



Saunier Duval
Siempre a tu lado

Nueva generación de Sistemas Genia

El motor del cambio hacia un mundo
más sostenible y eficiente



Bombas de Calor Saunier Duval Genia Air Max:
Genia Air Max 15

Documentación para acceder a las subvenciones de Inega:

- Hoja de características técnicas
- Etiqueta ErP
- Declaración de conformidad CE
- Certificado de rendimiento Keymark

Descubre más en saunierduval.es/sistemas-genia

Datos técnicos

Genia Air Max

Características		Ud	Genia Air Max 4	Genia Air Max 6	Genia Air Max 8	Genia Air Max 12	Genia Air Max 12T	Genia Air Max 15	Genia Air Max 15T
Alimentación eléctrica UE			230V/50Hz				400V/50Hz	230V/50Hz	400V/50Hz
Eficiencia Energética Calef. 35 °C/55 °C (A+++ - D)			A+++ / A++						
ηs Calefacción 35 °C		%	180	186	187	200		187	186
PCA (Potencial Calentamiento Atmosférico)	EN 517/2014		3						
CO2, equivalente	Por máquina	t	0,0018	0,0027		0,0039			
Rango de trabajo (mín - máx)	Calefacción	°C	-25 +43						
	ACS		-20 +43						
	Refrigeración		+15 +46						
Potencia Calefacción (mín - máx) PERMANENTE	A7/W35	kW	2,2-5,5	3,1-7,8	2,9-10,1	5,5-14,0		5,5-18,1	
	A7/W45		2,0-5,5	2,7-7,5	2,5-9,6	5,4-13,5		5,5-17,4	
	A7/W55		1,8-5,3	2,2-7,5	2,3-9,4	4,8-13,1		4,8-17,1	
COP ¹	A7W35		4,80	4,79		5,38			
	A7/W45		3,56	3,55		4,10			
	A7/W55		2,80	2,93		3,11			
Potencia Refrigeración (mín - máx) PERMANENTE	A35/W7	kW	1,8-5,0	2,5-6,3	2,5-7,7	4,4-10,0		4,4-12,8	
	A35/W18		2,4-5,6	3,6-7,1	3,6-9,6	6,0-13,4		6,0-17,3	
EER ¹	A35/W7		3,37	3,46		3,52			
	A35/W18		4,29	4,21		4,58			
Temperatura máxima sin resistencia eléctrica de apoyo	Calefacción	°C	75						
	ACS		70						
Presión sonora Ud. Exterior a 3m, direct.=2 / A7W35	modo normal	dB(A)	36	37		40		43	
	modo noche		28		33				
Rendimiento en ACS ²									
Eficiencia Energética ACS ³	Clima cálido		A+						
ηwh ACS		%	190			193			
COP ACS EN 16147 (A14)			4,41			4,43			
Perfil de carga			L	XL					
Eficiencia Energética ACS ³	Clima medio		A+						
ηwh ACS		%	171			163			
COP ACS EN 16147 (A7)			3,99			3,76			
Perfil de carga			L	XL					
Eficiencia Energética ACS ³	Clima frío		A+						
ηwh ACS		%	167			149			
COP ACS EN 16147 (A2)			3,77			3,41			
Perfil de carga			L	XL					

Consultar accesorios a partir de la página 38



Haz click o escanea el código QR para ver la guía rápida de instalación, con vídeos y otros recursos disponibles

Características		Ud	Genia Air Max 4	Genia Air Max 6	Genia Air Max 8	Genia Air Max 12	Genia Air Max 12T	Genia Air Max 15	Genia Air Max 15T
Rendimiento en calefacción									
Eficiencia estacional Calefacción etaS	Clima cálido W35	%	220	229	228	256		245	
	Clima medio W35		180	186	187	200		187	
	Clima frío W35		152	162	159	168		168	
Calefacción SCOP EN 14825	Clima cálido W35		5,57	5,81	5,78	6,48		6,19	
	Clima medio W35		4,56	4,71	4,75	5,07		4,74	
	Clima frío W35		3,88	4,13	4,05	4,27		4,28	
Unidad Exterior			HA 4-6 O B3 230V	HA 6-6 O B3 230V	HA 8-6 O B3 230V	HA 12-6 O B3 230V	HA 12-6 O B3 400V	HA 15-6 O B3 230V	HA 15-6 O B3 400V
Peso neto		kg	114	128		194	210	194	210
Refrigerante			R290						
Carga de refrigerante		kg	0,6	0,9		1,3			
Dimensiones sin embalaje	Alt/Ancho/Prof	mm	765/1.100/450		965/1.100/450		1.565/1.100/450		
Caudal bomba de calefacción		l/h	780	1050	1300	2065		2500	
Presión disponible		kPa	58	50	40	55		38	
Caudal mínimo		l/h	400	540		995			
Caudal máximo de ventilación		m³/h	2300	3000		6000			
Volumen mínimo de agua		l	15	20		45			
Conexiones hidráulicas		“	G 1 1/4						
Corriente máxima		A	14,3	15,0		23,3	15,0	23,3	15,0
Interruptor protección recomendado	Curva C	A	16			25	16A trif. 3P+N	25	16A trif. 3P+N
Potencia sonora EN 12102	A7W35	dB(A)	51	50	58		61		
	Modo silencioso		46			51			
	ErP A7/W55		52	57		60		61	
Unidad interior - torre hidráulica			FW 200-6						
Alimentación eléctrica			230V / 50 Hz						
Dimensiones sin embalaje	Alt/Ancho/Prof	mm	1.880/595/693						
Peso neto		kg	143						
Volumen equivalente agua a 40 °C	Acumul. 70 °C entrada 10 °C	l	370						
Volumen acumulación		l	185						
Tiempo de calentamiento a Tª de ACS según DIN EN 16147	EN 16147	min	192	125	125	80	80	80	80
Máx. presión circuito calef.		bar	3						
Potencia sonora EN 12102	A7W35	dB(A)	30						
Conexiones hidráulicas	Bomba de calor	“	G 1 1/4						
	Circuito calefacción		G 1						
Unidad interior - módulo hidráulico			HE 9-6 WB						
Alimentación eléctrica			230-400V / 50 Hz						
Dimensiones sin embalaje	Alt/Ancho/Prof	mm	720/440/350						
Peso neto		kg	20						
Máx. presión circuito calef.		bar	3						
Potencia sonora EN 12102	A7W35	dB(A)	29						
Conexiones hidráulicas	Bomba de calor	“	G 1 1/4						
	Circuito calefacción		G 1						



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Saunier Duval

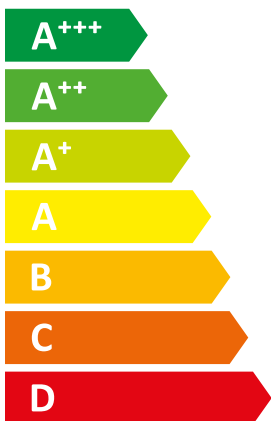


| Brand Group || HA 15-6 O 230V B3



55°C

35°C



A⁺⁺

A⁺⁺⁺



- dB



61 dB

■ 12
■ 12
■ 13
kW

■ 13
■ 13
■ 12
kW



2019

811/2013

0020292203_00

Declaración de conformidad CE

EC declaration of conformity



Fabricante <i>Manufacturer</i>	SDECCI SAS 17 rue de la Petite Baratte 44300 Nantes France
Denominación del producto <i>Product description</i>	Bomba de calor de aire-agua air/water heat pump
Denominación de tipo <i>Type designation</i>	HA 10-6 O 230V HA 12-6 O 230V HA 12-6 O 230V B3 HA 15-6 O 230V B3
Proceso de evaluación de la conformidad <i>Conformity assessment procedures</i>	Modul A2
Organismo notificado <i>Notified body</i>	TÜV Rheinland Energy GmbH Am Grauen Stein 51105 Köln Deutschland

Declaración de conformidad CE

EC declaration of conformity



Saunier Duval

Los productos especificados cumplen las disposiciones de las siguientes directivas y normas en sus versiones actualmente vigentes en el momento de la expedición. Esta declaración de conformidad se publica bajo la exclusiva responsabilidad del fabricante.

The designated products comply with the regulations of the following directives and standards in their currently applicable versions at the time they are issued. This declaration of conformity is issued under the sole responsibility of the manufacturer.

Directiva sobre baja tensión 2014/35/UE
Low voltage directive 2014/35/EU

EN 60335-1: 2012+A11:2014+A13:2017
EN 60335-2-40 A13+AC2013
EN 62233:2008 + Corr.:2008

Directiva CEM 2014/30/UE
EMC directive 2014/30/EU

EN 55014-1:2017
EN 55014-2:2015
EN 61000-3-12:2012
EN 61000-3-11:2000

Directiva sobre aparatos de presión 2014/68/UE
Pressure equipment directive 2014/68/EU

EN 378-2:2016

Directiva sobre diseño ecológico 2009/125/CE
Ecodesign directive 2009/125/EC

VO (EU) No. 813/2013

Directiva RoHS 2011/65/UE
RoHS directive 2011/65/EU

Normas aplicadas
Additional applied standards

EN 14511:2018
EN 14825:2016
EN 12102-1 1:2017

Toda modificación arbitraria y/o utilización incorrecta de los productos suministrados anula la validez de la presente declaración de conformidad.

Any unauthorised changes to the supplied products and/or any improper use invalidates this declaration of conformity.

Remscheid, 07.05.2020

(población, fecha)
(Place, date)

i.V. Dr. R. Lang
Group R&D Manager Heat Pumps

i. V. L. Christiaans
Head of International Certification and
Approval

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

Summary of	HA 12-6 O 230V, HA 12-6 O	Reg. No.	40051134
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 12-6 O 230V, HA 12-6 O		
Heat Pump Type	Outdoor Air/Water		
Refrigerant	R290		
Mass Of Refrigerant	1.3 kg		
Certification Date	07.04.2020		
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 12-6 O 230V

General Data

Power supply	1x230V 50Hz
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Heating

EN 14511-2

	Low temperature	Medium temperature
Heat output	8.54 kW	9.13 kW
El input	1.58 kW	2.92 kW
COP	5.38	3.11
Indoor water flow rate	1.48 m ³ /h	1.00 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	58 dB(A)	60 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	195 %	147 %
Prated	12.73 kW	11.81 kW
SCOP	4.96	3.75
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.27 kW	10.45 kW
COP Tj = -7°C	2.58	2.10
Cdh	0.99	0.99
Pdh Tj = +2°C	6.99 kW	6.43 kW
COP Tj = +2°C	5.17	3.73
Cdh	0.97	0.97
Pdh Tj = +7°C	5.81 kW	5.65 kW
COP Tj = +7°C	6.87	5.27
Cdh	0.95	0.96
Pdh Tj = 12°C	6.77 kW	6.58 kW

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

COP Tj = 12°C	8.66	6.64
Cdh	0.95	0.96
Pdh Tj = Tbiv	11.27 kW	10.45 kW
COP Tj = Tbiv	2.58	2.10
Pdh Tj = TOL	9.85 kW	9.83 kW
COP Tj = TOL	2.29	1.87
WTOL	70 °C	70 °C
Poff	8 W	8 W
PTO	45 W	45 W
PSB	45 W	45 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	5305 kWh	6501 kWh

Warmer Climate

EN 14825		
	Low temperature	Medium temperature
η_s	254 %	174 %
Prated	11.35 kW	11.06 kW
SCOP	6.41	4.42

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	11.35 kW	11.06 kW
COP Tj = +2°C	3.23	2.21
Cdh	0.99	0.99
Pdh Tj = +7°C	7.41 kW	7.19 kW
COP Tj = +7°C	5.97	3.82
Cdh	0.97	0.98
Pdh Tj = 12°C	6.63 kW	6.33 kW
COP Tj = 12°C	8.20	5.97
Cdh	0.95	0.96
Pdh Tj = Tbiv	11.35 kW	11.06 kW
COP Tj = Tbiv	3.23	2.21
Pdh Tj = TOL	11.35 kW	11.06 kW
COP Tj = TOL	3.23	2.21
WTOL	70 °C	70 °C
Poff	8 W	8 W
PTO	45 W	45 W
PSB	45 W	45 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}	2363 kWh	3342 kWh

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	58 dB(A)	60 dB(A)

Colder Climate

EN 14825		
	Low temperature	Medium temperature
η_s	170 %	128 %
Prated	12.16 kW	11.09 kW
SCOP	4.32	3.28
T _{biv}	-15 °C	-15 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = -7°C	6.93 kW	7.06 kW
COP T _j = -7°C	3.72	2.65
C _{dh}	0.98	0.96
P _{dh} T _j = +2°C	5.11 kW	4.83 kW
COP T _j = +2°C	5.51	4.20
C _{dh}	0.96	0.96

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

Pdh Tj = +7°C	5.82 kW	5.62 kW
COP Tj = +7°C	7.14	5.61
Cdh	0.95	0.96
Pdh Tj = 12°C	6.69 kW	6.55 kW
COP Tj = 12°C	8.51	6.95
Cdh	0.95	0.96
Pdh Tj = Tbiv	9.92 kW	9.04 kW
COP Tj = Tbiv	2.26	1.81
Pdh Tj = TOL	8.71 kW	7.73 kW
COP Tj = TOL	2.03	1.50
WTOL	70 °C	70 °C
Poff	8 W	8 W
PTO	45 W	45 W
PSB	45 W	45 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	6936 kWh	8321 kWh
Pdh Tj = -15°C (if TOL<-20°C)	9.92	9.04
COP Tj = -15°C (if TOL<-20°C)	2.26	1.81
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	58 dB(A)	60 dB(A)

Model: HA 12-6 O 230V B2

General Data

Power supply	1x230V 50Hz
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Heating

EN 14511-2

	Low temperature	Medium temperature
Heat output	8.54 kW	9.13 kW
El input	1.58 kW	2.92 kW
COP	5.38	3.11
Indoor water flow rate	1.48 m ³ /h	1.00 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	58 dB(A)	60 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	194 %	146 %
Prated	12.73 kW	11.81 kW
SCOP	4.93	3.74
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.27 kW	10.45 kW
COP Tj = -7°C	2.58	2.10
Cdh	0.99	0.99
Pdh Tj = +2°C	6.99 kW	6.43 kW
COP Tj = +2°C	5.17	3.73
Cdh	0.97	0.97
Pdh Tj = +7°C	5.81 kW	5.65 kW
COP Tj = +7°C	6.87	5.27
Cdh	0.95	0.96
Pdh Tj = 12°C	6.77 kW	6.58 kW

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

COP Tj = 12°C	8.66	6.64
Cdh	0.95	0.96
Pdh Tj = Tbiv	11.27 kW	10.45 kW
COP Tj = Tbiv	2.58	2.10
Pdh Tj = TOL	9.85 kW	9.83 kW
COP Tj = TOL	2.29	1.87
WTOL	70 °C	70 °C
Poff	8 W	8 W
PTO	45 W	45 W
PSB	45 W	45 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	5335 kWh	6532 kWh

Warmer Climate

EN 14825		
	Low temperature	Medium temperature
η_s	250 %	172 %
Prated	11.35 kW	11.06 kW
SCOP	6.32	4.38

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	11.35 kW	11.06 kW
COP Tj = +2°C	3.23	2.21
Cdh	0.99	0.99
Pdh Tj = +7°C	7.41 kW	7.19 kW
COP Tj = +7°C	5.97	3.82
Cdh	0.97	0.98
Pdh Tj = 12°C	6.63 kW	6.33 kW
COP Tj = 12°C	8.20	5.97
Cdh	0.95	0.96
Pdh Tj = Tbiv	11.35 kW	11.06 kW
COP Tj = Tbiv	3.23	2.21
Pdh Tj = TOL	11.35 kW	11.06 kW
COP Tj = TOL	3.23	2.21
WTOL	70 °C	70 °C
Poff	8 W	8 W
PTO	45 W	45 W
PSB	45 W	45 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}	2399 kWh	3378 kWh

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	58 dB(A)	60 dB(A)

Colder Climate

EN 14825		
	Low temperature	Medium temperature
η_s	169 %	128 %
Prated	12.16 kW	11.09 kW
SCOP	4.31	3.28
T _{biv}	-15 °C	-15 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = -7°C	6.93 kW	7.06 kW
COP T _j = -7°C	3.72	2.65
C _{dh}	0.98	0.96
P _{dh} T _j = +2°C	5.11 kW	4.83 kW
COP T _j = +2°C	5.51	4.20
C _{dh}	0.96	0.96

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

Pdh Tj = +7°C	5.82 kW	5.62 kW
COP Tj = +7°C	7.14	5.61
Cdh	0.95	0.96
Pdh Tj = 12°C	6.69 kW	6.55 kW
COP Tj = 12°C	8.51	6.95
Cdh	0.95	0.96
Pdh Tj = Tbiv	9.92 kW	9.04 kW
COP Tj = Tbiv	2.26	1.81
Pdh Tj = TOL	8.71 kW	7.73 kW
COP Tj = TOL	2.03	1.50
WTOL	70 °C	70 °C
Poff	8 W	8 W
PTO	45 W	45 W
PSB	45 W	45 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	6954 kWh	8339 kWh
Pdh Tj = -15°C (if TOL<-20°C)	9.92	9.04
COP Tj = -15°C (if TOL<-20°C)	2.26	1.81
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	58 dB(A)	60 dB(A)

Model: HA 12-6 O

General Data

Power supply	3x400V 50Hz
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Heating

EN 14511-2

	Low temperature	Medium temperature
Heat output	8.54 kW	9.13 kW
El input	1.58 kW	2.92 kW
COP	5.38	3.11
Indoor water flow rate	1.48 m ³ /h	1.00 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	58 dB(A)	60 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	195 %	147 %
Prated	12.73 kW	11.81 kW
SCOP	4.96	3.75
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.27 kW	10.45 kW
COP Tj = -7°C	2.58	2.10
Cdh	0.99	0.99
Pdh Tj = +2°C	6.99 kW	6.43 kW
COP Tj = +2°C	5.17	3.73
Cdh	0.96	0.97
Pdh Tj = +7°C	5.81 kW	5.65 kW
COP Tj = +7°C	6.87	5.27
Cdh	0.95	0.96
Pdh Tj = 12°C	6.77 kW	6.58 kW

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

COP Tj = 12°C	8.66	6.64
Cdh	0.94	0.95
Pdh Tj = Tbiv	11.27 kW	10.45 kW
COP Tj = Tbiv	2.58	2.10
Pdh Tj = TOL	9.85 kW	9.83 kW
COP Tj = TOL	2.29	1.87
WTOL	70 °C	70 °C
Poff	14 W	14 W
PTO	51 W	51 W
PSB	51 W	51 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	5313 kWh	6511 kWh

Warmer Climate

EN 14825		
	Low temperature	Medium temperature
η_s	254 %	173 %
Prated	11.35 kW	11.06 kW
SCOP	6.41	4.42

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	11.35 kW	11.06 kW
COP Tj = +2°C	3.23	2.21
Cdh	0.99	0.99
Pdh Tj = +7°C	7.41 kW	7.19 kW
COP Tj = +7°C	5.97	3.82
Cdh	0.96	0.97
Pdh Tj = 12°C	6.63 kW	6.33 kW
COP Tj = 12°C	8.20	5.97
Cdh	0.94	0.95
Pdh Tj = Tbiv	11.35 kW	11.06 kW
COP Tj = Tbiv	3.23	2.21
Pdh Tj = TOL	11.35 kW	11.06 kW
COP Tj = TOL	3.23	2.21
WTOL	70 °C	70 °C
Poff	14 W	14 W
PTO	51 W	51 W
PSB	51 W	51 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}	2363 kWh	3354 kWh

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	58 dB(A)	60 dB(A)

Colder Climate

EN 14825		
	Low temperature	Medium temperature
η_s	170 %	128 %
Prated	12.16 kW	11.09 kW
SCOP	4.32	3.28
T _{biv}	-15 °C	-15 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = -7°C	6.93 kW	7.06 kW
COP T _j = -7°C	3.72	2.65
C _{dh}	0.97	0.98
P _{dh} T _j = +2°C	5.11 kW	4.83 kW
COP T _j = +2°C	5.51	4.20
C _{dh}	0.95	0.96

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

Pdh Tj = +7°C	5.82 kW	5.62 kW
COP Tj = +7°C	7.14	5.61
Cdh	0.94	0.95
Pdh Tj = 12°C	6.69 kW	6.55 kW
COP Tj = 12°C	8.51	6.95
Cdh	0.94	0.95
Pdh Tj = Tbiv	9.92 kW	9.04 kW
COP Tj = Tbiv	2.26	1.81
Pdh Tj = TOL	8.71 kW	7.73 kW
COP Tj = TOL	2.03	1.50
WTOL	70 °C	70 °C
Poff	14 W	14 W
PTO	51 W	51 W
PSB	51 W	51 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	6936 kWh	8334 kWh
Pdh Tj = -15°C (if TOL<-20°C)	9.92	9.04
COP Tj = -15°C (if TOL<-20°C)	2.26	1.81
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	58 dB(A)	60 dB(A)

Model: HA 12-6 O B2

General Data

Power supply	3x400V 50Hz
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Heating

EN 14511-2

	Low temperature	Medium temperature
Heat output	8.44 kW	8.93 kW
El input	1.60 kW	2.93 kW
COP	5.24	3.04
Indoor water flow rate	1.48 m ³ /h	1.00 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	59 dB(A)	59 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	193 %	146 %
Prated	12.73 kW	11.81 kW
SCOP	4.90	3.72
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.27 kW	10.45 kW
COP Tj = -7°C	2.58	2.10
Cdh	0.99	0.99
Pdh Tj = +2°C	6.99 kW	6.43 kW
COP Tj = +2°C	5.17	3.73
Cdh	0.96	0.97
Pdh Tj = +7°C	5.81 kW	5.65 kW
COP Tj = +7°C	6.87	5.27
Cdh	0.95	0.96
Pdh Tj = 12°C	6.77 kW	6.58 kW

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

COP Tj = 12°C	8.66	6.64
Cdh	0.94	0.95
Pdh Tj = Tbiv	11.27 kW	10.45 kW
COP Tj = Tbiv	2.58	2.10
Pdh Tj = TOL	9.85 kW	9.83 kW
COP Tj = TOL	2.29	1.87
WTOL	70 °C	70 °C
Poff	14 W	14 W
PTO	51 W	51 W
PSB	51 W	51 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	5366 kWh	6563 kWh

Warmer Climate

EN 14825		
	Low temperature	Medium temperature
η_s	250 %	170 %
Prated	11.35 kW	11.06 kW
SCOP	6.32	4.33

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	11.35 kW	11.06 kW
COP Tj = +2°C	3.23	2.21
Cdh	0.99	0.99
Pdh Tj = +7°C	7.41 kW	7.19 kW
COP Tj = +7°C	5.97	3.82
Cdh	0.96	0.97
Pdh Tj = 12°C	6.63 kW	6.33 kW
COP Tj = 12°C	8.20	5.97
Cdh	0.94	0.95
Pdh Tj = Tbiv	11.35 kW	11.06 kW
COP Tj = Tbiv	3.23	2.21
Pdh Tj = TOL	11.35 kW	11.06 kW
COP Tj = TOL	3.23	2.21
WTOL	70 °C	70 °C
Poff	14 W	14 W
PTO	51 W	51 W
PSB	51 W	51 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}	2399 kWh	3417 kWh

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	59 dB(A)	59 dB(A)

Colder Climate

EN 14825		
	Low temperature	Medium temperature
η_s	169 %	128 %
Prated	12.16 kW	11.09 kW
SCOP	4.31	3.27
T _{biv}	-15 °C	-15 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = -7°C	6.93 kW	7.06 kW
COP T _j = -7°C	3.72	2.65
C _{dh}	0.97	0.98
P _{dh} T _j = +2°C	5.11 kW	4.83 kW
COP T _j = +2°C	5.51	4.20
C _{dh}	0.95	0.96

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

Pdh Tj = +7°C	5.82 kW	5.62 kW
COP Tj = +7°C	7.14	5.61
Cdh	0.94	0.95
Pdh Tj = 12°C	6.69 kW	6.55 kW
COP Tj = 12°C	8.51	6.95
Cdh	0.95	0.96
Pdh Tj = Tbiv	9.92 kW	9.04 kW
COP Tj = Tbiv	2.26	1.81
Pdh Tj = TOL	8.71 kW	7.73 kW
COP Tj = TOL	2.03	1.50
WTOL	70 °C	70 °C
Poff	14 W	14 W
PTO	51 W	51 W
PSB	51 W	51 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	6954 kWh	8365 kWh
Pdh Tj = -15°C (if TOL<-20°C)	9.92	9.04
COP Tj = -15°C (if TOL<-20°C)	2.26	1.81
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	59 dB(A)	59 dB(A)

Model: HA 15-6 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	14.29 kW	14.16 kW
El input	3.29 kW	5.06 kW
COP	4.33	2.79
Indoor water flow rate	2.46 m ³ /h	1.54 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	187 %	143 %
Prated	12.69 kW	12.00 kW
SCOP	4.74	3.66
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.23 kW	10.62 kW
COP Tj = -7°C	2.46	2.08
Cdh	0.99	0.99
Pdh Tj = +2°C	6.98 kW	6.54 kW
COP Tj = +2°C	4.88	3.68
Cdh	0.97	0.98
Pdh Tj = +7°C	5.79 kW	5.43 kW
COP Tj = +7°C	6.54	4.91
Cdh	0.95	0.96
Pdh Tj = 12°C	6.65 kW	6.31 kW
COP Tj = 12°C	9.06	6.32
Cdh	0.94	0.96
Pdh Tj = Tbiv	11.23 kW	10.62 kW
COP Tj = Tbiv	2.46	2.08
Pdh Tj = TOL	9.82 kW	11.05 kW
COP Tj = TOL	2.23	1.75

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

WTOL	55 °C	55 °C
Poff	8 W	8 W
PTO	45 W	45 W
PSB	45 W	45 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	5532 kWh	6780 kWh

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	61 dB(A)	61 dB(A)

Warmer Climate

EN 14825		
	Low temperature	Medium temperature
η_s	245 %	172 %
Prated	12.02 kW	12.69 kW
SCOP	6.19	4.38
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	12.02 kW	12.69 kW
COP Tj = +2°C	3.19	2.05
Cdh	0.99	0.99
Pdh Tj = +7°C	7.55 kW	7.46 kW
COP Tj = +7°C	5.70	3.87
Cdh	0.97	0.98
Pdh Tj = 12°C	6.64 kW	6.19 kW
COP Tj = 12°C	7.90	5.77
Cdh	0.95	0.96
Pdh Tj = Tbiv	12.02 kW	12.69 kW
COP Tj = Tbiv	3.19	2.05
Pdh Tj = TOL	12.02 kW	12.69 kW
COP Tj = TOL	3.19	2.05
WTOL	55 °C	55 °C
Poff	8 W	8 W
PTO	45 W	45 W
PSB	45 W	45 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	2595 kWh	3867 kWh

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	61 dB(A)	61 dB(A)

Colder Climate

EN 14825		
	Low temperature	Medium temperature
η_s	168 %	125 %
Prated	12.73 kW	12.17 kW
SCOP	4.28	3.20
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	7.04 kW	7.02 kW
COP Tj = -7°C	3.64	2.56
Cdh	0.98	0.98
Pdh Tj = +2°C	5.16 kW	4.80 kW
COP Tj = +2°C	5.33	4.08
Cdh	0.96	0.96
Pdh Tj = +7°C	5.81 kW	5.55 kW
COP Tj = +7°C	7.45	5.43
Cdh	0.95	0.96

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

Pdh Tj = 12°C	6.66 kW	6.42 kW
COP Tj = 12°C	9.04	6.82
Cdh	0.94	0.96
Pdh Tj = Tbiv	10.38 kW	9.93 kW
COP Tj = Tbiv	2.37	1.76
Pdh Tj = TOL	8.93 kW	8.65 kW
COP Tj = TOL	2.00	1.46
WTOL	55 °C	55 °C
Poff	8 W	8 W
PTO	45 W	45 W
PSB	45 W	45 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	7330 kWh	9377 kWh
Pdh Tj = -15°C (if TOL<-20°C)	10.38	9.93
COP Tj = -15°C (if TOL<-20°C)	2.37	1.76
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	61 dB(A)	61 dB(A)

Model: HA 15-6 O B3

General Data

Power supply	3x400V 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	14.29 kW	14.16 kW
El input	3.29 kW	5.06 kW
COP	4.33	2.79
Indoor water flow rate	2.46 m ³ /h	1.54 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	186 %	143 %
Prated	12.69 kW	12.00 kW
SCOP	4.73	3.65
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	11.23 kW	10.62 kW
COP Tj = -7°C	2.46	2.08
Cdh	0.99	0.99
Pdh Tj = +2°C	6.98 kW	6.54 kW
COP Tj = +2°C	4.88	3.68
Cdh	0.97	0.97
Pdh Tj = +7°C	5.79 kW	5.43 kW
COP Tj = +7°C	6.54	4.91
Cdh	0.95	0.96
Pdh Tj = 12°C	6.65 kW	6.31 kW
COP Tj = 12°C	9.06	6.32
Cdh	0.94	0.95
Pdh Tj = Tbiv	11.23 kW	10.62 kW
COP Tj = Tbiv	2.46	2.08
Pdh Tj = TOL	9.82 kW	11.05 kW
COP Tj = TOL	2.23	1.75

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

WTOL	55 °C	55 °C
Poff	14 W	14 W
PTO	51 W	51 W
PSB	51 W	51 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	5542 kWh	6789 kWh

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	61 dB(A)	61 dB(A)

Warmer Climate

EN 14825		
	Low temperature	Medium temperature
η_s	244 %	172 %
Prated	12.02 kW	12.69 kW
SCOP	6.16	4.37
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	12.02 kW	12.69 kW
COP Tj = +2°C	3.19	2.05
Cdh	0.99	0.99
Pdh Tj = +7°C	7.55 kW	7.46 kW
COP Tj = +7°C	5.70	3.87
Cdh	0.96	0.97
Pdh Tj = 12°C	6.64 kW	6.19 kW
COP Tj = 12°C	7.90	5.77
Cdh	0.94	0.96
Pdh Tj = Tbiv	12.02 kW	12.69 kW
COP Tj = Tbiv	3.19	2.05
Pdh Tj = TOL	12.02 kW	12.69 kW
COP Tj = TOL	3.19	2.05
WTOL	55 °C	55 °C
Poff	14 W	14 W
PTO	51 W	51 W
PSB	51 W	51 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	2606 kWh	3878 kWh

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	61 dB(A)	61 dB(A)

Colder Climate

EN 14825		
	Low temperature	Medium temperature
η_s	168 %	125 %
Prated	12.73 kW	12.17 kW
SCOP	4.27	3.20
Tbiv	-15 °C	-15 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	7.04 kW	7.02 kW
COP Tj = -7°C	3.64	2.56
Cdh	0.97	0.98
Pdh Tj = +2°C	5.16 kW	4.80 kW
COP Tj = +2°C	5.33	4.08
Cdh	0.95	0.96
Pdh Tj = +7°C	5.81 kW	5.55 kW
COP Tj = +7°C	7.45	5.43
Cdh	0.94	0.95

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

Pdh Tj = 12°C	6.66 kW	6.42 kW
COP Tj = 12°C	9.04	6.82
Cdh	0.94	0.95
Pdh Tj = Tbiv	10.38 kW	9.93 kW
COP Tj = Tbiv	2.37	1.76
Pdh Tj = TOL	8.93 kW	8.65 kW
COP Tj = TOL	2.00	1.46
WTOL	55 °C	55 °C
Poff	14 W	14 W
PTO	51 W	51 W
PSB	51 W	51 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	7341 kWh	9386 kWh
Pdh Tj = -15°C (if TOL<-20°C)	10.38	9.93
COP Tj = -15°C (if TOL<-20°C)	2.37	1.76
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	61 dB(A)	61 dB(A)

Model: HA 10-6 O 230V

General Data

Power supply	1x230V 50Hz
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Heating

EN 14511-2

	Low temperature	Medium temperature
Heat output	8.13 kW	9.08 kW
El input	1.54 kW	2.95 kW
COP	5.27	3.08
Indoor water flow rate	1.42 m ³ /h	1.00 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	58 dB(A)	60 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	199 %	143 %
Prated	8.86 kW	9.09 kW
SCOP	5.05	3.66
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	7.84 kW	8.04 kW
COP Tj = -7°C	3.21	2.20
Cdh	0.98	0.99
Pdh Tj = +2°C	4.92 kW	4.77 kW
COP Tj = +2°C	5.06	3.63
Cdh	0.96	0.97
Pdh Tj = +7°C	5.65 kW	5.37 kW
COP Tj = +7°C	6.65	4.92
Cdh	0.95	0.96
Pdh Tj = 12°C	6.62 kW	6.30 kW

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

COP Tj = 12°C	8.41	6.34
Cdh	0.95	0.96
Pdh Tj = Tbiv	7.84 kW	8.04 kW
COP Tj = Tbiv	3.21	2.20
Pdh Tj = TOL	8.93 kW	9.03 kW
COP Tj = TOL	2.58	1.87
WTOL	55 °C	55 °C
Poff	8 W	8 W
PTO	45 W	45 W
PSB	45 W	45 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	3624 kWh	5138 kWh

Warmer Climate

EN 14825		
	Low temperature	Medium temperature
η_s	254 %	175 %
Prated	10.42 kW	10.36 kW
SCOP	6.42	4.46

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	10.42 kW	10.36 kW
COP Tj = +2°C	3.42	2.32
Cdh	0.99	0.99
Pdh Tj = +7°C	6.71 kW	6.37 kW
COP Tj = +7°C	6.07	3.95
Cdh	0.96	0.97
Pdh Tj = 12°C	6.58 kW	6.20 kW
COP Tj = 12°C	8.09	5.85
Cdh	0.95	0.96
Pdh Tj = Tbiv	10.42 kW	10.36 kW
COP Tj = Tbiv	3.42	2.32
Pdh Tj = TOL	10.42 kW	10.36 kW
COP Tj = TOL	3.42	2.32
WTOL	55 °C	55 °C
Poff	8 W	8 W
PTO	45 W	45 W
PSB	45 W	45 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}	2167 kWh	3104 kWh

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	58 dB(A)	60 dB(A)

Colder Climate

EN 14825		
	Low temperature	Medium temperature
η_s	172 %	125 %
Prated	7.61 kW	7.38 kW
SCOP	4.37	3.21
T _{biv}	-20 °C	-20 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = -7°C	4.50 kW	4.50 kW
COP T _j = -7°C	3.79	2.65
C _{dh}	0.97	0.97
P _{dh} T _j = +2°C	5.00 kW	4.62 kW
COP T _j = +2°C	5.34	3.96
C _{dh}	0.96	0.96

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

Pdh Tj = +7°C	5.67 kW	5.47 kW
COP Tj = +7°C	6.89	5.34
Cdh	0.95	0.96
Pdh Tj = 12°C	6.60 kW	6.38 kW
COP Tj = 12°C	8.30	6.70
Cdh	0.95	0.96
Pdh Tj = Tbiv	7.21 kW	6.99 kW
COP Tj = Tbiv	2.14	1.53
Pdh Tj = TOL	7.21 kW	6.99 kW
COP Tj = TOL	2.14	1.53
WTOL	55 °C	55 °C
Poff	8 W	8 W
PTO	45 W	45 W
PSB	45 W	45 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	4296 kWh	5673 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	58 dB(A)	60 dB(A)

Model: HA 10-6 O 230V B2

General Data

Power supply	1x230V 50Hz
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Heating

EN 14511-2

	Low temperature	Medium temperature
Heat output	8.13 kW	9.08 kW
El input	1.54 kW	2.95 kW
COP	5.27	3.08
Indoor water flow rate	1.42 m ³ /h	1.00 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	58 dB(A)	60 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	197 %	142 %
Prated	8.86 kW	9.09 kW
SCOP	5.01	3.64
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	7.84 kW	8.04 kW
COP Tj = -7°C	3.21	2.20
Cdh	0.98	0.99
Pdh Tj = +2°C	4.92 kW	4.77 kW
COP Tj = +2°C	5.06	3.63
Cdh	0.96	0.97
Pdh Tj = +7°C	5.65 kW	5.37 kW
COP Tj = +7°C	6.65	4.92
Cdh	0.95	0.96
Pdh Tj = 12°C	6.62 kW	6.30 kW

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

COP Tj = 12°C	8.41	6.34
Cdh	0.95	0.96
Pdh Tj = Tbiv	7.84 kW	8.04 kW
COP Tj = Tbiv	3.21	2.20
Pdh Tj = TOL	8.93 kW	9.03 kW
COP Tj = TOL	2.58	1.87
WTOL	55 °C	55 °C
Poff	8 W	8 W
PTO	45 W	45 W
PSB	45 W	45 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	3654 kWh	5168 kWh

Warmer Climate

EN 14825		
	Low temperature	Medium temperature
η_s	250 %	173 %
Prated	10.42 kW	10.36 kW
SCOP	6.32	4.41

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	10.42 kW	10.36 kW
COP Tj = +2°C	3.42	2.32
Cdh	0.99	0.99
Pdh Tj = +7°C	6.71 kW	6.37 kW
COP Tj = +7°C	6.07	3.95
Cdh	0.96	0.97
Pdh Tj = 12°C	6.58 kW	6.20 kW
COP Tj = 12°C	8.09	5.85
Cdh	0.95	0.96
Pdh Tj = Tbiv	10.42 kW	10.36 kW
COP Tj = Tbiv	3.42	2.32
Pdh Tj = TOL	10.42 kW	10.36 kW
COP Tj = TOL	3.42	2.32
WTOL	55 °C	55 °C
Poff	8 W	8 W
PTO	45 W	45 W
PSB	45 W	45 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}	2204 kWh	3141 kWh

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	58 dB(A)	60 dB(A)

Colder Climate

EN 14825		
	Low temperature	Medium temperature
η_s	171 %	125 %
Prated	7.61 kW	7.38 kW
SCOP	4.35	3.20
T _{biv}	-20 °C	-20 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = -7°C	4.50 kW	4.50 kW
COP T _j = -7°C	3.79	2.65
C _{dh}	0.97	0.97
P _{dh} T _j = +2°C	5.00 kW	4.62 kW
COP T _j = +2°C	5.34	3.96
C _{dh}	0.96	0.96

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

Pdh Tj = +7°C	5.67 kW	5.47 kW
COP Tj = +7°C	6.89	5.34
Cdh	0.95	0.96
Pdh Tj = 12°C	6.60 kW	6.38 kW
COP Tj = 12°C	8.30	6.70
Cdh	0.95	0.96
Pdh Tj = Tbiv	7.21 kW	6.99 kW
COP Tj = Tbiv	2.14	1.53
Pdh Tj = TOL	7.21 kW	6.99 kW
COP Tj = TOL	2.14	1.53
WTOL	55 °C	55 °C
Poff	8 W	8 W
PTO	45 W	45 W
PSB	45 W	45 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	4314 kWh	5691 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	58 dB(A)	60 dB(A)

Model: HA 10-6 O

General Data

Power supply	3x400V 50Hz
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Heating

EN 14511-2

	Low temperature	Medium temperature
Heat output	8.13 kW	9.08 kW
El input	1.54 kW	2.95 kW
COP	5.27	3.08
Indoor water flow rate	1.42 m ³ /h	1.00 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	59 dB(A)	59 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	198 %	143 %
Prated	8.86 kW	9.09 kW
SCOP	5.04	3.65
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	7.84 kW	8.04 kW
COP Tj = -7°C	3.21	2.20
Cdh	0.98	0.99
Pdh Tj = +2°C	4.92 kW	4.77 kW
COP Tj = +2°C	5.06	3.63
Cdh	0.95	0.96
Pdh Tj = +7°C	5.65 kW	5.37 kW
COP Tj = +7°C	6.65	4.92
Cdh	0.95	0.96
Pdh Tj = 12°C	6.62 kW	6.30 kW

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

COP Tj = 12°C	8.41	6.34
Cdh	0.94	0.95
Pdh Tj = Tbiv	7.84 kW	8.04 kW
COP Tj = Tbiv	3.21	2.20
Pdh Tj = TOL	8.93 kW	9.03 kW
COP Tj = TOL	2.58	1.87
WTOL	55 °C	55 °C
Poff	14 W	14 W
PTO	51 W	51 W
PSB	51 W	51 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	3636 kWh	5149 kWh

Warmer Climate

EN 14825		
	Low temperature	Medium temperature
η_s	252 %	175 %
Prated	10.42 kW	10.36 kW
SCOP	6.39	4.44

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	10.42 kW	10.36 kW
COP Tj = +2°C	3.42	2.32
Cdh	0.98	0.99
Pdh Tj = +7°C	6.71 kW	6.37 kW
COP Tj = +7°C	6.07	3.95
Cdh	0.96	0.97
Pdh Tj = 12°C	6.58 kW	6.20 kW
COP Tj = 12°C	8.09	5.85
Cdh	0.94	0.96
Pdh Tj = Tbiv	10.42 kW	10.36 kW
COP Tj = Tbiv	3.42	2.32
Pdh Tj = TOL	10.42 kW	10.36 kW
COP Tj = TOL	3.42	2.32
WTOL	55 °C	55 °C
Poff	14 W	14 W
PTO	51 W	51 W
PSB	51 W	51 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}	2180 kWh	3117 kWh

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	59 dB(A)	59 dB(A)

Colder Climate

EN 14825		
	Low temperature	Medium temperature
η_s	171 %	125 %
Prated	7.61 kW	7.38 kW
SCOP	4.35	3.20
T _{biv}	-20 °C	-20 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = -7°C	4.50 kW	4.50 kW
COP T _j = -7°C	3.79	2.65
C _{dh}	0.96	0.97
P _{dh} T _j = +2°C	5.00 kW	4.62 kW
COP T _j = +2°C	5.34	3.96
C _{dh}	0.95	0.96

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

Pdh Tj = +7°C	5.67 kW	5.47 kW
COP Tj = +7°C	6.89	5.34
Cdh	0.94	0.95
Pdh Tj = 12°C	6.60 kW	6.38 kW
COP Tj = 12°C	8.30	6.70
Cdh	0.94	0.95
Pdh Tj = Tbiv	7.21 kW	6.99 kW
COP Tj = Tbiv	2.14	1.53
Pdh Tj = TOL	7.21 kW	6.99 kW
COP Tj = TOL	2.14	1.53
WTOL	55 °C	55 °C
Poff	14 W	14 W
PTO	51 W	51 W
PSB	51 W	51 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	4314 kWh	5692 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	59 dB(A)	59 dB(A)

Model: HA 10-6 O B2

General Data

Power supply	3x400V 50Hz
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Heating

EN 14511-2

	Low temperature	Medium temperature
Heat output	8.13 kW	9.08 kW
El input	1.54 kW	2.95 kW
COP	5.27	3.08
Indoor water flow rate	1.42 m ³ /h	1.00 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	59 dB(A)	59 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	196 %	141 %
Prated	8.86 kW	9.09 kW
SCOP	4.97	3.61
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	7.84 kW	8.04 kW
COP Tj = -7°C	3.21	2.20
Cdh	0.98	0.99
Pdh Tj = +2°C	4.92 kW	4.77 kW
COP Tj = +2°C	5.06	3.63
Cdh	0.95	0.96
Pdh Tj = +7°C	5.65 kW	5.37 kW
COP Tj = +7°C	6.65	4.92
Cdh	0.95	0.96
Pdh Tj = 12°C	6.62 kW	6.30 kW

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

COP Tj = 12°C	8.41	6.34
Cdh	0.94	0.95
Pdh Tj = Tbiv	7.84 kW	8.04 kW
COP Tj = Tbiv	3.21	2.20
Pdh Tj = TOL	8.93 kW	9.03 kW
COP Tj = TOL	2.58	1.87
WTOL	55 °C	55 °C
Poff	14 W	14 W
PTO	51 W	51 W
PSB	51 W	51 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	3688 kWh	5201 kWh

Warmer Climate

EN 14825		
	Low temperature	Medium temperature
η_s	245 %	171 %
Prated	10.42 kW	10.36 kW
SCOP	6.21	4.35

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	10.42 kW	10.36 kW
COP Tj = +2°C	3.42	2.32
Cdh	0.98	0.99
Pdh Tj = +7°C	6.71 kW	6.37 kW
COP Tj = +7°C	6.07	3.95
Cdh	0.96	0.97
Pdh Tj = 12°C	6.58 kW	6.20 kW
COP Tj = 12°C	8.09	5.85
Cdh	0.94	0.96
Pdh Tj = Tbiv	10.42 kW	10.36 kW
COP Tj = Tbiv	3.42	2.32
Pdh Tj = TOL	10.42 kW	10.36 kW
COP Tj = TOL	3.42	2.32
WTOL	55 °C	55 °C
Poff	14 W	14 W
PTO	51 W	51 W
PSB	51 W	51 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}	2243 kWh	3180 kWh

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	59 dB(A)	59 dB(A)

Colder Climate

EN 14825		
	Low temperature	Medium temperature
η_s	170 %	124 %
Prated	7.61 kW	7.38 kW
SCOP	4.32	3.18
T _{biv}	-20 °C	-20 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = -7°C	4.50 kW	4.50 kW
COP T _j = -7°C	3.79	2.65
C _{dh}	0.96	0.97
P _{dh} T _j = +2°C	5.00 kW	4.62 kW
COP T _j = +2°C	5.34	3.96
C _{dh}	0.95	0.96

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

Pdh Tj = +7°C	5.67 kW	5.47 kW
COP Tj = +7°C	6.89	5.34
Cdh	0.94	0.95
Pdh Tj = 12°C	6.60 kW	6.38 kW
COP Tj = 12°C	8.30	6.70
Cdh	0.94	0.95
Pdh Tj = Tbiv	7.21 kW	6.99 kW
COP Tj = Tbiv	2.14	1.53
Pdh Tj = TOL	7.21 kW	6.99 kW
COP Tj = TOL	2.14	1.53
WTOL	55 °C	55 °C
Poff	14 W	14 W
PTO	51 W	51 W
PSB	51 W	51 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	4345 kWh	5723 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	59 dB(A)	59 dB(A)

Model: HA 12-6 O 230V B3

General Data

Power supply	1x230V 50Hz
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Heating

EN 14511-2

	Low temperature	Medium temperature
Heat output	11.60 kW	13.15 kW
El input	2.46 kW	4.55 kW
COP	4.71	2.89
Indoor water flow rate	1.98 m ³ /h	1.42 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	58 dB(A)	60 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	200 %	144 %
Prated	9.35 kW	9.66 kW
SCOP	5.07	3.67
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.09 kW	8.64 kW
COP Tj = -7°C	3.11	2.12
Cdh	0.99	0.99
Pdh Tj = +2°C	4.90 kW	5.30 kW
COP Tj = +2°C	4.98	3.62
Cdh	0.98	0.99
Pdh Tj = +7°C	5.75 kW	5.47 kW
COP Tj = +7°C	6.73	4.94
Cdh	0.98	0.98
Pdh Tj = 12°C	6.67 kW	6.35 kW

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

COP Tj = 12°C	8.74	6.50
Cdh	0.97	0.98
Pdh Tj = Tbiv	9.35 kW	9.66 kW
COP Tj = Tbiv	2.58	1.92
Pdh Tj = TOL	9.35 kW	9.66 kW
COP Tj = TOL	2.58	1.92
WTOL	75 °C	75 °C
Poff	8 W	8 W
PTO	45 W	45 W
PSB	45 W	45 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	3812 kWh	5437 kWh

Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825		
	Low temperature	Medium temperature

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

η_s	256 %	176 %
Prated	11.16 kW	11.02 kW
SCOP	6.48	4.47
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	11.16 kW	11.02 kW
COP Tj = +2°C	3.26	2.23
Cdh	0.99	1.00
Pdh Tj = +7°C	7.36 kW	7.20 kW
COP Tj = +7°C	5.90	3.84
Cdh	0.98	0.99
Pdh Tj = 12°C	6.53 kW	6.25 kW
COP Tj = 12°C	8.26	5.95
Cdh	0.97	0.98
Pdh Tj = Tbiv	11.16 kW	11.02 kW
COP Tj = Tbiv	3.26	2.23
Pdh Tj = TOL	11.16 kW	11.02 kW
COP Tj = TOL	3.26	2.23
WTOL	75 °C	75 °C
Poff	8 W	8 W
PTO	45 W	45 W

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

PSB	45 W	45 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}	2303 kWh	3295 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_s	168 %	126 %
Prated	10.24 kW	10.65 kW
SCOP	4.27	3.24
T _{biv}	-15 °C	-15 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = -7°C	6.34 kW	6.45 kW
COP T _j = -7°C	3.58	2.58
C _{dh}	0.99	0.99

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

Pdh Tj = +2°C	5.00 kW	4.70 kW
COP Tj = +2°C	5.39	4.06
Cdh	0.98	0.98
Pdh Tj = +7°C	5.79 kW	5.60 kW
COP Tj = +7°C	7.02	5.45
Cdh	0.97	0.98
Pdh Tj = 12°C	6.67 kW	6.47 kW
COP Tj = 12°C	8.74	7.14
Cdh	0.97	0.98
Pdh Tj = Tbiv	8.35 kW	8.68 kW
COP Tj = Tbiv	2.41	1.90
Pdh Tj = TOL	7.20 kW	7.10 kW
COP Tj = TOL	2.06	1.48
WTOL	75 °C	75 °C
Poff	8 W	8 W
PTO	45 W	45 W
PSB	45 W	45 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	5906 kWh	8111 kWh

Model: HA 12-6 O B3

General Data

Power supply	3x400V 50Hz
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Heating

EN 14511-2

	Low temperature	Medium temperature
Heat output	11.60 kW	13.15 kW
El input	2.46 kW	4.55 kW
COP	4.71	2.89
Indoor water flow rate	1.98 m ³ /h	1.42 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	58 dB(A)	60 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	200 %	144 %
Prated	9.35 kW	9.66 kW
SCOP	5.06	3.67
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.09 kW	8.64 kW
COP Tj = -7°C	3.11	2.12
Cdh	0.99	0.99
Pdh Tj = +2°C	4.90 kW	5.30 kW
COP Tj = +2°C	4.98	3.62
Cdh	0.98	0.99
Pdh Tj = +7°C	5.75 kW	5.47 kW
COP Tj = +7°C	6.73	4.94
Cdh	0.98	0.98
Pdh Tj = 12°C	6.67 kW	6.35 kW

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

COP Tj = 12°C	8.74	6.50
Cdh	0.97	0.98
Pdh Tj = Tbiv	9.35 kW	9.66 kW
COP Tj = Tbiv	2.58	1.92
Pdh Tj = TOL	9.35 kW	9.66 kW
COP Tj = TOL	2.58	1.92
WTOL	75 °C	75 °C
Poff	14 W	14 W
PTO	51 W	51 W
PSB	51 W	51 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	3813 kWh	5438 kWh

Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825		
	Low temperature	Medium temperature

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

η_s	255 %	175 %
Prated	11.16 kW	11.02 kW
SCOP	6.46	4.46
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	11.16 kW	11.02 kW
COP Tj = +2°C	3.26	2.23
Cdh	0.99	1.00
Pdh Tj = +7°C	7.36 kW	7.20 kW
COP Tj = +7°C	5.90	3.84
Cdh	0.98	0.99
Pdh Tj = 12°C	6.53 kW	6.25 kW
COP Tj = 12°C	8.26	5.95
Cdh	0.97	0.98
Pdh Tj = Tbiv	11.16 kW	11.02 kW
COP Tj = Tbiv	3.26	2.23
Pdh Tj = TOL	11.16 kW	11.02 kW
COP Tj = TOL	3.26	2.23
WTOL	75 °C	75 °C
Poff	14 W	14 W
PTO	51 W	51 W

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

PSB	51 W	51 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}	2307 kWh	3299 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level outdoor	58 dB(A)	60 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_s	168 %	126 %
Prated	10.24 kW	10.65 kW
SCOP	4.27	3.24
T _{biv}	-15 °C	-15 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = -7°C	6.34 kW	6.45 kW
COP T _j = -7°C	3.58	2.58
C _{dh}	0.99	0.99

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

Pdh Tj = +2°C	5.00 kW	4.70 kW
COP Tj = +2°C	5.39	4.06
Cdh	0.98	0.98
Pdh Tj = +7°C	5.79 kW	5.60 kW
COP Tj = +7°C	7.02	5.45
Cdh	0.97	0.98
Pdh Tj = 12°C	6.67 kW	6.47 kW
COP Tj = 12°C	8.74	7.14
Cdh	0.97	0.98
Pdh Tj = Tbiv	8.35 kW	8.68 kW
COP Tj = Tbiv	2.41	1.90
Pdh Tj = TOL	7.20 kW	7.10 kW
COP Tj = TOL	2.06	1.48
WTOL	75 °C	75 °C
Poff	14 W	14 W
PTO	51 W	51 W
PSB	51 W	51 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	5907 kWh	8112 kWh