

## Subtype WWC 130 H/X

Certificate Holder	ait-deutschland GmbH
Address	Industriestr. 3
ZIP	95359
City	Kasendorf
Country	DE
Certification Body	BRE Global Limited
Subtype title	WWC 130 H/X
Registration number	041-K001-32
Heat Pump Type	Water/Water
Refrigerant	R407c
Mass of Refrigerant	3.5 kg
Certification Date	06.09.2019

## Model WWC 130H/X

Model name	WWC 130H/X
Application	Heating (medium temp)
Units	Indoor
Climate zone (for heating)	Warmer Climate, Colder Climate
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

## General data

Power supply	3x400V 50Hz
Off-peak product	n/a

## Water/Water

### EN 14511-4 | Heating

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

### EN 12102-1 | Average Climate

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

### EN 14825 | Average Climate

	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
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

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
$\eta_s$	233 %	183 %
Prated	12.90 kW	11.70 kW
SCOP	6.04	4.77
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	13.08 kW	12.36 kW
COP Tj = -7°C	5.95	4.35
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	13.08 kW	12.78 kW
COP Tj = +2°C	6.24	5.16
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	13.26 kW	13.08 kW
COP Tj = +7°C	6.45	5.88
Cdh Tj = +7 °C	1.00	1.00
Pdh Tj = 12°C	13.28 kW	13.32 kW
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	0.01	0.01

COP Tj = -15°C (if TOL	0.01	0.01
Cdh Tj = -15 °C	1.00	1.00

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
$\eta_s$	228 %	177 %
Prated	12.90 kW	11.70 kW
SCOP	5.90	4.63
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
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2920 kWh	3373 kWh