

Summary of	HA 5-6 O 230V	Reg. No.	40051132
Certificate H	older	-	
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

# Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	3.36 kW	4.83 kW
El input	0.69 kW	1.71 kW
СОР	4.80	2.80
Indoor water flow rate	0.58 m³/h	0.53 m³/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



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

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	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





	<u> </u>	
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
РТО	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
$\eta_{s}$	233 %	157 %
Prated	4.96 kW	5.07 kW
SCOP	5.89	3.99





This information was	generated by the HP	KEYMARK database on 17 Dec 202
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
$COPTj = +7^{\circ}C$	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
РТО	17 W	17 W
PSB	17 W	17 W
РСК	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
	I	





Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	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
$\eta_{s}$	158 %	116 %
Prated	5.01 kW	4.76 kW
SCOP	4.02	2.98
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	3.22 kW	2.89 kW
COP Tj = -7°C	3.36	2.45
Cdh	0.98	0.99
Pdh Tj = +2°C	1.92 kW	1.85 kW
COP Tj = +2°C	5.04	3.65
Cdh	0.96	0.97





Iation was ge		
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
РТО	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
	1	





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	

# Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	3.36 kW	4.83 kW
El input	0.69 kW	1.71 kW
СОР	4.80	2.80
Indoor water flow rate	0.58 m³/h	0.53 m³/h

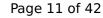
EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

### Average Climate



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

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	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





	<u> </u>	
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
РТО	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
$\eta_{s}$	225 %	153 %
Prated	4.96 kW	5.07 kW
SCOP	5.71	3.91





This information was	generated by the in Rein	MARK database on 17 Dec 202
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 = $+7^{\circ}$ C	3.42 kW	3.08 kW
$COP Tj = +7^{\circ}C$	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	o w	0 W
Supplementary Heater: Type of energy input	electricity	electricity



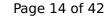


Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1161 kWh	1733 kWh

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

#### Colder Climate

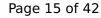
EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	157 %	116 %
Prated	5.01 kW	4.76 kW
SCOP	3.99	2.97
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	3.22 kW	2.89 kW
COP Tj = -7°C	3.36	2.45
Cdh	0.98	0.99
Pdh Tj = +2°C	1.92 kW	1.85 kW
COP Tj = +2°C	5.04	3.65
Cdh	0.96	0.97





# $$\operatorname{Page}\ 14$$ of 42 This information was generated by the HP KEYMARK database on 17 Dec 2020

ring information was ge	neraced by the fir RETH	ATTIC GALADASE OII IT DEC 202
Pdh Tj = +7°C	2.33 kW	2.21 kW
$COP Tj = +7^{\circ}C$	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
РТО	17 W	17 W
PSB	17 W	17 W
PCK	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	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





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	

# 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	
СОР	4.39	2.80	
Indoor water flow rate	0.74 m³/h	0.53 m³/h	

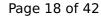
### **Average Climate**

EN 14825		
	Low temperature	Medium temperature
	•	





$\eta_{S}$	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
	1	,



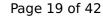


WTOL	55 °C	55 °C
Poff	8 W	8 W
PTO	17 W	17 W
PSB	17 W	17 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2043 kWh	3031 kWh

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
$\eta_{s}$	215 %	157 %
Prated	4.75 kW	5.07 kW
SCOP	5.44	3.99
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C





		711111 database on 17 Bee 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 = $+7^{\circ}$ C	3.33 kW	3.08 kW
$COP Tj = +7^{\circ}C$	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
РТО	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
$\eta_{s}$	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



	· · · · · · · · · · · · · · · · · · ·	
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
РТО	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





 $$\operatorname{\textit{Page}}\xspace$  22 of 42 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

# 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	
СОР	4.80	2.80	
Indoor water flow rate	0.58 m³/h	0.53 m³/h	

### Average Climate



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

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	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





	<u> </u>	
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
РТО	17 W	17 W
PSB	17 W	17 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	1923 kWh	2715 kWh

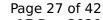
#### Warmer Climate

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	208 %	153 %
Prated	3.53 kW	3.55 kW
SCOP	5.29	3.89





Inis information was	generated by the HP i	RETMARK 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
$COP Tj = +7^{\circ}C$	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
РТО	17 W	17 W
PSB	17 W	17 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
	I	1





Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	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
$\eta_{s}$	147 %	108 %
Prated	3.34 kW	3.15 kW
SCOP	3.75	2.78
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	2.11 kW	1.92 kW
COP Tj = -7°C	3.34	2.25
Cdh	0.98	0.98
Pdh Tj = +2°C	1.78 kW	1.71 kW
COP Tj = +2°C	4.45	3.46
Cdh	0.96	0.97





rms mormation has g	The rated by the rin real	TANK database on 17 Dec 2020
Pdh Tj = +7°C	2.16 kW	2.09 kW
$COP Tj = +7^{\circ}C$	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
РТО	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		
·		





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



# Model: HA 3-6 O 230V B2

Gener	al 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

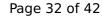
	EN 14511-2	
	Low temperature	Medium temperature
Heat output	3.32 kW	4.79 kW
El input	0.69 kW	1.71 kW
СОР	4.80	2.80
Indoor water flow rate	0.58 m³/h	0.53 m³/h

### Average Climate



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

	EN 14825	
	Low temperature	Medium temperature
$\eta_{s}$	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

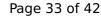




	<u> </u>	
COP Tj = 12°C	7.04	5.84
Cdh	0.96	0.96
Pdh Tj = Tbiv	3.71 kW	3.69 kW
COP Tj = Tbiv	3.04	2.08
Pdh Tj = TOL	3.34 kW	3.31 kW
COP Tj = TOL	2.51	1.81
WTOL	55 °C	55 °C
Poff	8 W	8 W
РТО	17 W	17 W
PSB	17 W	17 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1953 kWh	2745 kWh

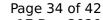
#### Warmer Climate

	EN 14825
re Medium temperature	Low tem
148 %	200 %
3.55 kW	3.53 kW
3.78	5.08
	5.08





	,	milit database on 17 Dec 2021
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
$COP Tj = +7^{\circ}C$	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
РТО	17 W	17 W
PSB	17 W	17 W
РСК	o w	o w
Supplementary Heater: Type of energy input	electricity	electricity
	I	



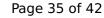


Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	928 kWh	1255 kWh

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

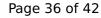
#### Colder Climate

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	146 %	108 %
Prated	3.34 kW	3.15 kW
SCOP	3.72	2.77
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	2.11 kW	1.92 kW
COP Tj = -7°C	3.34	2.25
Cdh	0.98	0.98
Pdh Tj = +2°C	1.78 kW	1.71 kW
COP Tj = +2°C	4.45	3.46
Cdh	0.96	0.97





rins intermation was g	The raced by the rin real	TANK database on 17 Dec 2020
Pdh Tj = +7°C	2.16 kW	2.09 kW
$COP Tj = +7^{\circ}C$	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
РТО	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		





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

# Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	4.07 kW	3.64 kW	
El input	0.89 kW	1.28 kW	
СОР	4.59	2.83	
Indoor water flow rate	0.70 m³/h	0.40 m³/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



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

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	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





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
РТО	17 W	17 W
PSB	17 W	17 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	1870 kWh	2606 kWh

#### Warmer Climate

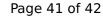
EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	50 dB(A)	52 dB(A)

EN 14825		
	Low temperature	Medium temperature





ins institution was get	iciacca by the in Rein	THIN GULUDUSE OIL IT DEC 2021
$\eta_{s}$	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
РТО	17 W	17 W





PSB	17 W	17 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	electricity	electricty
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	815 kWh	1164 kWh

#### Colder Climate

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

	Low temperature	Medium temperature
$\eta_{s}$	152 %	113 %
Prated	4.00 kW	3.48 kW
SCOP	3.87	2.90
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	2.42 kW	2.12 kW
COP Tj = -7°C	3.26	2.40
Cdh	0.98	0.98





	enerated by the Hi KETI	ANN 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
$COP Tj = +7^{\circ}C$	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
РТО	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