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Summary of	NIMBUS/ARIANEXT/AEROTOP/ENERGION 35/50 M - Plus/LB		Reg. No.	ICIM-PDC-000111
Certificate Holder				
Name	Ariston Thermo Group			
Address	Viale Aristide Merloni 45		Zip	I-60044
City	Fabriano (AN)		Country	Italy
Certification Body	ICIM S.p.A.			
Subtype title	NIMBUS/ARIANEXT/AEROTOP/ENERGION 35/50 M - Plus/LB			
Heat Pump Type	Outdoor Air/Water			
Refrigerant	R32			
Mass of Refrigerant	1 kg			
Certification Date	05.07.2022			
Testing basis	Heat Pump KEYMARK rev9			

Model: NIMBUS PLUS 35 M NET R32

Configure model	
Model name	NIMBUS PLUS 35 M NET R32
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	3.50 kW	2.95 kW
El input	0.69 kW	1.09 kW
COP	5.10	2.70

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

Cooling

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EN 14511-2

	+7°C/+12°C	+18°C/+23°C
El input	1.03 kW	kW
Cooling capacity	3.5	
EER		

EN 14825

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	+7°C/+12°C	+18°C/+23°C
P _{designc}	3.5 kW	kW
SEER	4.87	
P _{dc} T _j = 35°C	3.5 kW	kW
EER T _j = 35°C	3	
P _{dc} T _j = 30°C	2.58 kW	kW
EER T _j = 30°C	4.33	
C _{dc} T _j = 30 °C	0.98	
P _{dc} T _j = 25°C	1.72 kW	kW
EER T _j = 25°C	5.86	
C _{dc} T _j = 25 °C	0.95	
P _{dc} T _j = 20°C	1.79 kW	kW
EER T _j = 20°C	7.24	
C _{dc} T _j = 20 °C	0.94	
P _{off}	14 W	W
PTO	14 W	W
PSB	14 W	W
PCK	0 W	W
Annual energy consumption Q _{ce}	628 kWh	kWh

Warmer Climate

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EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	53 dB(A)	53 dB(A)

EN 14825

	Low temperature	Medium temperature
P _{designh}	2.84 kW	2.35 kW
η_s	239 %	137 %
P _{rated}	2.84 kW	2.35 kW
SCOP	6.06	3.49
T _{biv}	2 °C	2 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = +2°C	2.84 kW	2.35 kW
COP T _j = +2°C	4.00	2.19
C _{dh} T _j = +2 °C	0.982	0.988
P _{dh} T _j = +7°C	1.88 kW	1.60 kW
COP T _j = +7°C	5.57	2.80
C _{dh} T _j = +7 °C	0.961	0.977
P _{dh} T _j = 12°C	1.91 kW	1.81 kW
COP T _j = 12°C	7.94	5.10

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Cdh Tj = +12 °C	0.946	0.963
Pdh Tj = Tbiv	2.84 kW	2.35 kW
COP Tj = Tbiv	4.02	2.19
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.03 kW	2.46 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.25	1.52
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.982	0.988
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	13 W	13 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	626 kWh	899 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	53 dB(A)	53 dB(A)

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EN 14825

	Low temperature	Medium temperature
P _{designh}	7.75 kW	7.43 kW
η_s	151 %	120 %
Prated	7.75 kW	7.43 kW
SCOP	3.85	3.07
T _{biv}	-7 °C	-7 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = -7°C	4.69 kW	4.50 kW
COP T _j = -7°C	3.54	2.76
C _{dh} T _j = -7 °C	0.990	0.992
P _{dh} T _j = +2°C	2.95 kW	2.94 kW
COP T _j = +2°C	5.16	3.99
C _{dh} T _j = +2 °C	0.977	0.982
P _{dh} T _j = +7°C	1.89 kW	1.92 kW
COP T _j = +7°C	7.19	5.35
C _{dh} T _j = +7 °C	0.950	0.964
P _{dh} T _j = 12°C	1.92 kW	1.93 kW
COP T _j = 12°C	8.55	6.96
C _{dh} T _j = +12 °C	0.942	0.953
P _{dh} T _j = T _{biv}	4.69 kW	4.50 kW

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COP Tj = Tbiv	3.54	2.76
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.03 kW	2.46 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.25	1.52
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.992
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	13 W	13 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	7.34 kW	7.04 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	4964 kWh	5968 kWh
Pdh Tj = -15°C (if TOL<-20°C)		
COP Tj = -15°C (if TOL<-20°C)		
Cdh Tj = -15 °C		

Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	53 dB(A)	53 dB(A)

EN 14825

	Low temperature	Medium temperature
P _{designh}	5.20 kW	4.63 kW
η_s	192 %	134 %
P _{rated}	5.20 kW	4.63 kW
SCOP	4.89	3.43
T _{biv}	-7 °C	-7 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = -7°C	4.60 kW	4.10 kW
COP T _j = -7°C	3.21	2.28
C _{dh} T _j = -7 °C	0.991	0.993
P _{dh} T _j = +2°C	2.88 kW	2.63 kW
COP T _j = +2°C	4.66	3.35
C _{dh} T _j = +2 °C	0.979	0.983
P _{dh} T _j = +7°C	1.85 kW	1.76 kW
COP T _j = +7°C	6.56	4.22
C _{dh} T _j = +7 °C	0.954	0.969
P _{dh} T _j = 12°C	1.92 kW	1.88 kW
COP T _j = 12°C	8.49	6.30
C _{dh} T _j = +12 °C	0.942	0.956
P _{dh} T _j = T _{biv}	4.60 kW	4.10 kW

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COP $T_j = T_{biv}$	3.21	2.28
$P_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	3.03 kW	2.46 kW
COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	2.25	1.52
$C_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	0.991	0.993
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	13 W	13 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.17 kW	2.17 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Q_{he}	2198 kWh	2790 kWh

Model: NIMBUS PLUS 50 M NET R32

Configure model	
Model name	NIMBUS PLUS 50 M NET R32
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	5.00 kW	3.80 kW
El input	1.00 kW	1.36 kW
COP	5.00	2.80

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

Cooling

EN 14511-2

	+7°C/+12°C	+18°C/+23°C
El input	1.75 kW	
Cooling capacity	5	
EER	2.85	4.56

EN 14825

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	+7°C/+12°C
P _{designc}	5 kW
SEER	4.85
P _{dc} T _j = 35°C	5 kW
EER T _j = 35°C	2.85
P _{dc} T _j = 30°C	3.77 kW
EER T _j = 30°C	4.25
C _{dc} T _j = 30 °C	0.98
P _{dc} T _j = 25°C	2.32 kW
EER T _j = 25°C	5.38
C _{dc} T _j = 25 °C	0.97
P _{dc} T _j = 20°C	1.87 kW
EER T _j = 20°C	7.85
C _{dc} T _j = 20 °C	0.94
P _{off}	14 W
PTO	14 W
PSB	14 W
PCK	0 W
Annual energy consumption Q _{ce}	925 kWh

Warmer Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	55 dB(A)	55 dB(A)

EN 14825

	Low temperature	Medium temperature
P _{designh}	3.44 kW	2.97 kW
η_s	245 %	151 %
P _{rated}	3.44 kW	2.97 kW
SCOP	6.20	3.84
T _{biv}	2 °C	2 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = +2°C	3.44 kW	2.97 kW
COP T _j = +2°C	3.88	2.33
C _{dh} T _j = +2 °C	0.985	0.989
P _{dh} T _j = +7°C	2.22 kW	2.02 kW
COP T _j = +7°C	5.66	3.16
C _{dh} T _j = +7 °C	0.965	0.979
P _{dh} T _j = 12°C	1.86 kW	1.76 kW
COP T _j = 12°C	8.01	5.40

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Cdh Tj = +12 °C	0.941	0.958
Pdh Tj = Tbiv	3.44 kW	2.97 kW
COP Tj = Tbiv	3.88	2.33
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.69 kW	3.18 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.30	1.54
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.985	0.989
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	13 W	13 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	742 kWh	1033 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	55 dB(A)	55 dB(A)

This information was generated by the HP KEYMARK database on 5 Jul 2022

EN 14825

	Low temperature	Medium temperature
P _{designh}	8.26 kW	8.26 kW
η_s	150 %	118 %
Prated	8.26 kW	8.26 kW
SCOP	3.85	3.84
T _{biv}	-7 °C	-7 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = -7°C	5.00 kW	5.00 kW
COP T _j = -7°C	3.50	2.71
C _{dh} T _j = -7 °C	0.991	0.993
P _{dh} T _j = +2°C	3.00 kW	3.11 kW
COP T _j = +2°C	5.15	3.81
C _{dh} T _j = +2 °C	0.978	0.983
P _{dh} T _j = +7°C	1.99 kW	2.28 kW
COP T _j = +7°C	7.20	5.29
C _{dh} T _j = +7 °C	0.953	0.968
P _{dh} T _j = 12°C	1.87 kW	1.87 kW
COP T _j = 12°C	8.70	6.88
C _{dh} T _j = +12 °C	0.949	0.950
P _{dh} T _j = T _{biv}	5.00 kW	5.00 kW

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COP Tj = Tbiv	3.50	2.70
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.69 kW	4.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.30	1.51
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.991	0.993
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	13 W	13 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	7.83 kW	7.83 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	5317 kWh	6739 kWh
Pdh Tj = -15°C (if TOL<-20°C)		
COP Tj = -15°C (if TOL<-20°C)		
Cdh Tj = -15 °C		

Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	55 dB(A)	55 dB(A)

EN 14825

	Low temperature	Medium temperature
P _{designh}	5.65 kW	5.65 kW
η_s	183 %	136 %
P _{rated}	5.65 kW	5.65 kW
SCOP	4.66	3.48
T _{biv}	-7 °C	-7 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = -7°C	5.00 kW	5.00 kW
COP T _j = -7°C	3.10	2.28
C _{dh} T _j = -7 °C	0.992	0.994
P _{dh} T _j = +2°C	3.11 kW	3.11 kW
COP T _j = +2°C	4.32	3.30
C _{dh} T _j = +2 °C	0.981	0.986
P _{dh} T _j = +7°C	1.96 kW	2.19 kW
COP T _j = +7°C	6.48	4.58
C _{dh} T _j = +7 °C	0.955	0.972
P _{dh} T _j = 12°C	1.86 kW	1.84 kW
COP T _j = 12°C	8.41	6.33
C _{dh} T _j = +12 °C	0.939	0.953
P _{dh} T _j = T _{biv}	5.00 kW	5.00 kW

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COP $T_j = T_{biv}$	3.10	2.28
$P_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	3.69 kW	3.18 kW
COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	2.30	1.54
$C_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	0.992	0.994
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	13 W	13 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.96 kW	2.47 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Q_{he}	2505 kWh	3360 kWh

Model: NIMBUS POCKET 35 M NET R32

Configure model	
Model name	NIMBUS POCKET 35 M NET R32
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	3.50 kW	2.95 kW
El input	0.69 kW	1.09 kW
COP	5.10	2.70

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

Cooling

EN 14511-2

	+7°C/+12°C
El input	1.03 kW
Cooling capacity	3.5

EN 14825

This information was generated by the HP KEYMARK database on 5 Jul 2022

	+7°C/+12°C
P _{designc}	3.5 kW
SEER	4.87
P _{dc} T _j = 35°C	3.5 kW
EER T _j = 35°C	3
P _{dc} T _j = 30°C	2.58 kW
EER T _j = 30°C	4.33
C _{dc} T _j = 30 °C	0.98
P _{dc} T _j = 25°C	1.72 kW
EER T _j = 25°C	5.86
C _{dc} T _j = 25 °C	0.95
P _{dc} T _j = 20°C	1.79 kW
EER T _j = 20°C	7.24
C _{dc} T _j = 20 °C	0.94
P _{off}	14 W
PTO	14 W
PSB	14 W
PCK	0 W
Annual energy consumption Q _{ce}	628 kWh

Warmer Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	53 dB(A)	53 dB(A)

EN 14825

	Low temperature	Medium temperature
P _{designh}	2.84 kW	2.35 kW
η_s	239 %	137 %
P _{rated}	2.84 kW	2.35 kW
SCOP	6.06	3.49
T _{biv}	2 °C	2 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = +2°C	2.84 kW	2.35 kW
COP T _j = +2°C	4.00	2.19
C _{dh} T _j = +2 °C	0.982	0.988
P _{dh} T _j = +7°C	1.88 kW	1.60 kW
COP T _j = +7°C	5.57	2.80
C _{dh} T _j = +7 °C	0.961	0.977
P _{dh} T _j = 12°C	1.91 kW	1.81 kW
COP T _j = 12°C	7.94	5.10

This information was generated by the HP KEYMARK database on 5 Jul 2022

Cdh Tj = +12 °C	0.946	0.963
Pdh Tj = Tbiv	2.84 kW	2.35 kW
COP Tj = Tbiv	4.02	2.19
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.03 kW	2.46 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.25	1.52
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.982	0.988
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	13 W	13 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	626 kWh	899 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	53 dB(A)	53 dB(A)

This information was generated by the HP KEYMARK database on 5 Jul 2022

EN 14825

	Low temperature	Medium temperature
P _{designh}	7.75 kW	7.43 kW
η_s	151 %	120 %
Prated	7.75 kW	7.43 kW
SCOP	3.85	3.07
T _{biv}	-7 °C	-7 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = -7°C	4.69 kW	4.50 kW
COP T _j = -7°C	3.54	2.76
C _{dh} T _j = -7 °C	0.990	0.992
P _{dh} T _j = +2°C	2.95 kW	2.94 kW
COP T _j = +2°C	5.16	3.99
C _{dh} T _j = +2 °C	0.977	0.982
P _{dh} T _j = +7°C	1.89 kW	1.92 kW
COP T _j = +7°C	7.19	5.35
C _{dh} T _j = +7 °C	0.950	0.964
P _{dh} T _j = 12°C	1.92 kW	1.93 kW
COP T _j = 12°C	8.55	6.96
C _{dh} T _j = +12 °C	0.942	0.953
P _{dh} T _j = T _{biv}	4.69 kW	4.50 kW

This information was generated by the HP KEYMARK database on 5 Jul 2022

COP $T_j = T_{biv}$	3.54	2.76
$P_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	3.03 kW	2.46 kW
COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	2.25	1.52
$C_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	0.990	0.992
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	13 W	13 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	7.34 kW	7.04 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Q_{he}	4964 kWh	5968 kWh

Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	53 dB(A)	53 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 5 Jul 2022

	Low temperature	Medium temperature
P _{designh}	5.20 kW	4.63 kW
η_s	192 %	134 %
P _{rated}	5.20 kW	4.63 kW
SCOP	4.89	3.43
T _{biv}	-7 °C	-7 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = -7°C	4.60 kW	4.10 kW
COP T _j = -7°C	3.21	2.28
C _{dh} T _j = -7 °C	0.991	0.993
P _{dh} T _j = +2°C	2.88 kW	2.63 kW
COP T _j = +2°C	4.66	3.35
C _{dh} T _j = +2 °C	0.979	0.983
P _{dh} T _j = +7°C	1.85 kW	1.76 kW
COP T _j = +7°C	6.56	4.22
C _{dh} T _j = +7 °C	0.954	0.969
P _{dh} T _j = 12°C	1.92 kW	1.88 kW
COP T _j = 12°C	8.49	6.30
C _{dh} T _j = +12 °C	0.942	0.956
P _{dh} T _j = T _{biv}	4.60 kW	4.10 kW
COP T _j = T _{biv}	3.21	2.28

This information was generated by the HP KEYMARK database on 5 Jul 2022

$P_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	3.03 kW	2.46 kW
$COP T_j = TOL$ or $COP T_j = T_{designh}$ if $TOL < T_{designh}$	2.25	1.52
$C_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	0.991	0.993
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	13 W	13 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.17 kW	2.17 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Q_{he}	2198 kWh	2790 kWh

Model: NIMBUS POCKET 50 M NET R32

Configure model

Model name	NIMBUS POCKET 50 M NET R32
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C

General Data

Power supply	1x230V 50Hz
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Heating

EN 14511-2

	Low temperature	Medium temperature
Heat output	5.00 kW	3.80 kW
El input	1.00 kW	1.36 kW
COP	5.00	2.80

EN 14511-4

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

Cooling

This information was generated by the HP KEYMARK database on 5 Jul 2022

EN 14511-2

	+7°C/+12°C	+18°C/+23°C
El input	1.75 kW	
Cooling capacity	5	
EER	2.85	4.56

EN 14825

This information was generated by the HP KEYMARK database on 5 Jul 2022

	+7°C/+12°C
P _{designc}	5 kW
SEER	4.85
P _{dc} T _j = 35°C	5 kW
EER T _j = 35°C	2.85
P _{dc} T _j = 30°C	3.77 kW
EER T _j = 30°C	4.25
C _{dc} T _j = 30 °C	0.98
P _{dc} T _j = 25°C	2.32 kW
EER T _j = 25°C	5.38
C _{dc} T _j = 25 °C	0.97
P _{dc} T _j = 20°C	1.87 kW
EER T _j = 20°C	7.85
C _{dc} T _j = 20 °C	0.94
P _{off}	14 W
PTO	14 W
PSB	14 W
PCK	0 W
Annual energy consumption Q _{ce}	925 kWh

Warmer Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	55 dB(A)	55 dB(A)

EN 14825

	Low temperature	Medium temperature
P _{designh}	3.44 kW	2.97 kW
η_s	245 %	151 %
P _{rated}	3.44 kW	2.97 kW
SCOP	6.20	3.84
T _{biv}	2 °C	2 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = +2°C	3.44 kW	2.97 kW
COP T _j = +2°C	3.88	2.33
C _{dh} T _j = +2 °C	0.985	0.989
P _{dh} T _j = +7°C	2.22 kW	2.02 kW
COP T _j = +7°C	5.66	3.16
C _{dh} T _j = +7 °C	0.965	0.979
P _{dh} T _j = 12°C	1.86 kW	1.76 kW
COP T _j = 12°C	8.01	5.40

This information was generated by the HP KEYMARK database on 5 Jul 2022

Cdh Tj = +12 °C	0.941	0.958
Pdh Tj = Tbiv	3.44 kW	2.97 kW
COP Tj = Tbiv	3.88	2.33
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.69 kW	3.18 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.30	1.54
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.985	0.989
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	13 W	13 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	742 kWh	1033 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	55 dB(A)	55 dB(A)

This information was generated by the HP KEYMARK database on 5 Jul 2022

EN 14825

	Low temperature	Medium temperature
P _{designh}	8.26 kW	8.26 kW
η_s	150 %	118 %
P _{rated}	8.26 kW	8.26 kW
SCOP	3.85	3.84
T _{biv}	-7 °C	-7 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = -7°C	5.00 kW	5.00 kW
COP T _j = -7°C	3.50	2.71
C _{dh} T _j = -7 °C	0.991	0.993
P _{dh} T _j = +2°C	3.00 kW	3.11 kW
COP T _j = +2°C	5.15	3.81
C _{dh} T _j = +2 °C	0.978	0.983
P _{dh} T _j = +7°C	1.99 kW	2.28 kW
COP T _j = +7°C	7.20	5.29
C _{dh} T _j = +7 °C	0.953	0.968
P _{dh} T _j = 12°C	1.87 kW	1.87 kW
COP T _j = 12°C	8.70	6.88
C _{dh} T _j = +12 °C	0.949	0.950
P _{dh} T _j = T _{biv}	5.00 kW	5.00 kW

This information was generated by the HP KEYMARK database on 5 Jul 2022

COP $T_j = T_{biv}$	3.50	2.70
$P_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	3.69 kW	4.90 kW
COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	2.30	1.51
$C_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	0.991	0.993
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	13 W	13 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	7.83 kW	7.83 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Q_{he}	5317 kWh	6739 kWh

Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	55 dB(A)	55 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 5 Jul 2022

	Low temperature	Medium temperature
P _{designh}	5.65 kW	5.65 kW
η_s	183 %	136 %
P _{rated}	5.65 kW	5.65 kW
SCOP	4.66	3.48
T _{biv}	-7 °C	-7 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = -7°C	5.00 kW	5.00 kW
COP T _j = -7°C	3.10	2.28
C _{dh} T _j = -7 °C	0.992	0.994
P _{dh} T _j = +2°C	3.11 kW	3.11 kW
COP T _j = +2°C	4.32	3.30
C _{dh} T _j = +2 °C	0.981	0.986
P _{dh} T _j = +7°C	1.96 kW	2.19 kW
COP T _j = +7°C	6.48	4.58
C _{dh} T _j = +7 °C	0.955	0.972
P _{dh} T _j = 12°C	1.86 kW	1.84 kW
COP T _j = 12°C	8.41	6.33
C _{dh} T _j = +12 °C	0.939	0.953
P _{dh} T _j = T _{biv}	5.00 kW	5.00 kW
COP T _j = T _{biv}	3.10	2.28

This information was generated by the HP KEYMARK database on 5 Jul 2022

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.69 kW	3.18 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.30	1.54
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.992	0.994
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	13 W	13 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.96 kW	2.47 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	2505 kWh	3360 kWh

Model: ARIANEXT PLUS 35 M LINK R32

Configure model	
Model name	ARIANEXT PLUS 35 M LINK R32
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	3.50 kW	2.95 kW
El input	0.69 kW	1.09 kW
COP	5.10	2.70

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

Cooling

EN 14511-2

	+7°C/+12°C
El input	1.03 kW
Cooling capacity	3.5

EN 14825

This information was generated by the HP KEYMARK database on 5 Jul 2022

	+7°C/+12°C
P _{designc}	3.5 kW
SEER	4.87
P _{dc} T _j = 35°C	3.5 kW
EER T _j = 35°C	3
P _{dc} T _j = 30°C	2.58 kW
EER T _j = 30°C	4.33
C _{dc} T _j = 30 °C	0.98
P _{dc} T _j = 25°C	1.72 kW
EER T _j = 25°C	5.86
C _{dc} T _j = 25 °C	0.95
P _{dc} T _j = 20°C	1.79 kW
EER T _j = 20°C	7.24
C _{dc} T _j = 20 °C	0.94
P _{off}	14 W
PTO	14 W
PSB	14 W
PCK	0 W
Annual energy consumption Q _{ce}	628 kWh

Warmer Climate

This information was generated by the HP KEYMARK database on 5 Jul 2022

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	53 dB(A)	53 dB(A)

EN 14825

	Low temperature	Medium temperature
P _{designh}	2.84 kW	2.35 kW
η_s	239 %	137 %
P _{rated}	2.84 kW	2.35 kW
SCOP	6.06	3.49
T _{biv}	2 °C	2 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = +2°C	2.84 kW	2.35 kW
COP T _j = +2°C	4.00	2.19
C _{dh} T _j = +2 °C	0.982	0.988
P _{dh} T _j = +7°C	1.88 kW	1.60 kW
COP T _j = +7°C	5.57	2.80
C _{dh} T _j = +7 °C	0.961	0.977
P _{dh} T _j = 12°C	1.91 kW	1.81 kW
COP T _j = 12°C	7.94	5.10

This information was generated by the HP KEYMARK database on 5 Jul 2022

Cdh Tj = +12 °C	0.946	0.963
Pdh Tj = Tbiv	2.84 kW	2.35 kW
COP Tj = Tbiv	4.02	2.19
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.03 kW	2.46 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.25	1.52
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.982	0.988
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	13 W	13 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	626 kWh	899 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	53 dB(A)	53 dB(A)

This information was generated by the HP KEYMARK database on 5 Jul 2022

EN 14825

	Low temperature	Medium temperature
P _{designh}	7.75 kW	7.43 kW
η_s	151 %	120 %
P _{rated}	7.75 kW	7.43 kW
SCOP	3.85	3.07
T _{biv}	-7 °C	-7 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = -7°C	4.69 kW	4.50 kW
COP T _j = -7°C	3.54	2.76
C _{dh} T _j = -7 °C	0.990	0.992
P _{dh} T _j = +2°C	2.95 kW	2.94 kW
COP T _j = +2°C	5.16	3.99
C _{dh} T _j = +2 °C	0.977	0.982
P _{dh} T _j = +7°C	1.89 kW	1.92 kW
COP T _j = +7°C	7.19	5.35
C _{dh} T _j = +7 °C	0.950	0.964
P _{dh} T _j = 12°C	1.92 kW	1.93 kW
COP T _j = 12°C	8.55	6.96
C _{dh} T _j = +12 °C	0.942	0.953
P _{dh} T _j = T _{biv}	4.69 kW	4.50 kW

This information was generated by the HP KEYMARK database on 5 Jul 2022

COP Tj = Tbiv	3.54	2.76
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.03 kW	2.46 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.25	1.52
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.992
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	13 W	13 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	7.34 kW	7.04 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	4964 kWh	5968 kWh

Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	53 dB(A)	53 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 5 Jul 2022

	Low temperature	Medium temperature
P _{designh}	5.20 kW	4.63 kW
η_s	192 %	134 %
P _{rated}	5.20 kW	4.63 kW
SCOP	4.89	3.43
T _{biv}	-7 °C	-7 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = -7°C	4.60 kW	4.10 kW
COP T _j = -7°C	3.21	2.28
C _{dh} T _j = -7 °C	0.991	0.993
P _{dh} T _j = +2°C	2.88 kW	2.63 kW
COP T _j = +2°C	4.66	3.35
C _{dh} T _j = +2 °C	0.979	0.983
P _{dh} T _j = +7°C	1.85 kW	1.76 kW
COP T _j = +7°C	6.56	4.22
C _{dh} T _j = +7 °C	0.954	0.969
P _{dh} T _j = 12°C	1.92 kW	1.88 kW
COP T _j = 12°C	8.49	6.30
C _{dh} T _j = +12 °C	0.942	0.956
P _{dh} T _j = T _{biv}	4.60 kW	4.10 kW
COP T _j = T _{biv}	3.21	2.28

This information was generated by the HP KEYMARK database on 5 Jul 2022

$P_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	3.03 kW	2.46 kW
$COP T_j = TOL$ or $COP T_j = T_{designh}$ if $TOL < T_{designh}$	2.25	1.52
$C_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	0.991	0.993
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	13 W	13 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.17 kW	2.17 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Q_{he}	2198 kWh	2790 kWh

Model: ARIANEXT PLUS 50 M LINK R32

Configure model	
Model name	ARIANEXT PLUS 50 M LINK R32
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	5.00 kW	3.80 kW
El input	1.00 kW	1.36 kW
COP	5.00	2.80

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

Cooling

This information was generated by the HP KEYMARK database on 5 Jul 2022

EN 14511-2

	+7°C/+12°C	+18°C/+23°C
El input	1.75 kW	
Cooling capacity	5	
EER	2.85	4.56

EN 14825

This information was generated by the HP KEYMARK database on 5 Jul 2022

	+7°C/+12°C
P _{designc}	5 kW
SEER	4.85
P _{dc} T _j = 35°C	5 kW
EER T _j = 35°C	2.85
P _{dc} T _j = 30°C	3.77 kW
EER T _j = 30°C	4.25
C _{dc} T _j = 30 °C	0.98
P _{dc} T _j = 25°C	2.32 kW
EER T _j = 25°C	5.38
C _{dc} T _j = 25 °C	0.97
P _{dc} T _j = 20°C	1.87 kW
EER T _j = 20°C	7.85
C _{dc} T _j = 20 °C	0.94
P _{off}	14 W
PTO	14 W
PSB	14 W
PCK	0 W
Annual energy consumption Q _{ce}	925 kWh

Warmer Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	55 dB(A)	55 dB(A)

EN 14825

	Low temperature	Medium temperature
P _{designh}	3.44 kW	2.97 kW
η_s	245 %	151 %
P _{rated}	3.44 kW	2.97 kW
SCOP	6.20	3.84
T _{biv}	2 °C	2 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = +2°C	3.44 kW	2.97 kW
COP T _j = +2°C	3.88	2.33
C _{dh} T _j = +2 °C	0.985	0.989
P _{dh} T _j = +7°C	2.22 kW	2.02 kW
COP T _j = +7°C	5.66	3.16
C _{dh} T _j = +7 °C	0.965	0.979
P _{dh} T _j = 12°C	1.86 kW	1.76 kW
COP T _j = 12°C	8.01	5.40

This information was generated by the HP KEYMARK database on 5 Jul 2022

Cdh Tj = +12 °C	0.941	0.958
Pdh Tj = Tbiv	3.44 kW	2.97 kW
COP Tj = Tbiv	3.88	2.33
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.69 kW	3.18 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.30	1.54
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.985	0.989
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	13 W	13 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	742 kWh	1033 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	55 dB(A)	55 dB(A)

This information was generated by the HP KEYMARK database on 5 Jul 2022

EN 14825

	Low temperature	Medium temperature
P _{designh}	8.26 kW	8.26 kW
η_s	150 %	118 %
P _{rated}	8.26 kW	8.26 kW
SCOP	3.85	3.84
T _{biv}	-7 °C	-7 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = -7°C	5.00 kW	5.00 kW
COP T _j = -7°C	3.50	2.71
C _{dh} T _j = -7 °C	0.991	0.993
P _{dh} T _j = +2°C	3.00 kW	3.11 kW
COP T _j = +2°C	5.15	3.81
C _{dh} T _j = +2 °C	0.978	0.983
P _{dh} T _j = +7°C	1.99 kW	2.28 kW
COP T _j = +7°C	7.20	5.29
C _{dh} T _j = +7 °C	0.953	0.968
P _{dh} T _j = 12°C	1.87 kW	1.87 kW
COP T _j = 12°C	8.70	6.88
C _{dh} T _j = +12 °C	0.949	0.950
P _{dh} T _j = T _{biv}	5.00 kW	5.00 kW

This information was generated by the HP KEYMARK database on 5 Jul 2022

COP $T_j = T_{biv}$	3.50	2.70
P _{dh} $T_j = TOL$ or P _{dh} $T_j = T_{designh}$ if $TOL < T_{designh}$	3.69 kW	4.90 kW
COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	2.30	1.51
C _{dh} $T_j = TOL$ or P _{dh} $T_j = T_{designh}$ if $TOL < T_{designh}$	0.991	0.993
WTOL	60 °C	60 °C
P _{off}	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	13 W	13 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	7.83 kW	7.83 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Q _{he}	5317 kWh	6739 kWh

Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	55 dB(A)	55 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 5 Jul 2022

	Low temperature	Medium temperature
P _{designh}	5.65 kW	5.65 kW
η_s	183 %	136 %
P _{rated}	5.65 kW	5.65 kW
SCOP	4.66	3.48
T _{biv}	-7 °C	-7 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = -7°C	5.00 kW	5.00 kW
COP T _j = -7°C	3.10	2.28
C _{dh} T _j = -7 °C	0.992	0.994
P _{dh} T _j = +2°C	3.11 kW	3.11 kW
COP T _j = +2°C	4.32	3.30
C _{dh} T _j = +2 °C	0.981	0.986
P _{dh} T _j = +7°C	1.96 kW	2.19 kW
COP T _j = +7°C	6.48	4.58
C _{dh} T _j = +7 °C	0.955	0.972
P _{dh} T _j = 12°C	1.86 kW	1.84 kW
COP T _j = 12°C	8.41	6.33
C _{dh} T _j = +12 °C	0.939	0.953
P _{dh} T _j = T _{biv}	5.00 kW	5.00 kW
COP T _j = T _{biv}	3.10	2.28

This information was generated by the HP KEYMARK database on 5 Jul 2022

$P_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	3.69 kW	3.18 kW
$COP T_j = TOL$ or $COP T_j = T_{designh}$ if $TOL < T_{designh}$	2.30	1.54
$C_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	0.992	0.994
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	13 W	13 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.96 kW	2.47 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Q_{he}	2505 kWh	3360 kWh

Model: ARIANEXT LITE 35 M LINK R32

Configure model	
Model name	ARIANEXT LITE 35 M LINK R32
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	3.50 kW	2.95 kW
El input	0.69 kW	1.09 kW
COP	5.10	2.70

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

Cooling

EN 14511-2

	+7°C/+12°C
El input	1.03 kW
Cooling capacity	3.5

EN 14825

This information was generated by the HP KEYMARK database on 5 Jul 2022

	+7°C/+12°C
P _{designc}	3.5 kW
SEER	4.87
P _{dc} T _j = 35°C	3.5 kW
EER T _j = 35°C	3
P _{dc} T _j = 30°C	2.58 kW
EER T _j = 30°C	4.33
C _{dc} T _j = 30 °C	0.98
P _{dc} T _j = 25°C	1.72 kW
EER T _j = 25°C	5.86
C _{dc} T _j = 25 °C	0.95
P _{dc} T _j = 20°C	1.79 kW
EER T _j = 20°C	7.24
C _{dc} T _j = 20 °C	0.94
P _{off}	14 W
PTO	14 W
PSB	14 W
PCK	0 W
Annual energy consumption Q _{ce}	628 kWh

Warmer Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	53 dB(A)	53 dB(A)

EN 14825

	Low temperature	Medium temperature
P _{designh}	2.84 kW	2.35 kW
η_s	239 %	137 %
P _{rated}	2.84 kW	2.35 kW
SCOP	6.06	3.49
T _{biv}	2 °C	2 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = +2°C	2.84 kW	2.35 kW
COP T _j = +2°C	4.00	2.19
C _{dh} T _j = +2 °C	0.982	0.988
P _{dh} T _j = +7°C	1.88 kW	1.60 kW
COP T _j = +7°C	5.57	2.80
C _{dh} T _j = +7 °C	0.961	0.977
P _{dh} T _j = 12°C	1.91 kW	1.81 kW
COP T _j = 12°C	7.94	5.10

This information was generated by the HP KEYMARK database on 5 Jul 2022

Cdh Tj = +12 °C	0.946	0.963
Pdh Tj = Tbiv	2.84 kW	2.35 kW
COP Tj = Tbiv	4.02	2.19
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.03 kW	2.46 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.25	1.52
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.982	0.988
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	13 W	13 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	626 kWh	899 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	53 dB(A)	53 dB(A)

This information was generated by the HP KEYMARK database on 5 Jul 2022

EN 14825

	Low temperature	Medium temperature
P _{designh}	7.75 kW	7.43 kW
η_s	151 %	120 %
Prated	7.75 kW	7.43 kW
SCOP	3.85	3.07
T _{biv}	-7 °C	-7 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = -7°C	4.69 kW	4.50 kW
COP T _j = -7°C	3.54	2.76
C _{dh} T _j = -7 °C	0.990	0.992
P _{dh} T _j = +2°C	2.95 kW	2.94 kW
COP T _j = +2°C	5.16	3.99
C _{dh} T _j = +2 °C	0.977	0.982
P _{dh} T _j = +7°C	1.89 kW	1.92 kW
COP T _j = +7°C	7.19	5.35
C _{dh} T _j = +7 °C	0.950	0.964
P _{dh} T _j = 12°C	1.92 kW	1.93 kW
COP T _j = 12°C	8.55	6.96
C _{dh} T _j = +12 °C	0.942	0.953
P _{dh} T _j = T _{biv}	4.69 kW	4.50 kW

This information was generated by the HP KEYMARK database on 5 Jul 2022

COP Tj = Tbiv	3.54	2.76
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.03 kW	2.46 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.25	1.52
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.992
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	13 W	13 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	7.34 kW	7.04 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	4964 kWh	5968 kWh

Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	53 dB(A)	53 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 5 Jul 2022

	Low temperature	Medium temperature
P _{designh}	5.20 kW	4.63 kW
η_s	192 %	134 %
P _{rated}	5.20 kW	4.63 kW
SCOP	4.89	3.43
T _{biv}	-7 °C	-7 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = -7°C	4.60 kW	4.10 kW
COP T _j = -7°C	3.21	2.28
C _{dh} T _j = -7 °C	0.991	0.993
P _{dh} T _j = +2°C	2.88 kW	2.63 kW
COP T _j = +2°C	4.66	3.35
C _{dh} T _j = +2 °C	0.979	0.983
P _{dh} T _j = +7°C	1.85 kW	1.76 kW
COP T _j = +7°C	6.56	4.22
C _{dh} T _j = +7 °C	0.954	0.969
P _{dh} T _j = 12°C	1.92 kW	1.88 kW
COP T _j = 12°C	8.49	6.30
C _{dh} T _j = +12 °C	0.942	0.956
P _{dh} T _j = T _{biv}	4.60 kW	4.10 kW
COP T _j = T _{biv}	3.21	2.28

This information was generated by the HP KEYMARK database on 5 Jul 2022

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.03 kW	2.46 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.25	1.52
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.991	0.993
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	13 W	13 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.17 kW	2.17 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	2198 kWh	2790 kWh

Model: ARIANEXT LITE 50 M LINK R32

Configure model	
Model name	ARIANEXT LITE 50 M LINK R32
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	5.00 kW	3.80 kW
El input	1.00 kW	1.36 kW
COP	5.00	2.80

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

Cooling

This information was generated by the HP KEYMARK database on 5 Jul 2022

EN 14511-2

	+7°C/+12°C	+18°C/+23°C
El input	1.75 kW	
Cooling capacity	5	
EER	2.85	4.56

EN 14825

This information was generated by the HP KEYMARK database on 5 Jul 2022

	+7°C/+12°C
P _{designc}	5 kW
SEER	4.85
P _{dc} T _j = 35°C	5 kW
EER T _j = 35°C	2.85
P _{dc} T _j = 30°C	3.77 kW
EER T _j = 30°C	4.25
C _{dc} T _j = 30 °C	0.98
P _{dc} T _j = 25°C	2.32 kW
EER T _j = 25°C	5.38
C _{dc} T _j = 25 °C	0.97
P _{dc} T _j = 20°C	1.87 kW
EER T _j = 20°C	7.85
C _{dc} T _j = 20 °C	0.94
P _{off}	14 W
PTO	14 W
PSB	14 W
PCK	0 W
Annual energy consumption Q _{ce}	925 kWh

Warmer Climate

This information was generated by the HP KEYMARK database on 5 Jul 2022

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	55 dB(A)	55 dB(A)

EN 14825

	Low temperature	Medium temperature
P _{designh}	3.44 kW	2.97 kW
η_s	245 %	151 %
P _{rated}	3.44 kW	2.97 kW
SCOP	6.20	3.84
T _{biv}	2 °C	2 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = +2°C	3.44 kW	2.97 kW
COP T _j = +2°C	3.88	2.33
C _{dh} T _j = +2 °C	0.985	0.989
P _{dh} T _j = +7°C	2.22 kW	2.02 kW
COP T _j = +7°C	5.66	3.16
C _{dh} T _j = +7 °C	0.965	0.979
P _{dh} T _j = 12°C	1.86 kW	1.76 kW
COP T _j = 12°C	8.01	5.40

This information was generated by the HP KEYMARK database on 5 Jul 2022

Cdh Tj = +12 °C	0.941	0.958
Pdh Tj = Tbiv	3.44 kW	2.97 kW
COP Tj = Tbiv	3.88	2.33
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.69 kW	3.18 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.30	1.54
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.985	0.989
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	13 W	13 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	742 kWh	1033 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	55 dB(A)	55 dB(A)

This information was generated by the HP KEYMARK database on 5 Jul 2022

EN 14825

	Low temperature	Medium temperature
P _{designh}	8.26 kW	8.26 kW
η_s	150 %	118 %
P _{rated}	8.26 kW	8.26 kW
SCOP	3.85	3.84
T _{biv}	-7 °C	-7 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = -7°C	5.00 kW	5.00 kW
COP T _j = -7°C	3.50	2.71
C _{dh} T _j = -7 °C	0.991	0.993
P _{dh} T _j = +2°C	3.00 kW	3.11 kW
COP T _j = +2°C	5.15	3.81
C _{dh} T _j = +2 °C	0.978	0.983
P _{dh} T _j = +7°C	1.99 kW	2.28 kW
COP T _j = +7°C	7.20	5.29
C _{dh} T _j = +7 °C	0.953	0.968
P _{dh} T _j = 12°C	1.87 kW	1.87 kW
COP T _j = 12°C	8.70	6.88
C _{dh} T _j = +12 °C	0.949	0.950
P _{dh} T _j = T _{biv}	5.00 kW	5.00 kW

This information was generated by the HP KEYMARK database on 5 Jul 2022

COP $T_j = T_{biv}$	3.50	2.70
$P_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	3.69 kW	4.90 kW
COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	2.30	1.51
$C_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	0.991	0.993
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	13 W	13 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	7.83 kW	7.83 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Q_{he}	5317 kWh	6739 kWh

Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	55 dB(A)	55 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 5 Jul 2022

	Low temperature	Medium temperature
P _{designh}	5.65 kW	5.65 kW
η_s	183 %	136 %
P _{rated}	5.65 kW	5.65 kW
SCOP	4.66	3.48
T _{biv}	-7 °C	-7 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = -7°C	5.00 kW	5.00 kW
COP T _j = -7°C	3.10	2.28
C _{dh} T _j = -7 °C	0.992	0.994
P _{dh} T _j = +2°C	3.11 kW	3.11 kW
COP T _j = +2°C	4.32	3.30
C _{dh} T _j = +2 °C	0.981	0.986
P _{dh} T _j = +7°C	1.96 kW	2.19 kW
COP T _j = +7°C	6.48	4.58
C _{dh} T _j = +7 °C	0.955	0.972
P _{dh} T _j = 12°C	1.86 kW	1.84 kW
COP T _j = 12°C	8.41	6.33
C _{dh} T _j = +12 °C	0.939	0.953
P _{dh} T _j = T _{biv}	5.00 kW	5.00 kW
COP T _j = T _{biv}	3.10	2.28

This information was generated by the HP KEYMARK database on 5 Jul 2022

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.69 kW	3.18 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.30	1.54
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.992	0.994
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	13 W	13 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.96 kW	2.47 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	2505 kWh	3360 kWh

Model: AEROTOP MONO 04.2 M-RX

Configure model	
Model name	AEROTOP MONO 04.2 M-RX
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	3.50 kW	2.95 kW
El input	0.69 kW	1.09 kW
COP	5.10	2.70

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

Cooling

EN 14511-2

	+7°C/+12°C
El input	1.03 kW
Cooling capacity	3.5

EN 14825

This information was generated by the HP KEYMARK database on 5 Jul 2022

	+7°C/+12°C
P _{designc}	3.5 kW
SEER	4.87
P _{dc} T _j = 35°C	3.5 kW
EER T _j = 35°C	3
P _{dc} T _j = 30°C	2.58 kW
EER T _j = 30°C	4.33
C _{dc} T _j = 30 °C	0.98
P _{dc} T _j = 25°C	1.72 kW
EER T _j = 25°C	5.86
C _{dc} T _j = 25 °C	0.95
P _{dc} T _j = 20°C	1.79 kW
EER T _j = 20°C	7.24
C _{dc} T _j = 20 °C	0.94
P _{off}	14 W
PTO	14 W
PSB	14 W
PCK	0 W
Annual energy consumption Q _{ce}	628 kWh

Warmer Climate

This information was generated by the HP KEYMARK database on 5 Jul 2022

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	53 dB(A)	53 dB(A)

EN 14825

	Low temperature	Medium temperature
P _{designh}	2.84 kW	2.35 kW
η_s	239 %	137 %
P _{rated}	2.84 kW	2.35 kW
SCOP	6.06	3.49
T _{biv}	2 °C	2 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = +2°C	2.84 kW	2.35 kW
COP T _j = +2°C	4.00	2.19
C _{dh} T _j = +2 °C	0.982	0.988
P _{dh} T _j = +7°C	1.88 kW	1.60 kW
COP T _j = +7°C	5.57	2.80
C _{dh} T _j = +7 °C	0.961	0.977
P _{dh} T _j = 12°C	1.91 kW	1.81 kW
COP T _j = 12°C	7.94	5.10

This information was generated by the HP KEYMARK database on 5 Jul 2022

Cdh Tj = +12 °C	0.946	0.963
Pdh Tj = Tbiv	2.84 kW	2.35 kW
COP Tj = Tbiv	4.02	2.19
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.03 kW	2.46 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.25	1.52
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.982	0.988
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	13 W	13 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	626 kWh	899 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	53 dB(A)	53 dB(A)

This information was generated by the HP KEYMARK database on 5 Jul 2022

EN 14825

	Low temperature	Medium temperature
P _{designh}	7.75 kW	7.43 kW
η_s	151 %	120 %
Prated	7.75 kW	7.43 kW
SCOP	3.85	3.07
T _{biv}	-7 °C	-7 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = -7°C	4.69 kW	4.50 kW
COP T _j = -7°C	3.54	2.76
C _{dh} T _j = -7 °C	0.990	0.992
P _{dh} T _j = +2°C	2.95 kW	2.94 kW
COP T _j = +2°C	5.16	3.99
C _{dh} T _j = +2 °C	0.977	0.982
P _{dh} T _j = +7°C	1.89 kW	1.92 kW
COP T _j = +7°C	7.19	5.35
C _{dh} T _j = +7 °C	0.950	0.964
P _{dh} T _j = 12°C	1.92 kW	1.93 kW
COP T _j = 12°C	8.55	6.96
C _{dh} T _j = +12 °C	0.942	0.953
P _{dh} T _j = T _{biv}	4.69 kW	4.50 kW

This information was generated by the HP KEYMARK database on 5 Jul 2022

COP Tj = Tbiv	3.54	2.76
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.03 kW	2.46 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.25	1.52
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.992
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	13 W	13 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	7.34 kW	7.04 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	4964 kWh	5968 kWh

Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	53 dB(A)	53 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 5 Jul 2022

	Low temperature	Medium temperature
P _{designh}	5.20 kW	4.63 kW
η_s	192 %	134 %
P _{rated}	5.20 kW	4.63 kW
SCOP	4.89	3.43
T _{biv}	-7 °C	-7 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = -7°C	4.60 kW	4.10 kW
COP T _j = -7°C	3.21	2.28
C _{dh} T _j = -7 °C	0.991	0.993
P _{dh} T _j = +2°C	2.88 kW	2.63 kW
COP T _j = +2°C	4.66	3.35
C _{dh} T _j = +2 °C	0.979	0.983
P _{dh} T _j = +7°C	1.85 kW	1.76 kW
COP T _j = +7°C	6.56	4.22
C _{dh} T _j = +7 °C	0.954	0.969
P _{dh} T _j = 12°C	1.92 kW	1.88 kW
COP T _j = 12°C	8.49	6.30
C _{dh} T _j = +12 °C	0.942	0.956
P _{dh} T _j = T _{biv}	4.60 kW	4.10 kW
COP T _j = T _{biv}	3.21	2.28

This information was generated by the HP KEYMARK database on 5 Jul 2022

$P_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	3.03 kW	2.46 kW
$COP T_j = TOL$ or $COP T_j = T_{designh}$ if $TOL < T_{designh}$	2.25	1.52
$C_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	0.991	0.993
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	13 W	13 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.17 kW	2.17 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Q_{he}	2198 kWh	2790 kWh

Model: AERAEROTOP MONO 05.2 M-RX

Configure model	
Model name	AERAEROTOP MONO 05.2 M-RX
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	5.00 kW	3.80 kW
El input	1.00 kW	1.36 kW
COP	5.00	2.80

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

Cooling

EN 14511-2

	+7°C/+12°C	+18°C/+23°C
El input	1.75 kW	
Cooling capacity	5	
EER	2.85	4.56

EN 14825

This information was generated by the HP KEYMARK database on 5 Jul 2022

	+7°C/+12°C
P _{designc}	5 kW
SEER	4.85
P _{dc} T _j = 35°C	5 kW
EER T _j = 35°C	2.85
P _{dc} T _j = 30°C	3.77 kW
EER T _j = 30°C	4.25
C _{dc} T _j = 30 °C	0.98
P _{dc} T _j = 25°C	2.32 kW
EER T _j = 25°C	5.38
C _{dc} T _j = 25 °C	0.97
P _{dc} T _j = 20°C	1.87 kW
EER T _j = 20°C	7.85
C _{dc} T _j = 20 °C	0.94
P _{off}	14 W
PTO	14 W
PSB	14 W
PCK	0 W
Annual energy consumption Q _{ce}	925 kWh

Warmer Climate

This information was generated by the HP KEYMARK database on 5 Jul 2022

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	55 dB(A)	55 dB(A)

EN 14825

	Low temperature	Medium temperature
P _{designh}	3.44 kW	2.97 kW
η_s	245 %	151 %
P _{rated}	3.44 kW	2.97 kW
SCOP	6.20	3.84
T _{biv}	2 °C	2 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = +2°C	3.44 kW	2.97 kW
COP T _j = +2°C	3.88	2.33
C _{dh} T _j = +2 °C	0.985	0.989
P _{dh} T _j = +7°C	2.22 kW	2.02 kW
COP T _j = +7°C	5.66	3.16
C _{dh} T _j = +7 °C	0.965	0.979
P _{dh} T _j = 12°C	1.86 kW	1.76 kW
COP T _j = 12°C	8.01	5.40

This information was generated by the HP KEYMARK database on 5 Jul 2022

Cdh Tj = +12 °C	0.941	0.958
Pdh Tj = Tbiv	3.44 kW	2.97 kW
COP Tj = Tbiv	3.88	2.33
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.69 kW	3.18 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.30	1.54
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.985	0.989
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	13 W	13 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	742 kWh	1033 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	55 dB(A)	55 dB(A)

This information was generated by the HP KEYMARK database on 5 Jul 2022

EN 14825

	Low temperature	Medium temperature
P _{designh}	8.26 kW	8.26 kW
η_s	150 %	118 %
P _{rated}	8.26 kW	8.26 kW
SCOP	3.85	3.84
T _{biv}	-7 °C	-7 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = -7°C	5.00 kW	5.00 kW
COP T _j = -7°C	3.50	2.71
C _{dh} T _j = -7 °C	0.991	0.993
P _{dh} T _j = +2°C	3.00 kW	3.11 kW
COP T _j = +2°C	5.15	3.81
C _{dh} T _j = +2 °C	0.978	0.983
P _{dh} T _j = +7°C	1.99 kW	2.28 kW
COP T _j = +7°C	7.20	5.29
C _{dh} T _j = +7 °C	0.953	0.968
P _{dh} T _j = 12°C	1.87 kW	1.87 kW
COP T _j = 12°C	8.70	6.88
C _{dh} T _j = +12 °C	0.949	0.950
P _{dh} T _j = T _{biv}	5.00 kW	5.00 kW

This information was generated by the HP KEYMARK database on 5 Jul 2022

COP Tj = Tbiv	3.50	2.70
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.69 kW	4.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.30	1.51
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.991	0.993
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	13 W	13 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	7.83 kW	7.83 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	5317 kWh	6739 kWh

Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	55 dB(A)	55 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 5 Jul 2022

	Low temperature	Medium temperature
P _{designh}	5.65 kW	5.65 kW
η_s	183 %	136 %
P _{rated}	5.65 kW	5.65 kW
SCOP	4.66	3.48
T _{biv}	-7 °C	-7 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = -7°C	5.00 kW	5.00 kW
COP T _j = -7°C	3.10	2.28
C _{dh} T _j = -7 °C	0.992	0.994
P _{dh} T _j = +2°C	3.11 kW	3.11 kW
COP T _j = +2°C	4.32	3.30
C _{dh} T _j = +2 °C	0.981	0.986
P _{dh} T _j = +7°C	1.96 kW	2.19 kW
COP T _j = +7°C	6.48	4.58
C _{dh} T _j = +7 °C	0.955	0.972
P _{dh} T _j = 12°C	1.86 kW	1.84 kW
COP T _j = 12°C	8.41	6.33
C _{dh} T _j = +12 °C	0.939	0.953
P _{dh} T _j = T _{biv}	5.00 kW	5.00 kW
COP T _j = T _{biv}	3.10	2.28

This information was generated by the HP KEYMARK database on 5 Jul 2022

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.69 kW	3.18 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.30	1.54
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.992	0.994
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	13 W	13 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.96 kW	2.47 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	2505 kWh	3360 kWh

Model: AEROTOP MONO 04.2 M-RXL

Configure model	
Model name	AEROTOP MONO 04.2 M-RXL
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	3.50 kW	2.95 kW
El input	0.69 kW	1.09 kW
COP	5.10	2.70

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

Cooling

EN 14511-2

	+7°C/+12°C
El input	1.03 kW
Cooling capacity	3.5

EN 14825

This information was generated by the HP KEYMARK database on 5 Jul 2022

	+7°C/+12°C
P _{designc}	3.5 kW
SEER	4.87
P _{dc} T _j = 35°C	3.5 kW
EER T _j = 35°C	3
P _{dc} T _j = 30°C	2.58 kW
EER T _j = 30°C	4.33
C _{dc} T _j = 30 °C	0.98
P _{dc} T _j = 25°C	1.72 kW
EER T _j = 25°C	5.86
C _{dc} T _j = 25 °C	0.95
P _{dc} T _j = 20°C	1.79 kW
EER T _j = 20°C	7.24
C _{dc} T _j = 20 °C	0.94
P _{off}	14 W
PTO	14 W
PSB	14 W
PCK	0 W
Annual energy consumption Q _{ce}	628 kWh

Warmer Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	53 dB(A)	53 dB(A)

EN 14825

	Low temperature	Medium temperature
P _{designh}	2.84 kW	2.35 kW
η_s	239 %	137 %
P _{rated}	2.84 kW	2.35 kW
SCOP	6.06	3.49
T _{biv}	2 °C	2 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = +2°C	2.84 kW	2.35 kW
COP T _j = +2°C	4.00	2.19
C _{dh} T _j = +2 °C	0.982	0.988
P _{dh} T _j = +7°C	1.88 kW	1.60 kW
COP T _j = +7°C	5.57	2.80
C _{dh} T _j = +7 °C	0.961	0.977
P _{dh} T _j = 12°C	1.91 kW	1.81 kW
COP T _j = 12°C	7.94	5.10

This information was generated by the HP KEYMARK database on 5 Jul 2022

Cdh Tj = +12 °C	0.946	0.963
Pdh Tj = Tbiv	2.84 kW	2.35 kW
COP Tj = Tbiv	4.02	2.19
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.03 kW	2.46 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.25	1.52
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.982	0.988
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	13 W	13 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	626 kWh	899 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	53 dB(A)	53 dB(A)

This information was generated by the HP KEYMARK database on 5 Jul 2022

EN 14825

	Low temperature	Medium temperature
P _{designh}	7.75 kW	7.43 kW
η_s	151 %	120 %
Prated	7.75 kW	7.43 kW
SCOP	3.85	3.07
T _{biv}	-7 °C	-7 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = -7°C	4.69 kW	4.50 kW
COP T _j = -7°C	3.54	2.76
C _{dh} T _j = -7 °C	0.990	0.992
P _{dh} T _j = +2°C	2.95 kW	2.94 kW
COP T _j = +2°C	5.16	3.99
C _{dh} T _j = +2 °C	0.977	0.982
P _{dh} T _j = +7°C	1.89 kW	1.92 kW
COP T _j = +7°C	7.19	5.35
C _{dh} T _j = +7 °C	0.950	0.964
P _{dh} T _j = 12°C	1.92 kW	1.93 kW
COP T _j = 12°C	8.55	6.96
C _{dh} T _j = +12 °C	0.942	0.953
P _{dh} T _j = T _{biv}	4.69 kW	4.50 kW

This information was generated by the HP KEYMARK database on 5 Jul 2022

COP Tj = Tbiv	3.54	2.76
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.03 kW	2.46 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.25	1.52
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.992
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	13 W	13 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	7.34 kW	7.04 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	4964 kWh	5968 kWh

Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	53 dB(A)	53 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 5 Jul 2022

	Low temperature	Medium temperature
P _{designh}	5.20 kW	4.63 kW
η_s	192 %	134 %
P _{rated}	5.20 kW	4.63 kW
SCOP	4.89	3.43
T _{biv}	-7 °C	-7 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = -7°C	4.60 kW	4.10 kW
COP T _j = -7°C	3.21	2.28
C _{dh} T _j = -7 °C	0.991	0.993
P _{dh} T _j = +2°C	2.88 kW	2.63 kW
COP T _j = +2°C	4.66	3.35
C _{dh} T _j = +2 °C	0.979	0.983
P _{dh} T _j = +7°C	1.85 kW	1.76 kW
COP T _j = +7°C	6.56	4.22
C _{dh} T _j = +7 °C	0.954	0.969
P _{dh} T _j = 12°C	1.92 kW	1.88 kW
COP T _j = 12°C	8.49	6.30
C _{dh} T _j = +12 °C	0.942	0.956
P _{dh} T _j = T _{biv}	4.60 kW	4.10 kW
COP T _j = T _{biv}	3.21	2.28

This information was generated by the HP KEYMARK database on 5 Jul 2022

$P_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	3.03 kW	2.46 kW
$COP T_j = TOL$ or $COP T_j = T_{designh}$ if $TOL < T_{designh}$	2.25	1.52
$C_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	0.991	0.993
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	13 W	13 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.17 kW	2.17 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Q_{he}	2198 kWh	2790 kWh

Model: AEROTOP MONO 05.2 M-RXL

Configure model	
Model name	AEROTOP MONO 05.2 M-RXL
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	5.00 kW	3.80 kW
El input	1.00 kW	1.36 kW
COP	5.00	2.80

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

Cooling

This information was generated by the HP KEYMARK database on 5 Jul 2022

EN 14511-2

	+7°C/+12°C	+18°C/+23°C
El input	1.75 kW	
Cooling capacity	5	
EER	2.85	4.56

EN 14825

This information was generated by the HP KEYMARK database on 5 Jul 2022

	+7°C/+12°C
P _{designc}	5 kW
SEER	4.85
P _{dc} T _j = 35°C	5 kW
EER T _j = 35°C	2.85
P _{dc} T _j = 30°C	3.77 kW
EER T _j = 30°C	4.25
C _{dc} T _j = 30 °C	0.98
P _{dc} T _j = 25°C	2.32 kW
EER T _j = 25°C	5.38
C _{dc} T _j = 25 °C	0.97
P _{dc} T _j = 20°C	1.87 kW
EER T _j = 20°C	7.85
C _{dc} T _j = 20 °C	0.94
P _{off}	14 W
PTO	14 W
PSB	14 W
PCK	0 W
Annual energy consumption Q _{ce}	925 kWh

Warmer Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	55 dB(A)	55 dB(A)

EN 14825

	Low temperature	Medium temperature
P _{designh}	3.44 kW	2.97 kW
η_s	245 %	151 %
P _{rated}	3.44 kW	2.97 kW
SCOP	6.20	3.84
T _{biv}	2 °C	2 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = +2°C	3.44 kW	2.97 kW
COP T _j = +2°C	3.88	2.33
C _{dh} T _j = +2 °C	0.985	0.989
P _{dh} T _j = +7°C	2.22 kW	2.02 kW
COP T _j = +7°C	5.66	3.16
C _{dh} T _j = +7 °C	0.965	0.979
P _{dh} T _j = 12°C	1.86 kW	1.76 kW
COP T _j = 12°C	8.01	5.40

This information was generated by the HP KEYMARK database on 5 Jul 2022

Cdh Tj = +12 °C	0.941	0.958
Pdh Tj = Tbiv	3.44 kW	2.97 kW
COP Tj = Tbiv	3.88	2.33
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.69 kW	3.18 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.30	1.54
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.985	0.989
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	13 W	13 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	742 kWh	1033 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	55 dB(A)	55 dB(A)

This information was generated by the HP KEYMARK database on 5 Jul 2022

EN 14825

	Low temperature	Medium temperature
P _{designh}	8.26 kW	8.26 kW
η_s	150 %	118 %
P _{rated}	8.26 kW	8.26 kW
SCOP	3.85	3.84
T _{biv}	-7 °C	-7 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = -7°C	5.00 kW	5.00 kW
COP T _j = -7°C	3.50	2.71
C _{dh} T _j = -7 °C	0.991	0.993
P _{dh} T _j = +2°C	3.00 kW	3.11 kW
COP T _j = +2°C	5.15	3.81
C _{dh} T _j = +2 °C	0.978	0.983
P _{dh} T _j = +7°C	1.99 kW	2.28 kW
COP T _j = +7°C	7.20	5.29
C _{dh} T _j = +7 °C	0.953	0.968
P _{dh} T _j = 12°C	1.87 kW	1.87 kW
COP T _j = 12°C	8.70	6.88
C _{dh} T _j = +12 °C	0.949	0.950
P _{dh} T _j = T _{biv}	5.00 kW	5.00 kW

This information was generated by the HP KEYMARK database on 5 Jul 2022

COP Tj = Tbiv	3.50	2.70
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.69 kW	4.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.30	1.51
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.991	0.993
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	13 W	13 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	7.83 kW	7.83 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	5317 kWh	6739 kWh

Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	55 dB(A)	55 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 5 Jul 2022

	Low temperature	Medium temperature
P _{designh}	5.65 kW	5.65 kW
η_s	183 %	136 %
P _{rated}	5.65 kW	5.65 kW
SCOP	4.66	3.48
T _{biv}	-7 °C	-7 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = -7°C	5.00 kW	5.00 kW
COP T _j = -7°C	3.10	2.28
C _{dh} T _j = -7 °C	0.992	0.994
P _{dh} T _j = +2°C	3.11 kW	3.11 kW
COP T _j = +2°C	4.32	3.30
C _{dh} T _j = +2 °C	0.981	0.986
P _{dh} T _j = +7°C	1.96 kW	2.19 kW
COP T _j = +7°C	6.48	4.58
C _{dh} T _j = +7 °C	0.955	0.972
P _{dh} T _j = 12°C	1.86 kW	1.84 kW
COP T _j = 12°C	8.41	6.33
C _{dh} T _j = +12 °C	0.939	0.953
P _{dh} T _j = T _{biv}	5.00 kW	5.00 kW
COP T _j = T _{biv}	3.10	2.28

This information was generated by the HP KEYMARK database on 5 Jul 2022

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.69 kW	3.18 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.30	1.54
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.992	0.994
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	13 W	13 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.96 kW	2.47 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	2505 kWh	3360 kWh

Model: ENERGION M PLUS 40

Configure model	
Model name	ENERGION M PLUS 40
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	3.50 kW	2.95 kW
El input	0.69 kW	1.09 kW
COP	5.10	2.70

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

Cooling

EN 14511-2

	+7°C/+12°C
El input	1.03 kW
Cooling capacity	3.5

EN 14825

This information was generated by the HP KEYMARK database on 5 Jul 2022

	+7°C/+12°C
P _{designc}	3.5 kW
SEER	4.87
P _{dc} T _j = 35°C	3.5 kW
EER T _j = 35°C	3
P _{dc} T _j = 30°C	2.58 kW
EER T _j = 30°C	4.33
C _{dc} T _j = 30 °C	0.98
P _{dc} T _j = 25°C	1.72 kW
EER T _j = 25°C	5.86
C _{dc} T _j = 25 °C	0.95
P _{dc} T _j = 20°C	1.79 kW
EER T _j = 20°C	7.24
C _{dc} T _j = 20 °C	0.94
P _{off}	14 W
PTO	14 W
PSB	14 W
PCK	0 W
Annual energy consumption Q _{ce}	628 kWh

Warmer Climate

This information was generated by the HP KEYMARK database on 5 Jul 2022

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	53 dB(A)	53 dB(A)

EN 14825

	Low temperature	Medium temperature
P _{designh}	2.84 kW	2.35 kW
η_s	239 %	137 %
P _{rated}	2.84 kW	2.35 kW
SCOP	6.06	3.49
T _{biv}	2 °C	2 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = +2°C	2.84 kW	2.35 kW
COP T _j = +2°C	4.00	2.19
C _{dh} T _j = +2 °C	0.982	0.988
P _{dh} T _j = +7°C	1.88 kW	1.60 kW
COP T _j = +7°C	5.57	2.80
C _{dh} T _j = +7 °C	0.961	0.977
P _{dh} T _j = 12°C	1.91 kW	1.81 kW
COP T _j = 12°C	7.94	5.10

This information was generated by the HP KEYMARK database on 5 Jul 2022

Cdh Tj = +12 °C	0.946	0.963
Pdh Tj = Tbiv	2.84 kW	2.35 kW
COP Tj = Tbiv	4.02	2.19
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.03 kW	2.46 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.25	1.52
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.982	0.988
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	13 W	13 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	626 kWh	899 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	53 dB(A)	53 dB(A)

This information was generated by the HP KEYMARK database on 5 Jul 2022

EN 14825

	Low temperature	Medium temperature
P _{designh}	7.75 kW	7.43 kW
η_s	151 %	120 %
P _{rated}	7.75 kW	7.43 kW
SCOP	3.85	3.07
T _{biv}	-7 °C	-7 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = -7°C	4.69 kW	4.50 kW
COP T _j = -7°C	3.54	2.76
C _{dh} T _j = -7 °C	0.990	0.992
P _{dh} T _j = +2°C	2.95 kW	2.94 kW
COP T _j = +2°C	5.16	3.99
C _{dh} T _j = +2 °C	0.977	0.982
P _{dh} T _j = +7°C	1.89 kW	1.92 kW
COP T _j = +7°C	7.19	5.35
C _{dh} T _j = +7 °C	0.950	0.964
P _{dh} T _j = 12°C	1.92 kW	1.93 kW
COP T _j = 12°C	8.55	6.96
C _{dh} T _j = +12 °C	0.942	0.953
P _{dh} T _j = T _{biv}	4.69 kW	4.50 kW

This information was generated by the HP KEYMARK database on 5 Jul 2022

COP Tj = Tbiv	3.54	2.76
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.03 kW	2.46 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.25	1.52
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.992
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	13 W	13 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	7.34 kW	7.04 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	4964 kWh	5968 kWh

Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	53 dB(A)	53 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 5 Jul 2022

	Low temperature	Medium temperature
P _{designh}	5.20 kW	4.63 kW
η_s	192 %	134 %
P _{rated}	5.20 kW	4.63 kW
SCOP	4.89	3.43
T _{biv}	-7 °C	-7 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = -7°C	4.60 kW	4.10 kW
COP T _j = -7°C	3.21	2.28
C _{dh} T _j = -7 °C	0.991	0.993
P _{dh} T _j = +2°C	2.88 kW	2.63 kW
COP T _j = +2°C	4.66	3.35
C _{dh} T _j = +2 °C	0.979	0.983
P _{dh} T _j = +7°C	1.85 kW	1.76 kW
COP T _j = +7°C	6.56	4.22
C _{dh} T _j = +7 °C	0.954	0.969
P _{dh} T _j = 12°C	1.92 kW	1.88 kW
COP T _j = 12°C	8.49	6.30
C _{dh} T _j = +12 °C	0.942	0.956
P _{dh} T _j = T _{biv}	4.60 kW	4.10 kW
COP T _j = T _{biv}	3.21	2.28

This information was generated by the HP KEYMARK database on 5 Jul 2022

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.03 kW	2.46 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.25	1.52
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.991	0.993
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	13 W	13 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.17 kW	2.17 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	2198 kWh	2790 kWh

Model: ENERGION M PLUS 50

Configure model	
Model name	ENERGION M PLUS 50
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	5.00 kW	3.80 kW
El input	1.00 kW	1.36 kW
COP	5.00	2.80

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

Cooling

EN 14511-2

	+7°C/+12°C	+18°C/+23°C
El input	1.75 kW	
Cooling capacity	5	
EER	2.85	4.56

EN 14825

This information was generated by the HP KEYMARK database on 5 Jul 2022

	+7°C/+12°C
P _{designc}	5 kW
SEER	4.85
P _{dc} T _j = 35°C	5 kW
EER T _j = 35°C	2.85
P _{dc} T _j = 30°C	3.77 kW
EER T _j = 30°C	4.25
C _{dc} T _j = 30 °C	0.98
P _{dc} T _j = 25°C	2.32 kW
EER T _j = 25°C	5.38
C _{dc} T _j = 25 °C	0.97
P _{dc} T _j = 20°C	1.87 kW
EER T _j = 20°C	7.85
C _{dc} T _j = 20 °C	0.94
P _{off}	14 W
PTO	14 W
PSB	14 W
PCK	0 W
Annual energy consumption Q _{ce}	925 kWh

Warmer Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	55 dB(A)	55 dB(A)

EN 14825

	Low temperature	Medium temperature
P _{designh}	3.44 kW	2.97 kW
η_s	245 %	151 %
P _{rated}	3.44 kW	2.97 kW
SCOP	6.20	3.84
T _{biv}	2 °C	2 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = +2°C	3.44 kW	2.97 kW
COP T _j = +2°C	3.88	2.33
C _{dh} T _j = +2 °C	0.985	0.989
P _{dh} T _j = +7°C	2.22 kW	2.02 kW
COP T _j = +7°C	5.66	3.16
C _{dh} T _j = +7 °C	0.965	0.979
P _{dh} T _j = 12°C	1.86 kW	1.76 kW
COP T _j = 12°C	8.01	5.40

This information was generated by the HP KEYMARK database on 5 Jul 2022

Cdh Tj = +12 °C	0.941	0.958
Pdh Tj = Tbiv	3.44 kW	2.97 kW
COP Tj = Tbiv	3.88	2.33
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.69 kW	3.18 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.30	1.54
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.985	0.989
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	13 W	13 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	742 kWh	1033 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	55 dB(A)	55 dB(A)

This information was generated by the HP KEYMARK database on 5 Jul 2022

EN 14825

	Low temperature	Medium temperature
P _{designh}	8.26 kW	8.26 kW
η_s	150 %	118 %
P _{rated}	8.26 kW	8.26 kW
SCOP	3.85	3.84
T _{biv}	-7 °C	-7 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = -7°C	5.00 kW	5.00 kW
COP T _j = -7°C	3.50	2.71
C _{dh} T _j = -7 °C	0.991	0.993
P _{dh} T _j = +2°C	3.00 kW	3.11 kW
COP T _j = +2°C	5.15	3.81
C _{dh} T _j = +2 °C	0.978	0.983
P _{dh} T _j = +7°C	1.99 kW	2.28 kW
COP T _j = +7°C	7.20	5.29
C _{dh} T _j = +7 °C	0.953	0.968
P _{dh} T _j = 12°C	1.87 kW	1.87 kW
COP T _j = 12°C	8.70	6.88
C _{dh} T _j = +12 °C	0.949	0.950
P _{dh} T _j = T _{biv}	5.00 kW	5.00 kW

This information was generated by the HP KEYMARK database on 5 Jul 2022

COP Tj = Tbiv	3.50	2.70
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.69 kW	4.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.30	1.51
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.991	0.993
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	13 W	13 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	7.83 kW	7.83 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	5317 kWh	6739 kWh

Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	55 dB(A)	55 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 5 Jul 2022

	Low temperature	Medium temperature
P _{designh}	5.65 kW	5.65 kW
η_s	183 %	136 %
P _{rated}	5.65 kW	5.65 kW
SCOP	4.66	3.48
T _{biv}	-7 °C	-7 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = -7°C	5.00 kW	5.00 kW
COP T _j = -7°C	3.10	2.28
C _{dh} T _j = -7 °C	0.992	0.994
P _{dh} T _j = +2°C	3.11 kW	3.11 kW
COP T _j = +2°C	4.32	3.30
C _{dh} T _j = +2 °C	0.981	0.986
P _{dh} T _j = +7°C	1.96 kW	2.19 kW
COP T _j = +7°C	6.48	4.58
C _{dh} T _j = +7 °C	0.955	0.972
P _{dh} T _j = 12°C	1.86 kW	1.84 kW
COP T _j = 12°C	8.41	6.33
C _{dh} T _j = +12 °C	0.939	0.953
P _{dh} T _j = T _{biv}	5.00 kW	5.00 kW
COP T _j = T _{biv}	3.10	2.28

This information was generated by the HP KEYMARK database on 5 Jul 2022

$P_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	3.69 kW	3.18 kW
$COP T_j = TOL$ or $COP T_j = T_{designh}$ if $TOL < T_{designh}$	2.30	1.54
$C_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	0.992	0.994
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	13 W	13 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.96 kW	2.47 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Q_{he}	2505 kWh	3360 kWh

Model: ENERGION M LIGHT 40

Configure model	
Model name	ENERGION M LIGHT 40
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	3.50 kW	2.95 kW
El input	0.69 kW	1.09 kW
COP	5.10	2.70

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

Cooling

EN 14511-2

	+7°C/+12°C
El input	1.03 kW
Cooling capacity	3.5

EN 14825

This information was generated by the HP KEYMARK database on 5 Jul 2022

	+7°C/+12°C
P _{designc}	3.5 kW
SEER	4.87
P _{dc} T _j = 35°C	3.5 kW
EER T _j = 35°C	3
P _{dc} T _j = 30°C	2.58 kW
EER T _j = 30°C	4.33
C _{dc} T _j = 30 °C	0.98
P _{dc} T _j = 25°C	1.72 kW
EER T _j = 25°C	5.86
C _{dc} T _j = 25 °C	0.95
P _{dc} T _j = 20°C	1.79 kW
EER T _j = 20°C	7.24
C _{dc} T _j = 20 °C	0.94
P _{off}	14 W
PTO	14 W
PSB	14 W
PCK	0 W
Annual energy consumption Q _{ce}	628 kWh

Warmer Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	53 dB(A)	53 dB(A)

EN 14825

	Low temperature	Medium temperature
P _{designh}	2.84 kW	2.35 kW
η_s	239 %	137 %
P _{rated}	2.84 kW	2.35 kW
SCOP	6.06	3.49
T _{biv}	2 °C	2 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = +2°C	2.84 kW	2.35 kW
COP T _j = +2°C	4.00	2.19
C _{dh} T _j = +2 °C	0.982	0.988
P _{dh} T _j = +7°C	1.88 kW	1.60 kW
COP T _j = +7°C	5.57	2.80
C _{dh} T _j = +7 °C	0.961	0.977
P _{dh} T _j = 12°C	1.91 kW	1.81 kW
COP T _j = 12°C	7.94	5.10

This information was generated by the HP KEYMARK database on 5 Jul 2022

Cdh Tj = +12 °C	0.946	0.963
Pdh Tj = Tbiv	2.84 kW	2.35 kW
COP Tj = Tbiv	4.02	2.19
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.03 kW	2.46 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.25	1.52
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.982	0.988
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	13 W	13 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	626 kWh	899 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	53 dB(A)	53 dB(A)

This information was generated by the HP KEYMARK database on 5 Jul 2022

EN 14825

	Low temperature	Medium temperature
P _{designh}	7.75 kW	7.43 kW
η_s	151 %	120 %
Prated	7.75 kW	7.43 kW
SCOP	3.85	3.07
T _{biv}	-7 °C	-7 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = -7°C	4.69 kW	4.50 kW
COP T _j = -7°C	3.54	2.76
C _{dh} T _j = -7 °C	0.990	0.992
P _{dh} T _j = +2°C	2.95 kW	2.94 kW
COP T _j = +2°C	5.16	3.99
C _{dh} T _j = +2 °C	0.977	0.982
P _{dh} T _j = +7°C	1.89 kW	1.92 kW
COP T _j = +7°C	7.19	5.35
C _{dh} T _j = +7 °C	0.950	0.964
P _{dh} T _j = 12°C	1.92 kW	1.93 kW
COP T _j = 12°C	8.55	6.96
C _{dh} T _j = +12 °C	0.942	0.953
P _{dh} T _j = T _{biv}	4.69 kW	4.50 kW

This information was generated by the HP KEYMARK database on 5 Jul 2022

COP Tj = Tbiv	3.54	2.76
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.03 kW	2.46 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.25	1.52
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.990	0.992
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	13 W	13 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	7.34 kW	7.04 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	4964 kWh	5968 kWh

Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	53 dB(A)	53 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 5 Jul 2022

	Low temperature	Medium temperature
P _{designh}	5.20 kW	4.63 kW
η_s	192 %	134 %
P _{rated}	5.20 kW	4.63 kW
SCOP	4.89	3.43
T _{biv}	-7 °C	-7 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = -7°C	4.60 kW	4.10 kW
COP T _j = -7°C	3.21	2.28
C _{dh} T _j = -7 °C	0.991	0.993
P _{dh} T _j = +2°C	2.88 kW	2.63 kW
COP T _j = +2°C	4.66	3.35
C _{dh} T _j = +2 °C	0.979	0.983
P _{dh} T _j = +7°C	1.85 kW	1.76 kW
COP T _j = +7°C	6.56	4.22
C _{dh} T _j = +7 °C	0.954	0.969
P _{dh} T _j = 12°C	1.92 kW	1.88 kW
COP T _j = 12°C	8.49	6.30
C _{dh} T _j = +12 °C	0.942	0.956
P _{dh} T _j = T _{biv}	4.60 kW	4.10 kW
COP T _j = T _{biv}	3.21	2.28

This information was generated by the HP KEYMARK database on 5 Jul 2022

$P_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	3.03 kW	2.46 kW
$COP T_j = TOL$ or $COP T_j = T_{designh}$ if $TOL < T_{designh}$	2.25	1.52
$C_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	0.991	0.993
WTOL	60 °C	60 °C
P _{off}	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	13 W	13 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.17 kW	2.17 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Q _{he}	2198 kWh	2790 kWh

Model: ENERGION M LIGHT 50

Configure model	
Model name	ENERGION M LIGHT 50
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	5.00 kW	3.80 kW
El input	1.00 kW	1.36 kW
COP	5.00	2.80

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

Cooling

This information was generated by the HP KEYMARK database on 5 Jul 2022

EN 14511-2

	+7°C/+12°C	+18°C/+23°C
El input	1.75 kW	
Cooling capacity	5	
EER	2.85	4.56

EN 14825

This information was generated by the HP KEYMARK database on 5 Jul 2022

	+7°C/+12°C
P _{designc}	5 kW
SEER	4.85
P _{dc} T _j = 35°C	5 kW
EER T _j = 35°C	2.85
P _{dc} T _j = 30°C	3.77 kW
EER T _j = 30°C	4.25
C _{dc} T _j = 30 °C	0.98
P _{dc} T _j = 25°C	2.32 kW
EER T _j = 25°C	5.38
C _{dc} T _j = 25 °C	0.97
P _{dc} T _j = 20°C	1.87 kW
EER T _j = 20°C	7.85
C _{dc} T _j = 20 °C	0.94
P _{off}	14 W
PTO	14 W
PSB	14 W
PCK	0 W
Annual energy consumption Q _{ce}	925 kWh

Warmer Climate

This information was generated by the HP KEYMARK database on 5 Jul 2022

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	55 dB(A)	55 dB(A)

EN 14825

	Low temperature	Medium temperature
P _{designh}	3.44 kW	2.97 kW
η_s	245 %	151 %
P _{rated}	3.44 kW	2.97 kW
SCOP	6.20	3.84
T _{biv}	2 °C	2 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = +2°C	3.44 kW	2.97 kW
COP T _j = +2°C	3.88	2.33
C _{dh} T _j = +2 °C	0.985	0.989
P _{dh} T _j = +7°C	2.22 kW	2.02 kW
COP T _j = +7°C	5.66	3.16
C _{dh} T _j = +7 °C	0.965	0.979
P _{dh} T _j = 12°C	1.86 kW	1.76 kW
COP T _j = 12°C	8.01	5.40

This information was generated by the HP KEYMARK database on 5 Jul 2022

Cdh Tj = +12 °C	0.941	0.958
Pdh Tj = Tbiv	3.44 kW	2.97 kW
COP Tj = Tbiv	3.88	2.33
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.69 kW	3.18 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.30	1.54
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.985	0.989
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	13 W	13 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	742 kWh	1033 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	55 dB(A)	55 dB(A)

This information was generated by the HP KEYMARK database on 5 Jul 2022

EN 14825

	Low temperature	Medium temperature
P _{designh}	8.26 kW	8.26 kW
η_s	150 %	118 %
P _{rated}	8.26 kW	8.26 kW
SCOP	3.85	3.84
T _{biv}	-7 °C	-7 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = -7°C	5.00 kW	5.00 kW
COP T _j = -7°C	3.50	2.71
C _{dh} T _j = -7 °C	0.991	0.993
P _{dh} T _j = +2°C	3.00 kW	3.11 kW
COP T _j = +2°C	5.15	3.81
C _{dh} T _j = +2 °C	0.978	0.983
P _{dh} T _j = +7°C	1.99 kW	2.28 kW
COP T _j = +7°C	7.20	5.29
C _{dh} T _j = +7 °C	0.953	0.968
P _{dh} T _j = 12°C	1.87 kW	1.87 kW
COP T _j = 12°C	8.70	6.88
C _{dh} T _j = +12 °C	0.949	0.950
P _{dh} T _j = T _{biv}	5.00 kW	5.00 kW

This information was generated by the HP KEYMARK database on 5 Jul 2022

COP $T_j = T_{biv}$	3.50	2.70
$P_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	3.69 kW	4.90 kW
COP $T_j = TOL$ or COP $T_j = T_{designh}$ if $TOL < T_{designh}$	2.30	1.51
$C_{dh} T_j = TOL$ or $P_{dh} T_j = T_{designh}$ if $TOL < T_{designh}$	0.991	0.993
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	13 W	13 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	7.83 kW	7.83 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Q_{he}	5317 kWh	6739 kWh

Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	55 dB(A)	55 dB(A)

EN 14825

This information was generated by the HP KEYMARK database on 5 Jul 2022

	Low temperature	Medium temperature
P _{designh}	5.65 kW	5.65 kW
η_s	183 %	136 %
P _{rated}	5.65 kW	5.65 kW
SCOP	4.66	3.48
T _{biv}	-7 °C	-7 °C
TOL	-20 °C	-20 °C
P _{dh} T _j = -7°C	5.00 kW	5.00 kW
COP T _j = -7°C	3.10	2.28
C _{dh} T _j = -7 °C	0.992	0.994
P _{dh} T _j = +2°C	3.11 kW	3.11 kW
COP T _j = +2°C	4.32	3.30
C _{dh} T _j = +2 °C	0.981	0.986
P _{dh} T _j = +7°C	1.96 kW	2.19 kW
COP T _j = +7°C	6.48	4.58
C _{dh} T _j = +7 °C	0.955	0.972
P _{dh} T _j = 12°C	1.86 kW	1.84 kW
COP T _j = 12°C	8.41	6.33
C _{dh} T _j = +12 °C	0.939	0.953
P _{dh} T _j = T _{biv}	5.00 kW	5.00 kW
COP T _j = T _{biv}	3.10	2.28

This information was generated by the HP KEYMARK database on 5 Jul 2022

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	3.69 kW	3.18 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.30	1.54
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.992	0.994
WTOL	60 °C	60 °C
Poff	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	13 W	13 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.96 kW	2.47 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	2505 kWh	3360 kWh