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Summary of	WWC 130 H/X	Reg. No.	041-K001-32
Certificate Holder			
Name	ait-deutschland GmbH		
Address	Industriestr. 3	Zip	95359
City	Kasendorf	Country	Germany
Certification Body	BRE Global Limited		
Subtype title	WWC 130 H/X		
Heat Pump Type	Water/Water		
Refrigerant	R407c		
Mass of Refrigerant	3.5 kg		
Certification Date	06.09.2019		

## Model: WWC 130H/X

Configure model	
Model name	WWC 130H/X
Application	Heating (medium temp)
Units	Indoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	3x400V 50Hz

### Heating

EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Starting and operating test	passed

EN 14511-2		
	Low temperature	Medium temperature
Heat output	12.90 kW	11.70 kW
El input	2.35 kW	3.43 kW
COP	5.50	3.23

### Average Climate

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### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	53 dB(A)	53 dB(A)

### EN 14825

	Low temperature	Medium temperature
$\eta_s$	227 %	176 %
Prated	12.90 kW	11.70 kW
SCOP	5.88	4.60
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	12.92 kW	11.88 kW
COP Tj = -7°C	5.55	3.63
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	13.06 kW	12.48 kW
COP Tj = +2°C	5.89	4.56
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	13.18 kW	12.84 kW
COP Tj = +7°C	6.22	5.29
Cdh Tj = +7 °C	1.00	1.00
Pdh Tj = 12°C	13.30 kW	13.20 kW

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COP Tj = 12°C	6.49	6.16
Cdh Tj = +12 °C	1.00	1.00
Pdh Tj = Tbiv	12.90 kW	11.70 kW
COP Tj = Tbiv	5.49	3.41
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.90 kW	11.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.49	3.41
WTOL	65 °C	65 °C
Poff	10 W	10 W
PTO	10 W	10 W
PSB	10 W	10 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	4535 kWh	5250 kWh

## Warmer Climate

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	228 %	177 %
Prated	12.90 kW	11.70 kW
SCOP	5.90	4.63

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Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.90 kW	11.70 kW
COP Tj = +2°C	5.49	3.41
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	13.03 kW	12.24 kW
COP Tj = +7°C	5.82	4.15
Cdh Tj = +7 °C	1.00	1.00
Pdh Tj = 12°C	13.22 kW	12.96 kW
COP Tj = 12°C	6.33	5.57
Cdh Tj = +12 °C	1.00	1.00
Pdh Tj = Tbiv	12.90 kW	11.70 kW
COP Tj = Tbiv	5.49	3.41
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.90 kW	11.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.49	3.41
WTOL	65 °C	65 °C
Poff	10 W	10 W
PTO	10 W	10 W
PSB	10 W	10 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity

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Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q <sub>he</sub>	2920 kWh	3373 kWh

## Colder Climate

<b>EN 14825</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
$\eta_s$	233 %	183 %
Prated	12.90 kW	11.70 kW
SCOP	6.04	4.77
T <sub>biv</sub>	-22 °C	-22 °C
TOL	-22 °C	-22 °C
P <sub>d,h</sub> T <sub>j</sub> = -7°C	13.08 kW	12.36 kW
COP T <sub>j</sub> = -7°C	5.95	4.35
C <sub>d,h</sub> T <sub>j</sub> = -7 °C	1.00	1.00
P <sub>d,h</sub> T <sub>j</sub> = +2°C	13.08 kW	12.78 kW
COP T <sub>j</sub> = +2°C	6.24	5.16
C <sub>d,h</sub> T <sub>j</sub> = +2 °C	1.00	1.00
P <sub>d,h</sub> T <sub>j</sub> = +7°C	13.26 kW	13.08 kW
COP T <sub>j</sub> = +7°C	6.45	5.88
C <sub>d,h</sub> T <sub>j</sub> = +7 °C	1.00	1.00
P <sub>d,h</sub> T <sub>j</sub> = 12°C	13.28 kW	13.32 kW

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COP Tj = 12°C	6.35	6.43
Cdh Tj = +12 °C	1.00	1.00
Pdh Tj = Tbiv	12.90 kW	11.70 kW
COP Tj = Tbiv	5.49	3.41
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.90 kW	11.70 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.49	3.41
WTOL	65 °C	65 °C
Poff	10 W	10 W
PTO	10 W	10 W
PSB	10 W	10 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	5269 kWh	6049 kWh
Pdh Tj = -15°C (if TOL<-20°C)	0.01	0.01
COP Tj = -15°C (if TOL<-20°C)	0.01	0.01
Cdh Tj = -15 °C	1.00	1.00