

This information was generated by the HP KEYMARK database on 21 Jun 2022

[Login](#)

Summary of	WWC 190 H/X	Reg. No.	041-K001-34
Certificate Holder			
Name	ait-deutschland GmbH		
Address	Industriestr. 3	Zip	95359
City	Kasendorf	Country	Germany
Certification Body	BRE Global Limited		
Subtype title	WWC 190 H/X		
Heat Pump Type	Water/Water		
Refrigerant	R407c		
Mass of Refrigerant	4.3 kg		
Certification Date	06.09.2019		

Model: WWC 190H/X

Configure model	
Model name	WWC 190H/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 14511-2		
	Low temperature	Medium temperature
Heat output	18.60 kW	16.30 kW
El input	3.27 kW	4.81 kW
COP	5.60	3.20

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

Average Climate

This information was generated by the HP KEYMARK database on 21 Jun 2022

EN 12102-1

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

EN 14825

	Low temperature	Medium temperature
η_s	234 %	179 %
Prated	18.30 kW	16.30 kW
SCOP	6.05	4.68
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	18.34 kW	16.60 kW
COP Tj = -7°C	5.66	3.63
Cdh Tj = -7 °C	1.00	1.00
Pdh Tj = +2°C	18.56 kW	17.60 kW
COP Tj = +2°C	6.03	4.61
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	18.76 kW	18.20 kW
COP Tj = +7°C	6.39	5.40
Cdh Tj = +7 °C	1.00	1.00
Pdh Tj = 12°C	18.96 kW	18.80 kW

This information was generated by the HP KEYMARK database on 21 Jun 2022

COP Tj = 12°C	6.72	6.37
Cdh Tj = +12 °C	1.00	1.00
Pdh Tj = Tbiv	18.30 kW	16.30 kW
COP Tj = Tbiv	5.60	3.39
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	18.30 kW	16.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.60	3.39
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	6249 kWh	7193 kWh

Warmer Climate

EN 14825		
	Low temperature	Medium temperature
η_s	236 %	181 %
Prated	18.30 kW	16.30 kW
SCOP	6.09	4.73

This information was generated by the HP KEYMARK database on 21 Jun 2022

Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	18.30 kW	16.30 kW
COP Tj = +2°C	5.60	3.39
Cdh Tj = +2 °C	1.00	1.00
Pdh Tj = +7°C	18.52 kW	17.20 kW
COP Tj = +7°C	5.95	4.18
Cdh Tj = +7 °C	1.00	1.00
Pdh Tj = 12°C	18.82 kW	18.40 kW
COP Tj = 12°C	6.51	5.71
Cdh Tj = +12 °C	1.00	1.00
Pdh Tj = Tbiv	18.30 kW	16.30 kW
COP Tj = Tbiv	5.60	3.39
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	18.30 kW	16.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.60	3.39
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

This information was generated by the HP KEYMARK database on 21 Jun 2022

Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q _{he}	4012 kWh	4604 kWh

Colder Climate

EN 14825		
	Low temperature	Medium temperature
η_s	241 %	186 %
Prated	18.30 kW	16.30 kW
SCOP	6.22	4.86
T _{biv}	-22 °C	-22 °C
TOL	-22 °C	-22 °C
P _{dh} T _j = -7°C	18.59 kW	17.40 kW
COP T _j = -7°C	6.09	4.39
C _{dh} T _j = -7 °C	1.00	1.00
P _{dh} T _j = +2°C	18.77 kW	18.10 kW
COP T _j = +2°C	6.41	5.26
C _{dh} T _j = +2 °C	1.00	1.00
P _{dh} T _j = +7°C	18.90 kW	18.60 kW
COP T _j = +7°C	6.65	6.04
C _{dh} T _j = +7 °C	1.00	1.00
P _{dh} T _j = 12°C	18.94 kW	19.00 kW

This information was generated by the HP KEYMARK database on 21 Jun 2022

COP Tj = 12°C	6.59	6.70
Cdh Tj = +12 °C	1.00	1.00
Pdh Tj = Tbiv	18.30 kW	16.30 kW
COP Tj = Tbiv	5.60	3.39
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	18.30 kW	16.30 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	5.60	3.39
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	7258 kWh	8276 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