

This information was generated by the HP KEYMARK database on 17 Dec 2020

Summary of	WWC 160 H/X	Reg. No.	041-K001-33
Certificate Holder			
Name	ait-deutschland GmbH		
Address	Industriestr. 3	Zip	95359
City	Kasendorf	Country	Germany
Certification Body	BRE Energy & Communications Division		
Name of testing laboratory	WPZ		
Subtype title	WWC 160 H/X		
Heat Pump Type	Water/Water		
Refrigerant	R407c		
Mass Of Refrigerant	3.95 kg		
Certification Date	06.09.2019		

Model: WWC 160H/X

General Data

Power supply	3x400V 50Hz
--------------	-------------

Heating

EN 14511-2

	Low temperature	Medium temperature
Heat output	14.60 kW	13.42 kW
El input	2.73 kW	3.90 kW
COP	5.35	3.44
Indoor water flow rate	3.00 m ³ /h	3.00 m ³ /h

EN 14511-4

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

Average Climate

EN 12102-1

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

This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 14825

	Low temperature	Medium temperature
η_s	221 %	167 %
Prated	14.60 kW	13.83 kW
SCOP	5.72	4.37
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	14.61 kW	13.53 kW
COP Tj = -7°C	5.39	3.61
Cdh	1.00	1.00
Pdh Tj = +2°C	14.71 kW	13.97 kW
COP Tj = +2°C	5.70	4.28
Cdh	1.00	1.00
Pdh Tj = +7°C	14.79 kW	14.50 kW
COP Tj = +7°C	5.97	4.92
Cdh	1.00	1.00
Pdh Tj = 12°C	14.87 kW	14.72 kW
COP Tj = 12°C	6.31	5.60
Cdh	1.00	1.00
Pdh Tj = Tbiv	14.60 kW	13.35 kW
COP Tj = Tbiv	5.35	3.40

This information was generated by the HP KEYMARK database on 17 Dec 2020

Pdh Tj = TOL	14.60 kW	13.35 kW
COP Tj = TOL	5.35	3.40
WTOL	65 °C	65 °C
Poff	7 W	7 W
PTO	7 W	7 W
PSB	7 W	7 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	5278 kWh	6534 kWh

Warmer Climate

EN 14825		
	Low temperature	Medium temperature
η_s	240 %	168 %
Prated	14.70 kW	13.83 kW
SCOP	6.19	4.40
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	14.70 kW	13.83 kW
COP Tj = +2°C	5.65	3.41

This information was generated by the HP KEYMARK database on 17 Dec 2020

Cdh	n/a	1.00
Pdh Tj = +7°C	14.79 kW	14.14 kW
COP Tj = +7°C	6.05	3.99
Cdh	1.00	1.00
Pdh Tj = 12°C	14.93 kW	14.58 kW
COP Tj = 12°C	6.68	5.14
Cdh	1.00	1.00
Pdh Tj = Tbiv	14.70 kW	13.83 kW
COP Tj = Tbiv	5.65	3.41
Pdh Tj = TOL	14.70 kW	13.83 kW
COP Tj = TOL	5.65	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	3172 kWh	4197 kWh

Colder Climate

This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 14825

	Low temperature	Medium temperature
η_s	246 %	172 %
Prated	14.70 kW	13.83 kW
SCOP	6.34	4.50
Tbiv	-22 °C	-22 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	14.83 kW	14.22 kW
COP Tj = -7°C	6.21	4.16
Cdh	1.00	1.00
Pdh Tj = +2°C	14.91 kW	14.47 kW
COP Tj = +2°C	6.57	4.80
Cdh	1.00	1.00
Pdh Tj = +7°C	14.97 kW	14.65 kW
COP Tj = +7°C	6.84	5.39
Cdh	1.00	1.00
Pdh Tj = 12°C	14.98 kW	14.79 kW
COP Tj = 12°C	6.76	5.84
Cdh	1.00	1.00
Pdh Tj = Tbiv	14.70 kW	13.83 kW
COP Tj = Tbiv	5.65	3.41

This information was generated by the HP KEYMARK database on 17 Dec 2020

Pdh Tj = TOL	14.70 kW	13.83 kW
COP Tj = TOL	5.65	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	5716 kWh	7568 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	1.00	1.00