode PCK - kW electrical electrical Other items Capacity control fixed For air-to-water heat pumps: Rated air flow rate, outdoors - 3.500 m³/h Sound power level, ndoors/outdoors LwA 44 / 62 dB For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger - - m³/h Emissions of nitrogen oxides NO _X - mg/kWh - - % Declared load profile - - KWh Daily fuel consumption Qfuel - kWh Daily electricity consumption Q _{elec} - kWh Daily fuel consumption Qfuel - kWh Contact details ait deutschland GmbH Industriestr. 3 95359 Kasendorf Germany - kWh - kWh Protest pump space heaters and heat pump combination heaters - - kWh - kWh - kWh	Power consumption in modes	other than	active mod	le	Supplementary heater			<u>.</u>
Thermostat-off mode P_{TO} 0,015kWType of energy inputelectricalStandby mode P_{SB} 0,015kWImage: Standby modeP_{CK}-kWCrankcase heater mode P_{CK} -kWImage: Standby mode-standby modeOther itemsStandby mode P_{CK} -kWStandby mode-3.500m³/hCapacity controlImage: Standby modeImage: Standby mode3.500m³/hSound power level, ndoors/outdoorsLwA44 / 62dBFor water./brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchangerm³/hEmissions of nitrogen oxidesNO_X-mg/kWhm³/hSould profileMkHDaily fuel consumptionQfuel-kWhDeclared load profilekWhDaily fuel consumptionQfuel-kWhCantact detailsait deutschland GmbH Industriestr. 3 95359 Kasendorf Germany-*KWh'') For heat pump space heaters and heat pump combination heater?sequal to the design load for heating Pdesign h, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).	Off mode	P _{OFF}	0,015	kW	Rated heat output	Psup	3,6	kW
Standby mode P _{SB} 0,015 kW Crankcase heater mode P _{CK} - kW Other items Capacity control fixed For air-to-water heat pumps: Rated air flow rate, outdoors - 3.500 m³/h Capacity control Image: sound power level, ndoors/outdoors L _{WA} 44 / 62 dB For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger - - m³/h Emissions of nitrogen oxides NO _X - mg/kWh - - m³/h Emissions of nitrogen oxides NO _X - mg/kWh - - % Declared load profile - - KWh Daily fuel consumption Qfuel - kWh Contact details ait deutschland GmbH Industriestr. 3 95359 Kasendorf Germany - kWh 29359 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).	Thermostat-off mode		0,015	kW	Type of energy input		electrical	
Other items For air-to-water heat pumps: Rated air flow rate, outdoors - 3.500 m³/h Sound power level, ndoors/outdoors L _{WA} 44 / 62 dB For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat - - m³/h Emissions of nitrogen oxides NO _X - mg/kWh - - m³/h For heat pump combination heater: - - mg/kWh - - % Declared load profile - - KWh Daily fuel consumption Qfuel - kWh Daily electricity consumption Qelec - kWh Daily fuel consumption Qfuel - kWh Contact details ait deutschland GmbH Industriestr. 3 95359 Kasendorf Germany - kWh 295359 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).	Standby mode	P _{SB}	0,015	kW				
Capacity control fixed fixed For air-to-water heat pumps: Rated air flow rate, outdoors - 3.500 m³/h sound power level, ndoors/outdoors L _{WA} 44 / 62 dB For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger - - m³/h Emissions of nitrogen oxides NO _X - mg/kWh - - m³/h For heat pump combination heater: - - m³/h - % Declared load profile - - Water heating energy efficiency n _{wh} - % Daily electricity consumption Q _{elec} - kWh Daily fuel consumption Qfuel - kWh Contact details ait deutschland GmbH Industriestr. 3 95359 Kasendorf Germany - kWh equal to the design load for heating edesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj). - -	Crankcase heater mode	Р _{ск}	-	kW				
And the rated heat output of a supplementary heater Psup 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). Rated air flow rate, outdoors Rated air flow rate, outdoors Image: Content of the supplementary capacity for heating sup(Tj). Sound power level, ndoors/outdoors LwA 44 / 62 dB For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat pumps: Rated brine or water flow rate, outdoor heat exchanger - m³/h Emissions of nitrogen oxides NO _X - mg/kWh - - m³/h For heat pump combination heater: - - mg/kWh - - % Declared load profile - - Water heating energy efficiency nwh - % Daily electricity consumption Qelec - kWh Daily fuel consumption Qfuel - kWh	Other items			•				
ndoors/outdoors Image: Context details pumps: Rated brine or water flow rate, outdoor heat exchanger Image: Context details Image:	Capacity control		fixed			-	3.500	m³/h
For heat pump combination heater: Declared load profile - Water heating energy efficiency η_{wh} - % Daily electricity consumption Q_{elec} - kWh Daily fuel consumption Qfuel - kWh Contact details ait deutschland GmbH Industriestr. 3 95359 Kasendorf Germany - kWh *) 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).	sound power level, indoors/outdoors	L _{WA}	44 / 62	dB	pumps: Rated brine or water flow rate, outdoor heat	-	-	m ³ /h
Declared load profile - Water heating energy efficiency η_{wh} - % Daily electricity consumption Q_{elec} - kWh Daily fuel consumption Qfuel - kWh Contact details ait deutschland GmbH Industriestr. 3 95359 Kasendorf Germany ait deutschland GmbH Industriestr. 3 95359 Kasendorf Germany - kWh *) 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). - *	Emissions of nitrogen oxides	NO _X	-	mg/kWh				
Daily electricity consumption Q _{elec} - kWh Daily fuel consumption Qfuel - kWh Contact details ait deutschland GmbH Industriestr. 3 95359 Kasendorf Germany ait deutschland GmbH Industriestr. 3 95359 Kasendorf Germany - - kWh *) 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).	For heat pump combination h	eater:						
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).	Declared load profile		-		Water heating energy efficiency	η_{wh}	-	%
(*) 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).	Daily electricity consumption	Q _{elec}	-	kWh	Daily fuel consumption		-	kWh
Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).	Contact details	ait deutsch	land GmbH Ir	ndustriestr. 3	95359 Kasendorf Germany			
								eating
· · · · · · · · · · · · · · · · · · ·	-					*		

Model				LWD 90A-HMD			
Air-to-water heat pump: (yes/no)				yes			
Brine-to-water heat pump: (yes/n	o)			no			
Water-to-water heat pump: (yes/	no)			no			
Low-temperature heat pump: (ye	s/no)			no			
Equipped with supplementary heater: (yes/no)				yes			
combination heater with: (yes/no)				no			
application: (low/medium)				low			
climate: (colder/average/warmer)				average			
ltem	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output	Prated	10	kW	Seasonal space heating energy efficiency	ηS	150,4	%
Declared coefficient of perfor temperature 20°C and outdoor			indoor	Declared coefficient of perfor temperature 20°C and outdoo			indoor
Tj = -7°C	Pdh	7,5	kW	Tj = -7°C	COPd	3,18	-
Tj = +2°C	Pdh	9,0	kW	Tj = +2°C	COPd	3,83	-
Tj = +7°C	Pdh	10,3	kW	Tj = +7°C	COPd	4,69	-
Tj = +12°C	Pdh	12,0	kW	Tj = +12°C	COPd	5,42	-
Tj = bivalent temperature	Pdh	8,1	kW	Tj = bivalent temperature	COPd	3,43	-
Tj = operation limit temperature	Pdh	7,0	kW	Tj = operation limit temperature	COPd	2,93	-
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}	-4	°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	70	°C
Power consumption in modes	other that	n active mod	le	Supplementary heater			<u>.</u>
Off mode	P _{OFF}	0,015	kW	Rated heat output	Psup	3,5	kW
Thermostat-off mode	P _{TO}	0,015	kW	Type of energy input		electrical	
Standby mode	P _{SB}	0,015	kW	-			
Crankcase heater mode	Р _{ск}	-	kW	-			
Other items			•				
Capacity control		fixed		For air-to-water heat pumps: Rated air flow rate, outdoors	-	3.500	m³/h
sound power level, indoors/outdoors	L _{WA}	44 / 62	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 h	eater:						
Declared load profile		-		Water heating energy efficiency	η_{wh}	-	%
Daily electricity consumption	Q _{elec}	-	kWh	Daily fuel consumption	Qfuel	-	kWh
Contact details		Iand GmbH Ir	ndustriestr. 3	95359 Kasendorf Germany			
	and heat pu	Imp combinat	ion heaters, t	the rated heat output Prated is equ equal to the supplementary capac			eating
(**) If Cdh is not determined by m			-		-	/	
_			0	-) -			