



# ENERG

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10348342

NOVELAN

WIC 16HXE



55 °C

35 °C



**50** dB



- dB

- 14
- **14**
- 14

kW

- 15
- **15**
- 15

kW





# ENERGY

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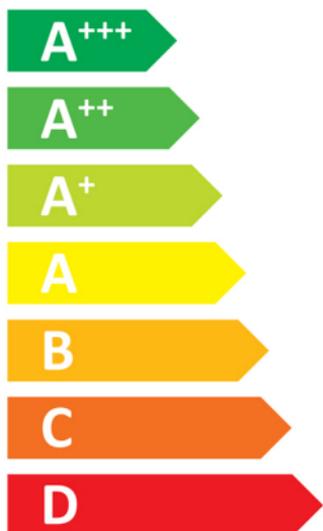
NOVELAN

WIC 16HXE



55 °C

35 °C



**50** dB



- dB

■ 14  
■ **14**  
■ 14  
kW

■ 15  
■ **15**  
■ 15  
kW





# ENERG

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Y

IJA

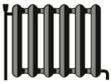
IE

IA

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NOVELAN

WIC 16HXE + WPR-Net 2.0



A+++

A+++

A+++

A++

A+

A

B

C

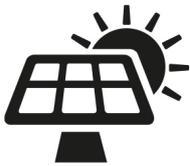
D

E

F

G

+



+



+



+



package (heat pumps and combination heater with heat pump) - WIC 16HXE + WPR-Net 2.0

Seasonal space heating energy efficiency of heat pump ( $\eta_s$ ) ① 167 %

**Rated heat output of the heat pump ( $P_{rated}$  kW)** 14

Temperature control Class III (Table 1) + ② 1,5 %

Supplementary boiler  
package with hot water storage tank no  $P_{sup}$  kW (rated heat output of supplementary heater)

$\eta_s$  % ( $\sigma\pi$ )  $(\eta_s \% (sup) - ①) \times (\alpha_{WP}) =$  - ③

( $\alpha_{WE}$ : see Table 3)  $(\alpha_{WE})$

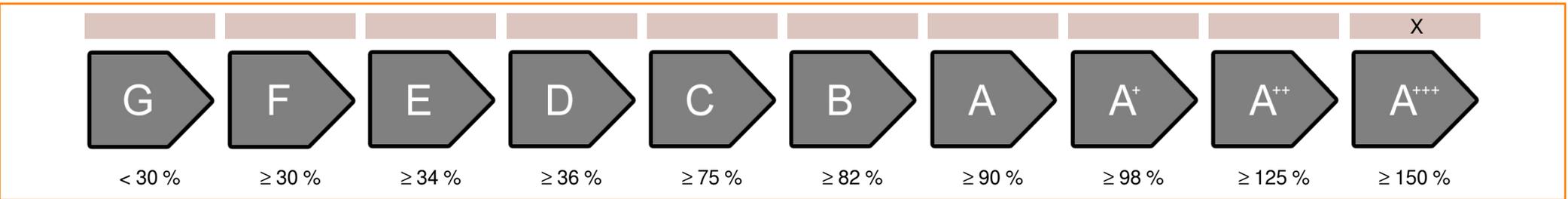
solar contribution  $(A_{Koll} m^2)$   $(\eta_{Koll} \%)$   
 $(V_{Sp} m^3)$   $(standstill\ heat\ loss\ of\ the\ hot\ water\ storage\ tank\ in\ W)$   
 $(\eta_{Sp}: Table\ 2)$

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

Seasonal space heating energy efficiency of package ⑤ 168 %

*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 ( $\eta_s$ ) under colder climate conditions** 172 %

**Seasonal space heating energy efficiency of the heat pump ( $\eta_s$ ) under warmer climate conditions** 168 %

colder ⑤ 168 -V -5 = 173 warmer ⑤ 168 +VI 1 = 169

<b>heatpump datasheet:</b>			
<b>manufacturer:</b>	NOVELAN		
<b>model:</b>	WIC 16HXE		
<b>Information concerning energy efficiency class and rated heat output:</b>			
	average / low	average / medium	
energy efficiency class space heater:	A+++	A+++	-
rated heat output:	15	14	kW
energy efficiency space heater:	221	167	%
annual final energy consumption space heater	5278	6534	kWh
sound power level indoors		50	dB
<b>special precautions concerning assembly, installation or maintenance</b>			
All instructional work in this manual may only be carried out by qualified specialist personnel in compliance with local regulations.			
<b>additional information</b>	low	medium	
rated heat output colder climate	15	14	kW
rated heat output warmer climate	15	14	kW
energy efficiency space heater colder climate	246	172	%
energy efficiency space heater warmer climate	240	168	%
annual energy consumption space heater colder climate	5716	7568	kWh
annual energy consumption space heater warmer climate	3172	4197	kWh
sound power level outdoors		-	dB

<b>technical data of the temperature controller</b>		
<b>manufacturer:</b>	<b>NOVELAN</b>	
<b>model:</b>	<b>WPR-Net 2.0</b>	
controller class	III	-
contribution of the controller to the energy efficiency space heater	1,5	%

Model				WIC 16HXE			
Air-to-water heat pump: (yes/no)				no			
Brine-to-water heat pump: (yes/no)				no			
Water-to-water heat pump: (yes/no)				yes			
Low-temperature heat pump: (yes/no)				no			
Equipped with supplementary heater: (yes/no)				yes			
combination heater with: (yes/no)				no			
application: (low/medium)				medium			
climate: (colder/average/warmer)				average			
Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated heat output	Prated	14	kW	Seasonal space heating energy efficiency	$\eta_S$	166,9	%
<b>Declared coefficient of performance for part load at indoor temperature 20°C and outdoor temperature Tj</b>				<b>Declared coefficient of performance for part load at indoor temperature 20°C and outdoor temperature Tj</b>			
Tj = -7°C	Pdh	13,5	kW	Tj = -7°C	COPd	3,61	-
Tj = +2°C	Pdh	14,0	kW	Tj = +2°C	COPd	4,28	-
Tj = +7°C	Pdh	14,5	kW	Tj = +7°C	COPd	4,92	-
Tj = +12°C	Pdh	14,7	kW	Tj = +12°C	COPd	5,60	-
Tj = bivalent temperature	Pdh	13,3	kW	Tj = bivalent temperature	COPd	3,40	-
Tj = operation limit temperature	Pdh	13,3	kW	Tj = operation limit temperature	COPd	3,40	-
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>	-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	1,0	-	Heating water operating limit temperature	WTOL	65	°C
<b>Power consumption in modes other than active mode</b>				<b>Supplementary heater</b>			
Off mode	P <sub>OFF</sub>	0,007	kW	Rated heat output	P <sub>sup</sub>	-	kW
Thermostat-off mode	P <sub>TO</sub>	0,007	kW	Type of energy input	electrical		
Standby mode	P <sub>SB</sub>	0,007	kW				
Crankcase heater mode	P <sub>CK</sub>	-	kW				
<b>Other items</b>							
Capacity control	fixed			For air-to-water heat pumps: Rated air flow rate, outdoors	-	-	m <sup>3</sup> /h
sound power level, indoors/outdoors	L <sub>WA</sub>	50 / -	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	3	m <sup>3</sup> /h
Emissions of nitrogen oxides	NO <sub>x</sub>	-	mg/kWh				
<b>For heat pump combination heater:</b>							
Declared load profile	-			Water heating energy efficiency	$\eta_{wh}$	-	%
Daily electricity consumption	Q <sub>elec</sub>	-	kWh	Daily fuel consumption	Q <sub>fuel</sub>	-	kWh
<b>Contact details</b>	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.							

<b>Model</b>				<b>WIC 16HXE</b>			
Air-to-water heat pump: (yes/no)				no			
Brine-to-water heat pump: (yes/no)				no			
Water-to-water heat pump: (yes/no)				yes			
Low-temperature heat pump: (yes/no)				no			
Equipped with supplementary heater: (yes/no)				yes			
combination heater with: (yes/no)				no			
application: (low/medium)				low			
climate: (colder/average/warmer)				average			
<b>Item</b>	<b>Symbol</b>	<b>Value</b>	<b>Unit</b>	<b>Item</b>	<b>Symbol</b>	<b>Value</b>	<b>Unit</b>
<b>Rated heat output</b>	Prated	15	kW	<b>Seasonal space heating energy efficiency</b>	$\eta_S$	220,6	%
<b>Declared coefficient of performance for part load at indoor temperature 20°C and outdoor temperature Tj</b>				<b>Declared coefficient of performance for part load at indoor temperature 20°C and outdoor temperature Tj</b>			
Tj = -7°C	Pdh	14,6	kW	Tj = -7°C	COPd	5,39	-
Tj = +2°C	Pdh	14,7	kW	Tj = +2°C	COPd	5,70	-
Tj = +7°C	Pdh	14,8	kW	Tj = +7°C	COPd	5,97	-
Tj = +12°C	Pdh	14,9	kW	Tj = +12°C	COPd	6,31	-
Tj = bivalent temperature	Pdh	14,6	kW	Tj = bivalent temperature	COPd	5,35	-
Tj = operation limit temperature	Pdh	14,6	kW	Tj = operation limit temperature	COPd	5,35	-
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>	-10	°C	For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval capacity for heating	P <sub>cyh</sub>	-	kW	Cycling interval efficiency	COP <sub>cyh</sub>	-	-
Degradation co-efficient (**)	Cdh	1,0	-	Heating water operating limit temperature	WTOL	65	°C
<b>Power consumption in modes other than active mode</b>				<b>Supplementary heater</b>			
Off mode	P <sub>OFF</sub>	0,007	kW	Rated heat output	P <sub>sup</sub>	-	kW
Thermostat-off mode	P <sub>TO</sub>	0,007	kW	Type of energy input	electrical		
Standby mode	P <sub>SB</sub>	0,007	kW				
Crankcase heater mode	P <sub>CK</sub>	-	kW				
<b>Other items</b>							
Capacity control	fixed			For air-to-water heat pumps: Rated air flow rate, outdoors	-	-	m <sup>3</sup> /h
sound power level, indoors/outdoors	L <sub>WA</sub>	50 / -	dB	For water-/brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	3	m <sup>3</sup> /h
Emissions of nitrogen oxides	NO <sub>x</sub>	-	mg/kWh				
<b>For heat pump combination heater:</b>							
Declared load profile	-			Water heating energy efficiency	$\eta_{wh}$	-	%
Daily electricity consumption	Q <sub>elec</sub>	-	kWh	Daily fuel consumption	Q <sub>fuel</sub>	-	kWh
<b>Contact details</b>	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.							