

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

Summary of	HA 5-6 O 230V	Reg. No.	40051132
Certificate Holder			
Name	Saunier Duval Brand Group		
Address		Zip	
City		Country	Germany
Certification Body	VDE Prüf- und Zertifizierungsinstitut GmbH		
Name of testing laboratory	VDE Prüf- und Zertifizierungsinstitut GmbH		
Subtype title	HA 5-6 O 230V		
Heat Pump Type	Outdoor Air/Water		
Refrigerant	R290		
Mass Of Refrigerant	0.6 kg		
Certification Date	11.05.2020		
Testing basis	DIN EN 14511-1:2019-07; EN 14511-1:2018 DIN EN 14511-2:2019-07; EN 14511-2:2018 DIN EN 14511-3:2019-07; EN 14511-3:2018 DIN EN 14511-4:2019-07; EN 14511-4:2018 DIN EN 14825:2016-10; EN 14825:2016 DIN EN 12102-1:2018-02; EN 12102-1:2017		

Model: HA 5-6 O 230V

General Data

Power supply	1x230V 50Hz
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Heating

EN 14511-2

	Low temperature	Medium temperature
Heat output	3.36 kW	4.83 kW
El input	0.69 kW	1.71 kW
COP	4.80	2.80
Indoor water flow rate	0.58 m ³ /h	0.53 m ³ /h

EN 14511-4

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

Average Climate

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

EN 12102-1

	Low temperature	Medium temperature
Sound power level outdoor	51 dB(A)	54 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	183 %	130 %
Prated	4.81 kW	4.88 kW
SCOP	4.66	3.33
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.26 kW	4.32 kW
COP Tj = -7°C	2.78	2.11
Cdh	0.99	0.99
Pdh Tj = +2°C	2.70 kW	2.46 kW
COP Tj = +2°C	4.62	3.19
Cdh	0.97	0.98
Pdh Tj = +7°C	2.29 kW	2.12 kW
COP Tj = +7°C	6.41	4.40
Cdh	0.96	0.97
Pdh Tj = 12°C	2.61 kW	2.52 kW

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COP Tj = 12°C	7.61	6.03
Cdh	0.96	0.96
Pdh Tj = Tbiv	4.26 kW	4.32 kW
COP Tj = Tbiv	2.78	2.11
Pdh Tj = TOL	4.13 kW	4.63 kW
COP Tj = TOL	2.43	1.86
WTOL	70 °C	70 °C
Poff	8 W	8 W
PTO	17 W	17 W
PSB	17 W	17 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	2135 kWh	3031 kWh

Warmer Climate

EN 14825		
	Low temperature	Medium temperature
η_s	233 %	157 %
Prated	4.96 kW	5.07 kW
SCOP	5.89	3.99

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Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	4.96 kW	5.07 kW
COP Tj = +2°C	3.35	2.30
Cdh	0.99	0.99
Pdh Tj = +7°C	3.42 kW	3.08 kW
COP Tj = +7°C	5.45	3.43
Cdh	0.97	0.98
Pdh Tj = 12°C	2.59 kW	2.42 kW
COP Tj = 12°C	7.25	5.17
Cdh	0.96	0.97
Pdh Tj = Tbiv	4.96 kW	5.07 kW
COP Tj = Tbiv	3.35	2.30
Pdh Tj = TOL	4.96 kW	5.07 kW
COP Tj = TOL	3.35	2.30
WTOL	70 °C	70 °C
Poff	8 W	8 W
PTO	17 W	17 W
PSB	17 W	17 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 _{he}	1125 kWh	1697 kWh

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	51 dB(A)	54 dB(A)

Colder Climate

EN 14825		
	Low temperature	Medium temperature
η_s	158 %	116 %
Prated	5.01 kW	4.76 kW
SCOP	4.02	2.98
T _{biv}	-15 °C	-15 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = -7°C	3.22 kW	2.89 kW
COP T _j = -7°C	3.36	2.45
C _{dh}	0.98	0.99
P _{dh} T _j = +2°C	1.92 kW	1.85 kW
COP T _j = +2°C	5.04	3.65
C _{dh}	0.96	0.97

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

Pdh Tj = +7°C	2.33 kW	2.21 kW
COP Tj = +7°C	6.82	5.01
Cdh	0.96	0.96
Pdh Tj = 12°C	2.62 kW	2.56 kW
COP Tj = 12°C	7.24	6.46
Cdh	0.96	0.96
Pdh Tj = Tbiv	4.09 kW	3.88 kW
COP Tj = Tbiv	2.13	1.67
Pdh Tj = TOL	4.04 kW	3.40 kW
COP Tj = TOL	2.00	1.50
WTOL	70 °C	70 °C
Poff	8 W	8 W
PTO	17 W	17 W
PSB	17 W	17 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	3076 kWh	3930 kWh
Pdh Tj = -15°C (if TOL<-20°C)	4.09	3.88
COP Tj = -15°C (if TOL<-20°C)	2.13	1.67
Cdh	0.99	0.99

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

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	51 dB(A)	54 dB(A)

Model: HA 5-6 O 230V B2

General Data

Power supply	1x230V 50Hz
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Heating

EN 14511-2

	Low temperature	Medium temperature
Heat output	3.36 kW	4.83 kW
El input	0.69 kW	1.71 kW
COP	4.80	2.80
Indoor water flow rate	0.58 m ³ /h	0.53 m ³ /h

EN 14511-4

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

Average Climate

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

EN 12102-1

	Low temperature	Medium temperature
Sound power level outdoor	51 dB(A)	54 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	181 %	129 %
Prated	4.81 kW	4.88 kW
SCOP	4.59	3.29
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	4.26 kW	4.32 kW
COP Tj = -7°C	2.78	2.11
Cdh	0.99	0.99
Pdh Tj = +2°C	2.70 kW	2.46 kW
COP Tj = +2°C	4.62	3.19
Cdh	0.97	0.98
Pdh Tj = +7°C	2.29 kW	2.12 kW
COP Tj = +7°C	6.41	4.40
Cdh	0.96	0.97
Pdh Tj = 12°C	2.61 kW	2.52 kW

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

COP Tj = 12°C	7.61	6.03
Cdh	0.96	0.96
Pdh Tj = Tbiv	4.26 kW	4.32 kW
COP Tj = Tbiv	2.78	2.11
Pdh Tj = TOL	4.13 kW	4.63 kW
COP Tj = TOL	2.43	1.86
WTOL	70 °C	70 °C
Poff	8 W	8 W
PTO	17 W	17 W
PSB	17 W	17 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	2165 kWh	3062 kWh

Warmer Climate

EN 14825		
	Low temperature	Medium temperature
η_s	225 %	153 %
Prated	4.96 kW	5.07 kW
SCOP	5.71	3.91

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

Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	4.96 kW	5.07 kW
COP Tj = +2°C	3.35	2.30
Cdh	0.99	0.99
Pdh Tj = +7°C	3.42 kW	3.08 kW
COP Tj = +7°C	5.45	3.43
Cdh	0.97	0.98
Pdh Tj = 12°C	2.59 kW	2.42 kW
COP Tj = 12°C	7.25	5.17
Cdh	0.96	0.97
Pdh Tj = Tbiv	4.96 kW	5.07 kW
COP Tj = Tbiv	3.35	2.30
Pdh Tj = TOL	4.96 kW	5.07 kW
COP Tj = TOL	3.35	2.30
WTOL	70 °C	70 °C
Poff	8 W	8 W
PTO	17 W	17 W
PSB	17 W	17 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity

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

Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q _{he}	1161 kWh	1733 kWh

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	51 dB(A)	54 dB(A)

Colder Climate

EN 14825		
	Low temperature	Medium temperature
η_s	157 %	116 %
Prated	5.01 kW	4.76 kW
SCOP	3.99	2.97
T _{biv}	-15 °C	-15 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = -7°C	3.22 kW	2.89 kW
COP T _j = -7°C	3.36	2.45
C _{dh}	0.98	0.99
P _{dh} T _j = +2°C	1.92 kW	1.85 kW
COP T _j = +2°C	5.04	3.65
C _{dh}	0.96	0.97

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

Pdh Tj = +7°C	2.33 kW	2.21 kW
COP Tj = +7°C	6.82	5.01
Cdh	0.96	0.96
Pdh Tj = 12°C	2.62 kW	2.56 kW
COP Tj = 12°C	7.24	6.46
Cdh	0.96	0.96
Pdh Tj = Tbiv	4.09 kW	3.88 kW
COP Tj = Tbiv	2.13	1.67
Pdh Tj = TOL	4.04 kW	3.40 kW
COP Tj = TOL	2.00	1.50
WTOL	70 °C	70 °C
Poff	8 W	8 W
PTO	17 W	17 W
PSB	17 W	17 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	3094 kWh	3948 kWh
Pdh Tj = -15°C (if TOL<-20°C)	4.09	3.88
COP Tj = -15°C (if TOL<-20°C)	2.13	1.67
Cdh	0.99	0.99

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

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	51 dB(A)	54 dB(A)

Model: HA 5-6 O 230V B3

General Data

Power supply	1x230V 50Hz
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Heating

EN 14511-4

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

EN 14511-2

	Low temperature	Medium temperature
Heat output	4.21 kW	4.83 kW
El input	0.95 kW	1.71 kW
COP	4.39	2.80
Indoor water flow rate	0.74 m ³ /h	0.53 m ³ /h

Average Climate

EN 14825

	Low temperature	Medium temperature

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

η_s	177 %	130 %
Prated	4.45 kW	4.88 kW
SCOP	4.50	3.33
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	3.93 kW	4.32 kW
COP Tj = -7°C	2.79	2.11
Cdh	0.99	0.99
Pdh Tj = +2°C	2.17 kW	2.46 kW
COP Tj = +2°C	4.46	3.19
Cdh	0.97	0.98
Pdh Tj = +7°C	2.26 kW	2.12 kW
COP Tj = +7°C	5.99	4.40
Cdh	0.96	0.96
Pdh Tj = 12°C	2.54 kW	2.52 kW
COP Tj = 12°C	7.16	6.03
Cdh	0.96	0.96
Pdh Tj = Tbiv	3.93 kW	4.32 kW
COP Tj = Tbiv	2.79	2.11
Pdh Tj = TOL	4.42 kW	4.63 kW
COP Tj = TOL	2.21	1.86

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

WTOL	55 °C	55 °C
Poff	8 W	8 W
PTO	17 W	17 W
PSB	17 W	17 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	2043 kWh	3031 kWh

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	52 dB(A)	54 dB(A)

Warmer Climate

EN 14825		
	Low temperature	Medium temperature
η_s	215 %	157 %
Prated	4.75 kW	5.07 kW
SCOP	5.44	3.99
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C

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

Pdh Tj = +2°C	4.75 kW	5.07 kW
COP Tj = +2°C	3.22	2.30
Cdh	0.99	0.99
Pdh Tj = +7°C	3.33 kW	3.08 kW
COP Tj = +7°C	5.07	3.43
Cdh	0.98	0.98
Pdh Tj = 12°C	2.48 kW	2.42 kW
COP Tj = 12°C	6.61	5.17
Cdh	0.96	0.97
Pdh Tj = Tbiv	4.75 kW	5.07 kW
COP Tj = Tbiv	3.22	2.30
Pdh Tj = TOL	4.75 kW	5.07 kW
COP Tj = TOL	3.22	2.30
WTOL	55 °C	55 °C
Poff	8 W	8 W
PTO	17 W	17 W
PSB	17 W	17 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	1166 kWh	1697 kWh

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	52 dB(A)	54 dB(A)

Colder Climate

EN 14825		
	Low temperature	Medium temperature
η_s	148 %	116 %
Prated	4.68 kW	4.76 kW
SCOP	3.77	2.98
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	2.69 kW	2.89 kW
COP Tj = -7°C	3.26	2.45
Cdh	0.98	0.99
Pdh Tj = +2°C	1.90 kW	1.85 kW
COP Tj = +2°C	4.66	3.65
Cdh	0.96	0.97
Pdh Tj = +7°C	2.22 kW	2.21 kW
COP Tj = +7°C	6.04	5.01
Cdh	0.96	0.96

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

Pdh Tj = 12°C	2.49 kW	2.56 kW
COP Tj = 12°C	6.79	6.46
Cdh	0.96	0.96
Pdh Tj = Tbiv	3.82 kW	3.88 kW
COP Tj = Tbiv	2.01	1.67
Pdh Tj = TOL	3.70 kW	3.40 kW
COP Tj = TOL	1.88	1.50
WTOL	55 °C	55 °C
Poff	8 W	8 W
PTO	17 W	17 W
PSB	17 W	17 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	3064 kWh	3930 kWh
Pdh Tj = -15°C (if TOL<-20°C)	3.82	3.88
COP Tj = -15°C (if TOL<-20°C)	2.01	1.67
Cdh	0.99	0.99

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

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	52 dB(A)	54 dB(A)

Model: HA 3-6 O 230V

General Data

Power supply	1x230V 50Hz
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Heating

EN 14511-4

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

EN 14511-2

	Low temperature	Medium temperature
Heat output	3.32 kW	4.79 kW
El input	0.69 kW	1.71 kW
COP	4.80	2.80
Indoor water flow rate	0.58 m ³ /h	0.53 m ³ /h

Average Climate

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

EN 12102-1

	Low temperature	Medium temperature
Sound power level outdoor	51 dB(A)	54 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	177 %	124 %
Prated	4.19 kW	4.18 kW
SCOP	4.50	3.18
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	3.71 kW	3.69 kW
COP Tj = -7°C	3.04	2.08
Cdh	0.99	0.99
Pdh Tj = +2°C	2.18 kW	2.32 kW
COP Tj = +2°C	4.40	3.01
Cdh	0.97	0.98
Pdh Tj = +7°C	2.15 kW	2.03 kW
COP Tj = +7°C	5.96	4.28
Cdh	0.96	0.97
Pdh Tj = 12°C	2.41 kW	2.42 kW

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

COP Tj = 12°C	7.04	5.84
Cdh	0.96	0.96
Pdh Tj = Tbiv	3.71 kW	3.69 kW
COP Tj = Tbiv	3.04	2.08
Pdh Tj = TOL	3.34 kW	3.31 kW
COP Tj = TOL	2.51	1.81
WTOL	55 °C	55 °C
Poff	8 W	8 W
PTO	17 W	17 W
PSB	17 W	17 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	1923 kWh	2715 kWh

Warmer Climate

EN 14825		
	Low temperature	Medium temperature
η_s	208 %	153 %
Prated	3.53 kW	3.55 kW
SCOP	5.29	3.89

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

Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	3.53 kW	3.55 kW
COP Tj = +2°C	3.42	2.31
Cdh	0.98	0.99
Pdh Tj = +7°C	2.18 kW	2.44 kW
COP Tj = +7°C	4.97	3.37
Cdh	0.97	0.98
Pdh Tj = 12°C	2.40 kW	2.37 kW
COP Tj = 12°C	6.45	5.11
Cdh	0.96	0.97
Pdh Tj = Tbiv	3.53 kW	3.55 kW
COP Tj = Tbiv	3.42	2.31
Pdh Tj = TOL	3.53 kW	3.55 kW
COP Tj = TOL	3.42	2.31
WTOL	55 °C	55 °C
Poff	8 W	8 W
PTO	17 W	17 W
PSB	17 W	17 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity

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

Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q _{he}	892 kWh	1219 kWh

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	51 dB(A)	54 dB(A)

Colder Climate

EN 14825		
	Low temperature	Medium temperature
η_s	147 %	108 %
Prated	3.34 kW	3.15 kW
SCOP	3.75	2.78
T _{biv}	-15 °C	-15 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = -7°C	2.11 kW	1.92 kW
COP T _j = -7°C	3.34	2.25
C _{dh}	0.98	0.98
P _{dh} T _j = +2°C	1.78 kW	1.71 kW
COP T _j = +2°C	4.45	3.46
C _{dh}	0.96	0.97

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

Pdh Tj = +7°C	2.16 kW	2.09 kW
COP Tj = +7°C	6.23	4.71
Cdh	0.96	0.97
Pdh Tj = 12°C	2.49 kW	2.44 kW
COP Tj = 12°C	7.22	6.17
Cdh	0.96	0.96
Pdh Tj = Tbiv	2.72 kW	2.57 kW
COP Tj = Tbiv	2.16	1.61
Pdh Tj = TOL	2.69 kW	2.43 kW
COP Tj = TOL	2.06	1.46
WTOL	55 °C	55 °C
Poff	8 W	8 W
PTO	17 W	17 W
PSB	17 W	17 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	2192 kWh	2787 kWh
Pdh Tj = -15°C (if TOL<-20°C)		
COP Tj = -15°C (if TOL<-20°C)		
Cdh		

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

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	51 dB(A)	54 dB(A)

Model: HA 3-6 O 230V B2

General Data

Power supply	1x230V 50Hz
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Heating

EN 14511-4

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

EN 14511-2

	Low temperature	Medium temperature
Heat output	3.32 kW	4.79 kW
El input	0.69 kW	1.71 kW
COP	4.80	2.80
Indoor water flow rate	0.58 m ³ /h	0.53 m ³ /h

Average Climate

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

EN 12102-1

	Low temperature	Medium temperature
Sound power level outdoor	51 dB(A)	54 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	174 %	123 %
Prated	4.19 kW	4.18 kW
SCOP	4.43	3.14
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	3.71 kW	3.69 kW
COP Tj = -7°C	3.04	2.08
Cdh	0.99	0.99
Pdh Tj = +2°C	2.18 kW	2.32 kW
COP Tj = +2°C	4.40	3.01
Cdh	0.97	0.98
Pdh Tj = +7°C	2.15 kW	2.03 kW
COP Tj = +7°C	5.96	4.28
Cdh	0.96	0.97
Pdh Tj = 12°C	2.41 kW	2.42 kW

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

COP Tj = 12°C	7.04	5.84
Cdh	0.96	0.96
Pdh Tj = Tbiv	3.71 kW	3.69 kW
COP Tj = Tbiv	3.04	2.08
Pdh Tj = TOL	3.34 kW	3.31 kW
COP Tj = TOL	2.51	1.81
WTOL	55 °C	55 °C
Poff	8 W	8 W
PTO	17 W	17 W
PSB	17 W	17 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	1953 kWh	2745 kWh

Warmer Climate

EN 14825		
	Low temperature	Medium temperature
η_s	200 %	148 %
Prated	3.53 kW	3.55 kW
SCOP	5.08	3.78

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

Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	3.53 kW	3.55 kW
COP Tj = +2°C	3.42	2.31
Cdh	0.98	0.99
Pdh Tj = +7°C	2.18 kW	2.44 kW
COP Tj = +7°C	4.97	3.37
Cdh	0.97	0.98
Pdh Tj = 12°C	2.40 kW	2.37 kW
COP Tj = 12°C	6.45	5.11
Cdh	0.96	0.97
Pdh Tj = Tbiv	3.53 kW	3.55 kW
COP Tj = Tbiv	3.42	2.31
Pdh Tj = TOL	3.53 kW	3.55 kW
COP Tj = TOL	3.42	2.31
WTOL	55 °C	55 °C
Poff	8 W	8 W
PTO	17 W	17 W
PSB	17 W	17 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity

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

Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Q _{he}	928 kWh	1255 kWh

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	51 dB(A)	54 dB(A)

Colder Climate

EN 14825		
	Low temperature	Medium temperature
η_s	146 %	108 %
Prated	3.34 kW	3.15 kW
SCOP	3.72	2.77
T _{biv}	-15 °C	-15 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = -7°C	2.11 kW	1.92 kW
COP T _j = -7°C	3.34	2.25
C _{dh}	0.98	0.98
P _{dh} T _j = +2°C	1.78 kW	1.71 kW
COP T _j = +2°C	4.45	3.46
C _{dh}	0.96	0.97

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

Pdh Tj = +7°C	2.16 kW	2.09 kW
COP Tj = +7°C	6.23	4.71
Cdh	0.96	0.97
Pdh Tj = 12°C	2.49 kW	2.44 kW
COP Tj = 12°C	7.22	6.17
Cdh	0.96	0.96
Pdh Tj = Tbiv	2.72 kW	2.57 kW
COP Tj = Tbiv	2.16	1.61
Pdh Tj = TOL	2.69 kW	2.43 kW
COP Tj = TOL	2.06	1.46
WTOL	55 °C	55 °C
Poff	8 W	8 W
PTO	17 W	17 W
PSB	17 W	17 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	2210 kWh	2805 kWh
Pdh Tj = -15°C (if TOL<-20°C)		
COP Tj = -15°C (if TOL<-20°C)		
Cdh		

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

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	51 dB(A)	54 dB(A)

Model: HA 4-6 O 230V B3

General Data

Power supply	1x230V 50Hz
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Heating

EN 14511-2

	Low temperature	Medium temperature
Heat output	4.07 kW	3.64 kW
El input	0.89 kW	1.28 kW
COP	4.59	2.83
Indoor water flow rate	0.70 m ³ /h	0.40 m ³ /h

EN 14511-4

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

Average Climate

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

EN 12102-1

	Low temperature	Medium temperature
Sound power level outdoor	50 dB(A)	52 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	180 %	131 %
Prated	4.13 kW	4.22 kW
SCOP	4.56	3.34
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	3.65 kW	3.73 kW
COP Tj = -7°C	2.97	2.12
Cdh	0.99	0.99
Pdh Tj = +2°C	2.20 kW	2.28 kW
COP Tj = +2°C	4.48	3.24
Cdh	0.97	0.98
Pdh Tj = +7°C	2.23 kW	2.11 kW
COP Tj = +7°C	6.02	4.45
Cdh	0.96	0.97
Pdh Tj = 12°C	2.59 kW	2.54 kW

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

COP Tj = 12°C	7.39	5.97
Cdh	0.96	0.96
Pdh Tj = Tbiv	3.65 kW	3.73 kW
COP Tj = Tbiv	2.97	2.12
Pdh Tj = TOL	3.65 kW	3.35 kW
COP Tj = TOL	2.65	1.86
WTOL	75 °C	75 °C
Poff	8 W	8 W
PTO	17 W	17 W
PSB	17 W	17 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	1870 kWh	2606 kWh

Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	50 dB(A)	52 dB(A)

EN 14825		
	Low temperature	Medium temperature

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

η_s	220 %	155 %
Prated	3.40 kW	3.43 kW
SCOP	5.57	3.94
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	3.44 kW	3.43 kW
COP Tj = +2°C	3.36	2.28
Cdh	0.98	0.99
Pdh Tj = +7°C	2.33 kW	2.16 kW
COP Tj = +7°C	5.21	3.39
Cdh	0.97	0.98
Pdh Tj = 12°C	2.57 kW	2.45 kW
COP Tj = 12°C	7.00	5.25
Cdh	0.96	0.97
Pdh Tj = Tbiv	3.44 kW	3.43 kW
COP Tj = Tbiv	3.36	2.28
Pdh Tj = TOL	3.44 kW	3.43 kW
COP Tj = TOL	3.36	2.28
WTOL	75 °C	75 °C
Poff	8 W	8 W
PTO	17 W	17 W

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

PSB	17 W	17 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 Q _{he}	815 kWh	1164 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	50 dB(A)	52 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_s	152 %	113 %
Prated	4.00 kW	3.48 kW
SCOP	3.87	2.90
T _{biv}	-15 °C	-15 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = -7°C	2.42 kW	2.12 kW
COP T _j = -7°C	3.26	2.40
C _{dh}	0.98	0.98

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

Pdh Tj = +2°C	1.92 kW	1.76 kW
COP Tj = +2°C	4.80	3.53
Cdh	0.96	0.97
Pdh Tj = +7°C	2.26 kW	2.14 kW
COP Tj = +7°C	6.27	4.81
Cdh	0.96	0.97
Pdh Tj = 12°C	2.59 kW	2.57 kW
COP Tj = 12°C	7.39	6.27
Cdh	0.96	0.96
Pdh Tj = Tbiv	3.11 kW	2.84 kW
COP Tj = Tbiv	2.37	1.76
Pdh Tj = TOL	2.66 kW	2.41 kW
COP Tj = TOL	2.02	1.47
WTOL	75 °C	75 °C
Poff	8 W	8 W
PTO	17 W	17 W
PSB	17 W	17 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	2543 kWh	2959 kWh