

Page 1 of 43

#### This information was generated by the HP KEYMARK database on 8 Apr 2022

#### **Login**

Summary of	HA 7-6 O 230V	Reg. No.	40051133	
Certificate H	Certificate Holder			
Name	Saunier Duval Brand Group			
Address	Zip			
City		Country	Germany	
Certification Body	VDE Prüf- und Zertifizierungsinstitut GmbH			
Subtype title	HA 7-6 O 230V			
Heat Pump Type	Outdoor Air/Water			
Refrigerant	R290			
Mass of Refrigerant	0.9 kg			
Certification Date	06.04.2022			
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 14825:2019-07; EN 14825:2018, DIN EN 12102-1:2018-02; EN 12102-1:2017			

# Model: HA 7-6 O 230V

Configure model		
Model name	HA 7-6 O 230V	
Application	Heating (medium temp)	
Units	Outdoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	Yes	
Cooling mode application (optional)	n/a	

General Data		
Power supply	1x230V 50Hz	

### Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	4.57 kW	4.95 kW	
El input	0.95 kW	1.68 kW	
СОР	4.79	2.93	

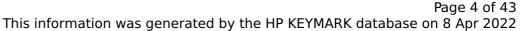
EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

# **Average Climate**



EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	53 dB(A)	55 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	185 %	134 %
Prated	6.60 kW	6.13 kW
SCOP	4.69	3.43
Tbiv	-10 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.84 kW	5.42 kW
COP Tj = -7°C	2.72	2.13
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	3.72 kW	3.46 kW
COP Tj = +2°C	4.68	3.36
Cdh Tj = +2 °C	0.960	0.970
Pdh Tj = +7°C	3.18 kW	3.00 kW
COP Tj = +7°C	6.38	4.60
Cdh Tj = +7 °C	0.950	0.960
Pdh Tj = 12°C	3.74 kW	3.59 kW





COP Tj = 12°C7.88 6.18 Cdh Tj = +12 °C 0.940 0.950 Pdh Tj = Tbiv6.27 kW 5.42 kW COP Tj = Tbiv2.64 2.13 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh 6.27 kW 4.88 kW 2.64 COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh 1.88 Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh WTOL 70 °C 70 °C Poff 8 W 8 W

29 W

29 W

0 W

kW

Electricity

2907 kWh

29 W

29 W

0 W

Electricity

1.25 kW

3688 kWh

### Warmer Climate

Supplementary Heater: PSUP

Annual energy consumption Qhe

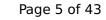
Supplementary Heater: Type of energy input

PTO

**PSB** 

**PCK** 

EN 14825			
	Low temperature	Medium temperature	
$\eta_{s}$	237 %	163 %	
Prated	6.77 kW	6.60 kW	





SCOP	5.99	4.14
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.77 kW	6.60 kW
$COP Tj = +2^{\circ}C$	3.23	2.23
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = $+7^{\circ}$ C	4.14 kW	4.52 kW
$COP Tj = +7^{\circ}C$	5.52	3.47
Cdh Tj = $+7$ °C	0.96	0.97
Pdh Tj = 12°C	3.75 kW	3.56 kW
COP Tj = 12°C	7.65	5.68
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	6.77 kW	6.60 kW
COP Tj = Tbiv	3.23	2.23
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL $<$ Tdesignh	6.77 kW	6.60 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.23	2.23
WTOL	70 °C	70 °C
Poff	8 W	8 W
PTO	29 W	29 W
PSB	29 W	29 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	1510 kWh	2128 kWh

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level outdoor	53 dB(A)	55 dB(A)	

### Colder Climate

EN 14825			
	Low temperature	Medium temperature	
$\eta_{s}$	160 %	118 %	
Prated	5.85 kW	5.39 kW	
SCOP	4.07	3.03	
Tbiv	-15 °C	-15 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	3.51 kW	3.69 kW	
COP Tj = -7°C	3.31	2.53	
Cdh Tj = -7 °C	0.970	0.980	
Pdh Tj = +2°C	2.73 kW	2.55 kW	
COP Tj = +2°C	5.01	3.62	





····· 9-··-		interest and a second of the second
Cdh Tj = +2 °C	0.950	0.960
Pdh Tj = $+7^{\circ}$ C	3.19 kW	3.08 kW
COP Tj = +7°C	6.82	5.05
Cdh Tj = +7 °C	0.940	0.950
Pdh Tj = 12°C	3.78 kW	3.64 kW
COP Tj = 12°C	8.52	6.54
Cdh Tj = +12 °C	0.940	0.950
Pdh Tj = Tbiv	4.77 kW	4.40 kW
COP Tj = Tbiv	2.60	1.90
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.94 kW	4.57 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.08	1.53
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	70 °C	70 °C
Poff	8 W	8 W
РТО	29 W	29 W
PSB	29 W	29 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.85 kW	5.39 kW
Annual energy consumption Qhe	3546 kWh	4380 kWh
Pdh Tj = -15°C (if TOL<-20°C)	4.77	4.40





COP Tj = -15°C (if TOL $<$ -20°C)	2.60	1.90
Cdh Tj = -15 °C	0.980	0.990

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	53 dB(A)	55 dB(A)



# Model: HA 7-6 O 230V B2

Configure model		
Model name	HA 7-6 O 230V B2	
Application	Heating (medium temp)	
Units	Outdoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	No	
Cooling mode application (optional)	n/a	

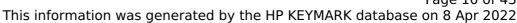
General Data		
Power supply 1x230V 50Hz		

### Heating

EN 14511-2		
Low temperature Medium temperature		
Heat output	4.57 kW	4.95 kW
El input	0.95 kW	1.68 kW
СОР	4.79	2.93

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

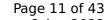
# **Average Climate**





EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	53 dB(A)	55 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	183 %	133 %
Prated	6.60 kW	6.13 kW
SCOP	4.64	3.41
Tbiv	-10 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.84 kW	5.42 kW
COP Tj = -7°C	2.72	2.13
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	3.72 kW	3.46 kW
COP Tj = +2°C	4.68	3.36
Cdh Tj = +2 °C	0.960	0.970
Pdh Tj = +7°C	3.18 kW	3.00 kW
COP Tj = +7°C	6.38	4.60
Cdh Tj = +7 °C	0.950	0.960
Pdh Tj = 12°C	3.74 kW	3.59 kW

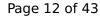




COP Tj = 12°C	7.88	6.18
Cdh Tj = +12 °C	0.940	0.950
Pdh Tj = Tbiv	6.27 kW	5.42 kW
COP Tj = Tbiv	2.64	2.13
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.27 kW	4.88 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.64	1.88
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	70 °C	70 °C
Poff	8 W	8 W
РТО	29 W	29 W
PSB	29 W	29 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	kW	1.25 kW
Annual energy consumption Qhe	2937 kWh	3718 kWh

### Warmer Climate

EN 14825		
	Low temperature	Medium temperature
$\eta_{S}$	231 %	160 %
Prated	6.77 kW	6.60 kW





SCOP	5.85	4.07
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = $+2$ °C	6.77 kW	6.60 kW
COP Tj = +2°C	3.23	2.23
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = $+7^{\circ}$ C	4.14 kW	4.52 kW
$COPTj = +7^{\circ}C$	5.52	3.47
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	3.75 kW	3.56 kW
COP Tj = 12°C	7.65	5.68
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	6.77 kW	6.60 kW
COP Tj = Tbiv	3.23	2.23
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.77 kW	6.60 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.23	2.23
WTOL	70 °C	70 °C
Poff	8 W	8 W
РТО	29 W	29 W
PSB	29 W	29 W
РСК	0 W	0 W





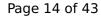
			9
This information was	generated by the	HP KEYMARK	database on 8 Apr 2022

Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1546 kWh	2164 kWh

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level outdoor	53 dB(A)	55 dB(A)	

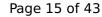
### Colder Climate

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	159 %	118 %
Prated	5.85 kW	5.39 kW
SCOP	4.05	3.02
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	3.51 kW	3.69 kW
COP Tj = -7°C	3.31	2.53
Cdh Tj = -7 °C	0.970	0.980
Pdh Tj = +2°C	2.73 kW	2.55 kW
COP Tj = +2°C	5.01	3.62
	·	·





This information was gene	rated by the HE KLIMA	ANN database on 6 Apr 2022
Cdh Tj = $+2$ °C	0.950	0.960
Pdh Tj = $+7^{\circ}$ C	3.19 kW	3.08 kW
$COPTj = +7^{\circ}C$	6.82	5.05
Cdh Tj = +7 °C	0.940	0.950
Pdh Tj = 12°C	3.78 kW	3.64 kW
COP Tj = 12°C	8.52	6.54
Cdh Tj = +12 °C	0.940	0.950
Pdh Tj = Tbiv	4.77 kW	4.40 kW
COP Tj = Tbiv	2.60	1.90
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.94 kW	4.57 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.08	1.53
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL $<$ Tdesignh		
WTOL	70 °C	70 °C
Poff	8 W	8 W
РТО	29 W	29 W
PSB	29 W	29 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.85 kW	5.39 kW
Annual energy consumption Qhe	3565 kWh	4398 kWh
Pdh Tj = -15°C (if TOL<-20°C)	4.77	4.40





COP Tj = -15°C (if TOL $<$ -20°C)	2.60	1.90
Cdh Tj = -15 °C	0.980	0.990

EN 12102-1			
Low temperature Medium temperature			
Sound power level outdoor	53 dB(A)	55 dB(A)	

# Model: HA 8-6 O 230V B3

Configure model		
Model name	HA 8-6 O 230V B3	
Application	Heating (medium temp)	
Units	Outdoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	Yes	
Cooling mode application (optional) n/a		

General Data		
Power supply	1x230V 50Hz	

### 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	7.37 kW	7.58 kW	
El input	1.66 kW	2.65 kW	
СОР	4.42	2.85	

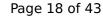
# **Average Climate**





#### EN 14825

	Low temperature	Medium temperature
$\eta_{S}$	187 %	135 %
Prated	7.21 kW	6.39 kW
SCOP	4.75	3.44
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	6.38 kW	5.66 kW
$COP Tj = -7^{\circ}C$	2.93	2.17
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = $+2^{\circ}$ C	3.83 kW	3.49 kW
$COP Tj = +2^{\circ}C$	4.73	3.32
Cdh Tj = +2 °C	0.970	0.970
Pdh Tj = $+7^{\circ}$ C	3.21 kW	3.06 kW
$COP Tj = +7^{\circ}C$	6.33	4.67
Cdh Tj = +7 °C	0.950	0.960
Pdh Tj = 12°C	3.72 kW	3.62 kW
COP Tj = 12°C	7.79	6.23
Cdh Tj = +12 °C	0.940	0.950
Pdh Tj = Tbiv	6.38 kW	5.66 kW
COP Tj = Tbiv	2.93	2.17



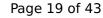


Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.00 kW	5.09 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.66	1.92
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	55 °C	55 °C
Poff	8 W	8 W
РТО	29 W	29 W
PSB	29 W	29 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.21 kW	1.30 kW
Annual energy consumption Qhe	3139 kWh	3837 kWh

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	58 dB(A)	57 dB(A)

### Warmer Climate

EN 14825		
	Low temperature	Medium temperature
$\eta_s$	228 %	162 %
Prated	6.87 kW	7.06 kW
	·	





		4.12
SCOP	5.78	4.13
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = $+2$ °C	6.87 kW	7.06 kW
COP Tj = +2°C	3.18	2.31
Cdh Tj = +2 °C	0.99	0.99
Pdh Tj = $+7^{\circ}$ C	4.38 kW	4.71 kW
$COPTj = +7^{\circ}C$	5.29	3.44
Cdh Tj = +7 °C	0.97	0.98
Pdh Tj = 12°C	3.68 kW	3.56 kW
COP Tj = 12°C	7.37	5.62
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	6.87 kW	7.06 kW
COP Tj = Tbiv	3.18	2.31
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.87 kW	7.06 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.18	2.31
WTOL	55 °C	55 °C
Poff	8 W	8 W
РТО	29 W	29 W
PSB	29 W	29 W
РСК	0 W	o w
	•	•



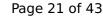


Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1586 kWh	2284 kWh

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	58 dB(A)	57 dB(A)

### Colder Climate

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	159 %	119 %
Prated	6.03 kW	5.59 kW
SCOP	4.05	3.06
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	3.71 kW	3.77 kW
COP Tj = -7°C	3.42	2.54
Cdh Tj = -7 °C	0.970	0.980
Pdh Tj = +2°C	2.80 kW	2.59 kW
COP Tj = +2°C	5.04	3.70





This information was gener	acca by the fit RETI-II	interest and a second of the EoE
Cdh Tj = +2 °C	0.950	0.960
Pdh Tj = $+7^{\circ}$ C	3.25 kW	3.12 kW
$COPTj = +7^{\circ}C$	6.63	5.08
Cdh Tj = $+7$ °C	0.950	0.960
Pdh Tj = 12°C	3.73 kW	3.67 kW
COP Tj = 12°C	7.71	6.80
Cdh Tj = +12 °C	0.940	0.950
Pdh Tj = Tbiv	4.92 kW	4.56 kW
COP Tj = Tbiv	2.57	1.92
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.66 kW	3.29 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.19	1.56
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	55 °C	55 °C
Poff	8 W	8 W
РТО	29 W	29 W
PSB	29 W	29 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	6.03 kW	5.59 kW
Annual energy consumption Qhe	3665 kWh	4506 kWh
Pdh Tj = $-15$ °C (if TOL< $-20$ °C)	4.92	4.56





# $$\operatorname{Page}\ 22$$ of 43 This information was generated by the HP KEYMARK database on 8 Apr 2022

COP Tj = -15°C (if TOL $<$ -20°C)	2.57	1.92
Cdh Tj = -15 °C	0.980	0.990

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	58 dB(A)	57 dB(A)



# Model: HA 6-6 O 230V

Configure model		
Model name	HA 6-6 O 230V	
Application	Heating (medium temp)	
Units	Outdoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	Yes	
Cooling mode application (optional)	n/a	

General Data		
Power supply	1x230V 50Hz	

### Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	4.48 kW	4.94 kW	
El input	0.94 kW	1.69 kW	
СОР	4.78	2.93	

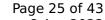
EN 14511-4		
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	
Starting and operating test	passed	

# Average Climate



EN 12102-1			
	Low temperature	Medium temperature	
Sound power level outdoor	53 dB(A)	55 dB(A)	

EN 14825		
	Low temperature	Medium temperature
η <sub>s</sub>	188 %	131 %
Prated	5.75 kW	4.49 kW
SCOP	4.76	3.35
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.19 kW	3.89 kW
COP Tj = -7°C	3.10	2.19
Cdh Tj = -7 °C	0.980	0.980
Pdh Tj = +2°C	3.01 kW	2.57 kW
COP Tj = +2°C	4.73	3.25
Cdh Tj = +2 °C	0.960	0.960
Pdh Tj = +7°C	3.09 kW	2.95 kW
COP Tj = +7°C	6.17	4.48
Cdh Tj = +7 °C	0.950	0.960
Pdh Tj = 12°C	3.66 kW	3.56 kW





		· · · · · · · · · · · · · · · · · · ·
COP Tj = 12°C	7.60	6.06
Cdh Tj = +12 °C	0.940	0.950
Pdh Tj = Tbiv	5.37 kW	4.84 kW
COP Tj = Tbiv	2.78	1.89
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.37 kW	4.84 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.78	1.89
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	55 °C	55 °C
Poff	8 W	8 W
РТО	29 W	29 W
PSB	29 W	29 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	kW	kW
Annual energy consumption Qhe	2494 kWh	2766 kWh

### Warmer Climate

EN 14825		
	Low temperature	Medium temperature
$\eta_{S}$	232 %	164 %
Prated	5.71 kW	6.10 kW
	ı	1





	racea by the fir RETIN	ANN database on 6 Apr 2022
SCOP	5.87	4.16
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.71 kW	6.10 kW
COP Tj = +2°C	3.29	2.29
Cdh Tj = +2 °C	0.980	0.990
Pdh Tj = $+7$ °C	3.73 kW	4.28 kW
$COPTj = +7^{\circ}C$	5.59	3.58
Cdh Tj = +7 °C	0.960	0.980
Pdh Tj = 12°C	3.64 kW	3.51 kW
COP Tj = 12°C	7.36	5.59
Cdh Tj = +12 °C	0.950	0.960
Pdh Tj = Tbiv	5.71 kW	6.10 kW
COP Tj = Tbiv	3.29	2.29
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.71 kW	6.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.29	2.29
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	55 °C	55 °C
Poff	8 W	8 W
РТО	29 W	29 W
PSB	29 W	29 W



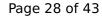


PCK	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1299 kWh	1956 kWh

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level outdoor	53 dB(A)	55 dB(A)	

### Colder Climate

EN 14825		
	Low temperature	Medium temperature
$\eta_{S}$	162 %	117 %
Prated	4.25 kW	3.92 kW
SCOP	4.11	3.00
Tbiv	-20 °C	-20 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	2.81 kW	2.28 kW
COP Tj = $-7^{\circ}$ C	3.51	2.43
Cdh Tj = -7 °C	0.970	0.970
Pdh Tj = +2°C	2.71 kW	2.53 kW





<b>3</b>	· · · · <b>,</b>	ANN database on 6 Apr 202
$COP Tj = +2^{\circ}C$	5.06	3.72
Cdh Tj = +2 °C	0.950	0.960
Pdh Tj = $+7^{\circ}$ C	3.10 kW	3.01 kW
$COP Tj = +7^{\circ}C$	6.39	4.89
Cdh Tj = +7 °C	0.950	0.960
Pdh Tj = 12°C	3.69 kW	3.58 kW
COP Tj = 12°C	7.84	6.44
Cdh Tj = +12 °C	0.940	0.950
Pdh Tj = Tbiv	4.03 kW	3.71 kW
COP Tj = Tbiv	2.20	1.59
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.03 kW	3.71 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.20	1.59
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	55 °C	55 °C
Poff	8 W	8 W
РТО	29 W	29 W
PSB	29 W	29 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.25 kW	3.92 kW
Annual energy consumption Qhe	2549 kWh	3219 kWh



Page 29 of 43

Pdh Tj = -15°C (if TOL<-20°C)	
COP Tj = -15°C (if TOL $<$ -20°C)	
Cdh Tj = -15 °C	

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	53 dB(A)	55 dB(A)

# Model: HA 6-6 O 230V B2

Configure model		
Model name	HA 6-6 O 230V B2	
Application	Heating (medium temp)	
Units	Outdoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	No	
Cooling mode application (optional)	n/a	

General Data		
Power supply	1x230V 50Hz	

### Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	4.48 kW	4.94 kW
El input	0.94 kW	1.69 kW
СОР	4.78	2.93

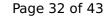
EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

# Average Climate



EN 12102-1			
Low temperature Medium temperature			
Sound power level outdoor	53 dB(A)	55 dB(A)	

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	185 %	130 %
Prated	5.75 kW	4.49 kW
SCOP	4.71	3.32
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.19 kW	3.89 kW
COP Tj = -7°C	3.10	2.19
Cdh Tj = -7 °C	0.980	0.980
Pdh Tj = +2°C	3.01 kW	2.57 kW
COP Tj = +2°C	4.73	3.25
Cdh Tj = +2 °C	0.960	0.960
Pdh Tj = +7°C	3.09 kW	2.95 kW
COP Tj = +7°C	6.17	4.48
Cdh Tj = +7 °C	0.950	0.960
Pdh Tj = 12°C	3.66 kW	3.56 kW

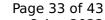




	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·
COP Tj = 12°C	7.60	6.06
Cdh Tj = +12 °C	0.940	0.950
Pdh Tj = Tbiv	5.37 kW	4.84 kW
COP Tj = Tbiv	2.78	1.89
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.37 kW	4.84 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.78	1.89
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	55 °C	55 °C
Poff	8 W	8 W
РТО	29 W	29 W
PSB	29 W	29 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2524 kWh	2796 kWh

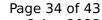
### Warmer Climate

EN 14825		
	Low temperature	Medium temperature
$\eta_s$	226 %	161 %
Prated	5.71 kW	6.10 kW





This information was gene	rated by the HP KETM	ARK database on 8 Apr 2022
SCOP	5.71	4.09
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.71 kW	6.10 kW
COP Tj = +2°C	3.29	2.29
Cdh Tj = +2 °C	0.980	0.990
Pdh Tj = +7°C	3.73 kW	4.28 kW
$COPTj = +7^{\circ}C$	5.59	3.58
Cdh Tj = +7 °C	0.960	0.980
Pdh Tj = 12°C	3.64 kW	3.51 kW
COP Tj = 12°C	7.36	5.59
Cdh Tj = +12 °C	0.950	0.960
Pdh Tj = Tbiv	5.71 kW	6.10 kW
COP Tj = Tbiv	3.29	2.29
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.71 kW	6.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.29	2.29
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	55 °C	55 °C
Poff	8 W	8 W
РТО	29 W	29 W
PSB	29 W	29 W



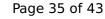


PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1335 kWh	1993 kWh

EN 12102-1			
Low temperature Medium temperature			
Sound power level outdoor	53 dB(A)	55 dB(A)	

### Colder Climate

EN 14825		
	Low tempera	nture Medium temperature
$\eta_{s}$	160 %	116 %
Prated	4.25 kW	3.92 kW
SCOP	4.08	2.98
Tbiv	-20 °C	-20 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	2.81 kW	2.28 kW
COP Tj = -7°C	3.51	2.43
Cdh Tj = -7 °C	0.970	0.970
Pdh Tj = +2°C	2.71 kW	2.53 kW





illis illioilliation was gener	ated by the HE KLIMA	ANN database on 6 Apr 2022
COP Tj = +2°C	5.06	3.72
Cdh Tj = +2 °C	0.950	0.960
Pdh Tj = $+7^{\circ}$ C	3.10 kW	3.01 kW
$COP Tj = +7^{\circ}C$	6.39	4.89
Cdh Tj = +7 °C	0.950	0.960
Pdh Tj = 12°C	3.69 kW	3.58 kW
COP Tj = 12°C	7.84	6.44
Cdh Tj = +12 °C	0.940	0.950
Pdh Tj = Tbiv	4.03 kW	3.71 kW
COP Tj = Tbiv	2.20	1.59
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.03 kW	3.71 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.20	1.59
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	55 °C	55 °C
Poff	8 W	8 W
РТО	29 W	29 W
PSB	29 W	29 W
РСК	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.25 kW	3.92 kW
Annual energy consumption Qhe	2567 kWh	3237 kWh



Page 36 of 43

Pdh Tj = -15°C (if TOL<-20°C)	
COP Tj = -15°C (if TOL $<$ -20°C)	
Cdh Tj = -15 °C	

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	53 dB(A)	55 dB(A)

# Model: HA 6-6 O 230V B3

Configure model		
Model name	HA 6-6 O 230V B3	
Application	Heating (medium temp)	
Units	Outdoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	Yes	
Cooling mode application (optional)	n/a	

General Data		
Power supply 1x230V 50Hz		

### Heating

EN 14511-2		
Low temperature Medium temperature		
Heat output	5.12 kW	5.80 kW
El input	1.10 kW	2.00 kW
СОР	4.66	2.89

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



EN 12102-1			
Low temperature Medium temperature			
Sound power level outdoor	50 dB(A)	57 dB(A)	

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	186 %	136 %
Prated	6.73 kW	6.26 kW
SCOP	4.71	3.47
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.96 kW	5.54 kW
COP Tj = -7°C	3.01	2.14
Cdh Tj = -7 °C	0.990	0.990
Pdh Tj = +2°C	3.67 kW	3.63 kW
COP Tj = +2°C	4.62	3.39
Cdh Tj = +2 °C	0.970	0.970
Pdh Tj = +7°C	3.12 kW	3.01 kW
COP Tj = +7°C	6.36	4.67
Cdh Tj = +7 °C	0.950	0.960
Pdh Tj = 12°C	3.69 kW	3.57 kW





COP Tj = 12°C	7.82	6.19
Cdh Tj = +12 °C	0.940	0.950
Pdh Tj = Tbiv	5.96 kW	5.54 kW
COP Tj = Tbiv	3.01	2.14
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.52 kW	5.05 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.77	1.90
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	55 °C	55 °C
Poff	8 W	8 W
РТО	29 W	29 W
PSB	29 W	29 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.21 kW	1.21 kW
Annual energy consumption Qhe	2951 kWh	3731 kWh

### Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	50 dB(A)	57 dB(A)

#### EN 14825



	Low temperature	Medium temperature
$\eta_{s}$	229 %	162 %
Prated	5.31 kW	5.98 kW
SCOP	5.81	4.12
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	5.31 kW	5.98 kW
COP Tj = +2°C	3.46	2.33
Cdh Tj = +2 °C	0.98	0.99
Pdh Tj = +7°C	4.12 kW	3.72 kW
$COP Tj = +7^{\circ}C$	5.49	3.50
Cdh Tj = +7 °C	0.96	0.97
Pdh Tj = 12°C	3.67 kW	3.52 kW
COP Tj = 12°C	7.40	5.58
Cdh Tj = +12 °C	0.95	0.96
Pdh Tj = Tbiv	5.31 kW	5.98 kW
COP Tj = Tbiv	3.46	2.33
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.31 kW	5.98 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.46	2.33
WTOL	55 °C	55 °C





Poff	8 W	8 W
РТО	29 W	29 W
PSB	29 W	29 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1222 kWh	1938 kWh

### Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	50 dB(A)	57 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	162 %	121 %
Prated	5.97 kW	5.51 kW
SCOP	4.13	3.10
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	3.58 kW	3.27 kW





This information was gener	rated by the Hi KETMA	and database on 6 Apr 2022
COP Tj = -7°C	3.45	2.55
Cdh Tj = -7 °C	0.970	0.980
Pdh Tj = +2°C	2.75 kW	2.58 kW
COP Tj = +2°C	5.17	3.80
Cdh Tj = +2 °C	0.950	0.960
Pdh Tj = $+7^{\circ}$ C	3.16 kW	3.07 kW
$COPTj = +7^{\circ}C$	6.64	5.07
Cdh Tj = $+7$ °C	0.940	0.960
Pdh Tj = 12°C	3.69 kW	3.60 kW
COP Tj = 12°C	7.77	6.57
Cdh Tj = +12 °C	0.940	0.950
Pdh Tj = Tbiv	4.87 kW	4.50 kW
COP Tj = Tbiv	2.57	1.91
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.10 kW	3.76 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.23	1.58
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	55 °C	55 °C
Poff	8 W	8 W
РТО	29 W	29 W
PSB	29 W	29 W
РСК	0 W	o w



#### Page 43 of 43

Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	5.97 kW	5.51 kW
Annual energy consumption Qhe	3560 kWh	4385 kWh
Pdh Tj = -15°C (if TOL<-20°C)		
COP Tj = -15°C (if TOL $<$ -20°C)		
Cdh Tj = -15 °C		