

$$\operatorname{\textit{Page}}\ 1$$ of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

Summary of	NIMBUS 90 M - ARIANEXT 90 M - AEROTOP MONO 09 - ENERGION M 9	Reg. No.	ICIM-PDC- 000001
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.		
Name of testing laboratory	-Transition Rules-		
Subtype title	NIMBUS 90 M - ARIANEXT 90 M - AEROTOP MONO 09 - ENERGION M 9		
Heat Pump Type	Outdoor Air/Water		
Refrigerant	R410a		
Mass Of Refrigerant	3.9 kg		
Certification Date	19.12.2017		



Model: AEROTOP MONO 09M-R

General Data	
Power supply	3x230V 50Hz

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	8.49 kW	7.59 kW	
El input	1.66 kW	2.50 kW	
СОР	5.10	3.04	
Indoor water flow rate	1.49 m³/h	0.82 m³/h	

EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



 $$\operatorname{\textit{Page}}\xspace$ 3 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	15 dB(A)	15 dB(A)	
Sound power level outdoor	63 dB(A)	63 dB(A)	

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81





Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

EN 12102-1				
	Low temperature	Medium temperature		
Sound power level indoor	15 dB(A)	15 dB(A)		
Sound power level outdoor	63 dB(A)	63 dB(A)		

EN 14825		
	Low temperature	Medium temperature





 $$\operatorname{\textit{Page}}\xspace 5$$ of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

	I	
Pdesignh	6.65 kW	6.26 kW
n_s	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = +7°C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W





PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1				
	Low temperature	Medium temperature		
Sound power level indoor	15 dB(A)	15 dB(A)		
Sound power level outdoor	63 dB(A)	63 dB(A)		

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW



This information was generated by the HF RETMARK database on 17 Dec 2020			
COP Tj = -7°C	3.67	2.77	
Pdh Tj = +2°C	5.61 kW	5.12 kW	
COP Tj = +2°C	5.17	3.67	
Pdh Tj = +7°C	3.68 kW	3.75 kW	
$COP Tj = +7^{\circ}C$	6.75	5.12	
Pdh Tj = 12°C	4.43 kW	4.30 kW	
COP Tj = 12°C	8.92	6.96	
Pdh Tj = Tbiv	9.18 kW	8.42 kW	
COP Tj = Tbiv	3.67	2.77	
Pdh Tj = TOL	6.31 kW	2.06 kW	
COP Tj = TOL	2.18	0.54	
Cdh	0.90	0.90	
WTOL	60 °C	60 °C	
Poff	20 W	20 W	
РТО	20 W	20 W	
PSB	20 W	20 W	
PCK	20 W	20 W	
Supplementary Heater: Type of energy input	electricity	electricity	
Supplementary Heater: PSUP	6.00 kW	6.00 kW	
Annual energy consumption Qhe	9625 kWh	12191 kWh	



Model: AEROTOP MONO 09M-RL

General Data	
Power supply	3x230V 50Hz

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	8.49 kW	7.59 kW	
El input	1.66 kW	2.50 kW	
СОР	5.10	3.04	
Indoor water flow rate	1.49 m³/h	0.82 m³/h	

EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

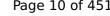
Average Climate



 $$\operatorname{\textit{Page}}\xspace$ 9 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81





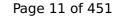
$$\operatorname{\textit{Page}}\ 10$ of 451$$ This information was generated by the HP KEYMARK database on 17 Dec 2020

Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

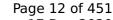
EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	15 dB(A)	15 dB(A)	
Sound power level outdoor	63 dB(A)	63 dB(A)	

EN 14825		
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = +7°C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W





PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW



Page 13 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

This information was ge	Tieracea by the Till RETI-	ANN database on 17 Dec 2020
COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = +7°C	3.68 kW	3.75 kW
$COP Tj = +7^{\circ}C$	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh



Model: ARIANEXT LITE 90 M-T LINK

General Data	
Power supply	3x230V 50Hz

Heating

EN 14511-2			
Low temperature Medium temperature			
Heat output	8.49 kW	7.59 kW	
El input	1.66 kW	2.50 kW	
СОР	5.10	3.04	
Indoor water flow rate	1.49 m³/h	0.82 m³/h	

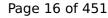
EN 14511-4	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81



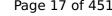


Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

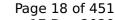
EN 14825		
	Low temperature	Medium temperature





 $$\operatorname{\textit{Page}}\ 17$$ of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = +7°C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W





PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW



Page 19 of 451

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

	· · · · · · · · · · · · · · · · · · ·	
COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = +7°C	3.68 kW	3.75 kW
COP Tj = +7°C	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh
L	1	



Model: ARIANEXT LITE 90 M-T

General Data	
Power supply	3x230V 50Hz

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	8.49 kW	7.59 kW	
El input	1.66 kW	2.50 kW	
СОР	5.10	3.04	
Indoor water flow rate	1.49 m³/h	0.82 m³/h	

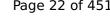
EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81





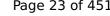
$$\operatorname{\textit{Page}}\xspace$ 22 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

1	
9.38 kW	8.31 kW
3.29	2.32
9.14 kW	9.32 kW
2.77	1.68
0.90	0.90
60 °C	60 °C
20 W	20 W
electricity	electricity
1.47 kW	0.07 kW
4561 kWh	5878 kWh
	3.29 9.14 kW 2.77 0.90 60 °C 20 W 20 W 20 W electricity 1.47 kW

Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

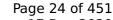
EN 14825		
	Low temperature	Medium temperature





$$\operatorname{\textit{Page}}\xspace$ 23 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = +7°C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W





PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	15 dB(A)	15 dB(A)	
Sound power level outdoor	63 dB(A)	63 dB(A)	

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW



$$\operatorname{\textit{Page}}\xspace$ 25 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

This information was get		
COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = $+7^{\circ}$ C	3.68 kW	3.75 kW
COP Tj = +7°C	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh
-		



Model: ARIANEXT PLUS 90 M-T LINK

General Data	
Power supply	3x230V 50Hz

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	8.49 kW	7.59 kW	
El input	1.66 kW	2.50 kW	
СОР	5.10	3.04	
Indoor water flow rate	1.49 m³/h	0.82 m³/h	

EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit		
	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

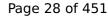
Average Climate



 $$\operatorname{\textit{Page}}\xspace$ 27 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81





Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

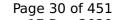
EN 12102-1 Low temperature Medium temperature Sound power level indoor 15 dB(A) 15 dB(A) Sound power level outdoor 63 dB(A) 63 dB(A)

EN 14825		
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = +7°C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W





PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW



Page 31 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

inis information was ge	enerated by the HP KETIV	IARK database on 17 Dec 2020
COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = +7°C	3.68 kW	3.75 kW
$COP Tj = +7^{\circ}C$	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh
		•



Model: ARIANEXT PLUS 90 M-T

General Data	
Power supply	3x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8.49 kW	7.59 kW
El input	1.66 kW	2.50 kW
СОР	5.10	3.04
Indoor water flow rate	1.49 m³/h	0.82 m³/h

EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81



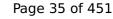


Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

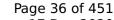
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 1	4825	
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = +7°C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W





PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825			
	Low temperature	Medium temperature	
Pdesignh	15.17 kW	13.91 kW	
η_{s}	152 %	109 %	
Prated	6.90 kW	6.20 kW	
SCOP	3.88	2.81	
Tbiv	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	9.18 kW	8.42 kW	



Page 37 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

	Chicrated by the fir RETI	ANN database on 17 Dec 2020
COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = +7°C	3.68 kW	3.75 kW
$COP Tj = +7^{\circ}C$	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh
<u> </u>		



Model: NIMBUS PLUS 90 M-T NET

General Data		
Power supply	3x230V 50Hz	

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	8.49 kW	7.59 kW	
El input	1.66 kW	2.50 kW	
СОР	5.10	3.04	
Indoor water flow rate	1.49 m³/h	0.82 m³/h	

EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit		
	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81



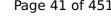


	-	
Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	15 dB(A)	15 dB(A)	
Sound power level outdoor	63 dB(A)	63 dB(A)	

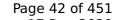
EN 14825		
	Low temperature	Medium temperature





 $$\operatorname{\textit{Page}}\ 41\ \text{of}\ 451$ This information was generated by the HP KEYMARK database on 17 Dec 2020

	I	
Pdesignh	6.65 kW	6.26 kW
n_s	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = +7°C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W





PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	15 dB(A)	15 dB(A)	
Sound power level outdoor	63 dB(A)	63 dB(A)	

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW



Page 43 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

This information was generated by the HP RETMARK database on 17 Dec 2020			
COP Tj = -7°C	3.67	2.77	
Pdh Tj = +2°C	5.61 kW	5.12 kW	
COP Tj = +2°C	5.17	3.67	
Pdh Tj = +7°C	3.68 kW	3.75 kW	
$COP Tj = +7^{\circ}C$	6.75	5.12	
Pdh Tj = 12°C	4.43 kW	4.30 kW	
COP Tj = 12°C	8.92	6.96	
Pdh Tj = Tbiv	9.18 kW	8.42 kW	
COP Tj = Tbiv	3.67	2.77	
Pdh Tj = TOL	6.31 kW	2.06 kW	
COP Tj = TOL	2.18	0.54	
Cdh	0.90	0.90	
WTOL	60 °C	60 °C	
Poff	20 W	20 W	
РТО	20 W	20 W	
PSB	20 W	20 W	
PCK	20 W	20 W	
Supplementary Heater: Type of energy input	electricity	electricity	
Supplementary Heater: PSUP	6.00 kW	6.00 kW	
Annual energy consumption Qhe	9625 kWh	12191 kWh	



Model: NIMBUS POCKET 90 M-T NET

General Data	
Power supply	3x230V 50Hz

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	8.49 kW	7.59 kW	
El input	1.66 kW	2.50 kW	
СОР	5.10	3.04	
Indoor water flow rate	1.49 m³/h	0.82 m³/h	

EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81



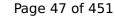


Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = +7°C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W





PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW



Page 49 of 451

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

This information was get		
COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = $+7^{\circ}$ C	3.68 kW	3.75 kW
COP Tj = +7°C	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh
-		



Model: AEROTOP MONO 09M-CR

General Data	
Power supply	3x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8.49 kW	7.59 kW
El input	1.66 kW	2.50 kW
СОР	5.10	3.04
Indoor water flow rate	1.49 m³/h	0.82 m³/h

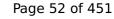
EN 14511-4	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81



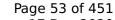


1	
9.38 kW	8.31 kW
3.29	2.32
9.14 kW	9.32 kW
2.77	1.68
0.90	0.90
60 °C	60 °C
20 W	20 W
electricity	electricity
1.47 kW	0.07 kW
4561 kWh	5878 kWh
	3.29 9.14 kW 2.77 0.90 60 °C 20 W 20 W 20 W electricity 1.47 kW

Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 1	4825	
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = +7°C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W



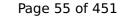


PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW





COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = +7°C	3.68 kW	3.75 kW
COP Tj = +7°C	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh
I	1	

Domestic Hot Water (DHW)

Average Climate

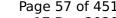
This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 16147	
Declared load profile	XL
Efficiency ηDHW	106 %
СОР	2.56
Heating up time	01:28 h:min
Standby power input	52.0 W
Reference hot water temperature	53.6 °C
Mixed water at 40°C	251 I

Warmer Climate

EN 16147	
Declared load profile	XL
Efficiency ηDHW	111 %
COP	2.70
Heating up time	01:16 h:min
Standby power input	39.0 W
	53.2 °C
Reference hot water temperature	
Mixed water at 40°C	248 I

Colder Climate





 $$\operatorname{\textit{Page}}\xspace$ 57 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 16147	
Declared load profile	XL
Efficiency ηDHW	89 %
СОР	2.15
Heating up time	01:49 h:min
Standby power input	57.0 W
Reference hot water temperature	53.6 °C
Mixed water at 40°C	250 I



Model: ARIANEXT COMPACT 90 M-T LINK

General Data	
Power supply	3x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8.49 kW	7.59 kW
El input	1.66 kW	2.50 kW
СОР	5.10	3.04
Indoor water flow rate	1.49 m³/h	0.82 m³/h

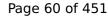
EN 14511-4	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81



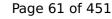


Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

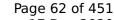
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = +7°C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W



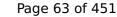


PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW





COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = +7°C	3.68 kW	3.75 kW
COP Tj = +7°C	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh
I	1	

Domestic Hot Water (DHW)

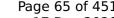
Average Climate

EN 16147	
Declared load profile	XL
Efficiency ηDHW	106 %
СОР	2.56
Heating up time	01:28 h:min
Standby power input	52.0 W
Reference hot water temperature	53.6 °C
Mixed water at 40°C	251 l

Warmer Climate

EN 16147	
Declared load profile	XL
Efficiency ηDHW	111 %
СОР	2.70
Heating up time	01:16 h:min
Standby power input	39.0 W
Reference hot water temperature	53.2 °C
Mixed water at 40°C	248 I

Colder Climate





 $$\operatorname{\textit{Page}}\xspace$ 65 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 16147	
Declared load profile	XL
Efficiency ηDHW	89 %
СОР	2.15
Heating up time	01:49 h:min
Standby power input	57.0 W
Reference hot water temperature	53.6 °C
Mixed water at 40°C	250 I



Model: ARIANEXT FLEX 90 M-T - 300 LINK

General Data		
Power supply	3x230V 50Hz	

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	8.49 kW	7.59 kW	
El input	1.66 kW	2.50 kW	
СОР	5.10	3.04	
Indoor water flow rate	1.49 m³/h	0.82 m³/h	

EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



 $$\operatorname{\textit{Page}}\xspace$ 67 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81



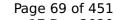


Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

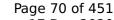
EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	15 dB(A)	15 dB(A)	
Sound power level outdoor	63 dB(A)	63 dB(A)	

EN 1	4825	
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = +7°C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W



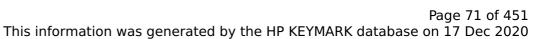


PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	15 dB(A)	15 dB(A)	
Sound power level outdoor	63 dB(A)	63 dB(A)	

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW





COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = $+7^{\circ}$ C	3.68 kW	3.75 kW
$COP Tj = +7^{\circ}C$	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh

Domestic Hot Water (DHW)

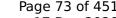
Average Climate

EN 16147		
Declared load profile	XXL	
Efficiency ηDHW	122 %	
СОР	3.06	
Heating up time	01:52 h:min	
Standby power input	53.0 W	
Reference hot water temperature	54.5 °C	
Mixed water at 40°C	434 I	

Warmer Climate

EN 16147		
Declared load profile	XXL	
Efficiency ηDHW	132 %	
СОР	3.30	
Heating up time	01:34 h:min	
Standby power input	48.0 W	
Reference hot water temperature	54.2 °C	
Mixed water at 40°C	430 I	

Colder Climate





 $$\operatorname{\textit{Page}}\xspace$ 73 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 16147		
Declared load profile	XXL	
Efficiency ηDHW	97 %	
СОР	2.43	
Heating up time	02:15 h:min	
Standby power input	63.0 W	
Reference hot water temperature	53.4 °C	
Mixed water at 40°C	422 I	



Model: ARIANEXT FLEX 90 M-T LINK

General Data	
Power supply 3x230V 50Hz	

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	8.49 kW	7.59 kW	
El input	1.66 kW	2.50 kW	
СОР	5.10	3.04	
Indoor water flow rate	1.49 m³/h	0.82 m³/h	

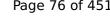
EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81





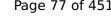
$$\operatorname{\textit{Page}}\ 76$$ of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

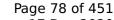
EN 14825		
	Low temperature	Medium temperature





$$\operatorname{\textit{Page}}\xspace$ 77 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = $+7^{\circ}$ C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W





PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW





COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = +7°C	3.68 kW	3.75 kW
COP Tj = +7°C	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh
I	1	

Domestic Hot Water (DHW)

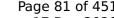
Average Climate

EN 16147	
Declared load profile	XL
Efficiency ηDHW	106 %
СОР	2.56
Heating up time	01:28 h:min
Standby power input	52.0 W
Reference hot water temperature	53.6 °C
Mixed water at 40°C	251 l

Warmer Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	111 %	
СОР	2.70	
Heating up time	01:16 h:min	
Standby power input	39.0 W	
Reference hot water temperature	53.2 °C	
Mixed water at 40°C	248	

Colder Climate





 $$\operatorname{\textit{Page}}\xspace$ 81 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	89 %	
СОР	2.15	
Heating up time	01:49 h:min	
Standby power input	57.0 W	
Reference hot water temperature	53.6 °C	
Mixed water at 40°C	250 I	



Model: NIMBUS COMPACT 90 M-T NET

General Data	
Power supply	3x230V 50Hz

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	8.49 kW	7.59 kW	
El input	1.66 kW	2.50 kW	
СОР	5.10	3.04	
Indoor water flow rate	1.49 m³/h	0.82 m³/h	

EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81



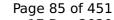


	· · · · · · · · · · · · · · · · · · ·	
Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

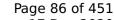
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = +7°C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W



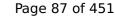


PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW





COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = $+7^{\circ}$ C	3.68 kW	3.75 kW
COP Tj = +7°C	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh

Domestic Hot Water (DHW)

Average Climate

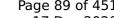
This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 16147	
Declared load profile	XL
Efficiency ηDHW	106 %
СОР	2.56
Heating up time	01:28 h:min
Standby power input	52.0 W
Reference hot water temperature	53.6 °C
Mixed water at 40°C	251 l

Warmer Climate

EN 16147	
Declared load profile	XL
Efficiency ηDHW	111 %
COP	2.70
Heating up time	01:16 h:min
Standby power input	39.0 W
	53.2 °C
Reference hot water temperature	
Mixed water at 40°C	248 I

Colder Climate





 $$\operatorname{\textit{Page}}$$ 89 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 16147	
Declared load profile	XL
Efficiency ηDHW	89 %
СОР	2.15
Heating up time	01:49 h:min
Standby power input	57.0 W
Reference hot water temperature	53.6 °C
Mixed water at 40°C	250 l



Model: NIMBUS FLEX 90 M-T - 300 NET

General Data	
Power supply	3x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8.49 kW	7.59 kW
El input	1.66 kW	2.50 kW
СОР	5.10	3.04
Indoor water flow rate	1.49 m³/h	0.82 m³/h

EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81



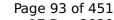


The same state get		
Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = +7°C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W



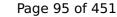


PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW





COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = $+7^{\circ}$ C	3.68 kW	3.75 kW
$COP Tj = +7^{\circ}C$	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh

Domestic Hot Water (DHW)

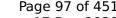
Average Climate

EN 16147		
Declared load profile	XXL	
Efficiency ηDHW	122 %	
СОР	3.06	
Heating up time	01:52 h:min	
Standby power input	53.0 W	
Reference hot water temperature	54.5 °C	
Mixed water at 40°C	434	

Warmer Climate

EN 16147		
Declared load profile	XXL	
Efficiency ηDHW	132 %	
СОР	3.30	
Heating up time	01:34 h:min	
Standby power input	48.0 W	
Reference hot water temperature	54.2 °C	
Mixed water at 40°C	430 I	

Colder Climate





 $$\operatorname{\textit{Page}}\xspace$ 97 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 16147	
Declared load profile	XXL
Efficiency ηDHW	97 %
СОР	2.43
Heating up time	02:15 h:min
Standby power input	63.0 W
Reference hot water temperature	53.4 °C
Mixed water at 40°C	422 I



Model: NIMBUS FLEX 90 M-T NET

General Data	
Power supply	3x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8.49 kW	7.59 kW
El input	1.66 kW	2.50 kW
СОР	5.10	3.04
Indoor water flow rate	1.49 m³/h	0.82 m³/h

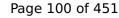
EN 14511-4	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	
	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81



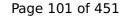


Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

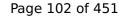
EN 12102-1 Low temperature Medium temperature Sound power level indoor 15 dB(A) 15 dB(A) Sound power level outdoor 63 dB(A) 63 dB(A)

EN 1	4825	
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = +7°C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W



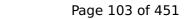


PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW





COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = $+7^{\circ}$ C	3.68 kW	3.75 kW
$COP Tj = +7^{\circ}C$	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh

Domestic Hot Water (DHW)



Average Climate

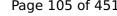
This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	106 %	
СОР	2.56	
Heating up time	01:28 h:min	
Standby power input	52.0 W	
Reference hot water temperature	53.6 °C	
Mixed water at 40°C	251 I	

Warmer Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	111 %	
СОР	2.70	
Heating up time	01:16 h:min	
Standby power input	39.0 W	
Reference hot water temperature	53.2 °C	
Mixed water at 40°C	248	
INITIAL WATER AT 40 C	2401	

Colder Climate





 $$\operatorname{\textit{Page}}\xspace$ 105 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	89 %	
СОР	2.15	
Heating up time	01:49 h:min	
Standby power input	57.0 W	
Reference hot water temperature	53.6 °C	
Mixed water at 40°C	250 I	



Model: ARIANEXT COMPACT 90 M-T

General Data	
Power supply	3x230V 50Hz

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	8.49 kW	7.59 kW	
El input	1.66 kW	2.50 kW	
СОР	5.10	3.04	
Indoor water flow rate	1.49 m³/h	0.82 m³/h	

EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81

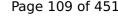


Page 108 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

This information was generated by the fir KETP with database on 17 Bee 2020			
Pdh Tj = Tbiv	9.38 kW	8.31 kW	
COP Tj = Tbiv	3.29	2.32	
Pdh Tj = TOL	9.14 kW	9.32 kW	
COP Tj = TOL	2.77	1.68	
Cdh	0.90	0.90	
WTOL	60 °C	60 °C	
Poff	20 W	20 W	
РТО	20 W	20 W	
PSB	20 W	20 W	
PCK	20 W	20 W	
Supplementary Heater: Type of energy input	electricity	electricity	
Supplementary Heater: PSUP	1.47 kW	0.07 kW	
Annual energy consumption Qhe	4561 kWh	5878 kWh	
	·		

Domestic Hot Water (DHW)

Average Climate





Page 109 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 16147		
Declared load profile	L	
Efficiency ηDHW	127 %	
СОР	3.01	
Heating up time	00:47 h:min	
Standby power input	38.0 W	
Reference hot water temperature	52.5 °C	
Mixed water at 40°C	247	



Model: ARIANEXT FLEX 90 M-T - 300

General Data		
Power supply	3x230V 50Hz	

Heating

EN 14511-2			
Low temperature Medium temperature		Medium temperature	
Heat output	8.49 kW	7.59 kW	
El input	1.66 kW	2.50 kW	
СОР	5.10	3.04	
Indoor water flow rate	1.49 m³/h	0.82 m³/h	

EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81

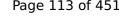


Page 112 of 451

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

Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Domestic Hot Water (DHW)





$$\operatorname{\textit{Page}}\ 113$$ of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	131 %	
СОР	3.10	
Heating up time	01:52 h:min	
Standby power input	61.0 W	
Reference hot water temperature	54.4 °C	
Mixed water at 40°C	434	



Model: ARIANEXT FLEX 90 M-T

General Data		
Power supply	3x230V 50Hz	

Heating

EN 14511-2			
Low temperature Medium temperature		Medium temperature	
Heat output	8.49 kW	7.59 kW	
El input	1.66 kW	2.50 kW	
СОР	5.10	3.04	
Indoor water flow rate	1.49 m³/h	0.82 m³/h	

EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81

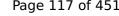


Page 116 of 451

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

	·	
Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Domestic Hot Water (DHW)





 $$\operatorname{\textit{Page}}\xspace$ 117 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 16147	
Declared load profile	L
Efficiency ηDHW	127 %
СОР	3.01
Heating up time	00:47 h:min
Standby power input	38.0 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	247



Model: AEROTOP MONO 09M-RX

General Data	
Power supply	1x230V 50Hz

Heating

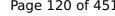
EN 14511-2		
	Low temperature	Medium temperature
Heat output	8.49 kW	7.59 kW
El input	1.66 kW	2.50 kW
СОР	5.10	3.04
Indoor water flow rate	1.49 m³/h	0.82 m³/h

EN 14511-4	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed



EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	15 dB(A)	15 dB(A)	
Sound power level outdoor 63 dB(A) 63 dB(A)			

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81





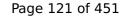
$$\operatorname{\textit{Page}}\ 120$ of 451$$ This information was generated by the HP KEYMARK database on 17 Dec 2020

Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

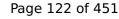
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = $+7^{\circ}$ C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W





PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	15 dB(A)	15 dB(A)	
Sound power level outdoor	63 dB(A)	63 dB(A)	

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW



Page 123 of 451

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

	· · · · · · · · · · · · · · · · · · ·	
COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = $+7^{\circ}$ C	3.68 kW	3.75 kW
$COP Tj = +7^{\circ}C$	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh
	1	1



Model: AEROTOP MONO 09M-RXL

General Data	
Power supply 1x230V 50Hz	

Heating

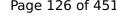
EN 14511-2			
	Low temperature	Medium temperature	
Heat output	8.49 kW	7.59 kW	
El input	1.66 kW	2.50 kW	
СОР	5.10	3.04	
Indoor water flow rate	1.49 m³/h	0.82 m³/h	

EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81





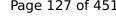
$$\operatorname{\textit{Page}}\ 126$$ of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	15 dB(A)	15 dB(A)	
Sound power level outdoor	63 dB(A)	63 dB(A)	

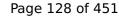
EN 14825		
	Low temperature	Medium temperature





 $$\operatorname{\textit{Page}}\ 127$$ of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = +7°C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W





PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW



$$\operatorname{\textit{Page}}\ 129$ of 451$$ This information was generated by the HP KEYMARK database on 17 Dec 2020

This information was get		
COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = $+7^{\circ}$ C	3.68 kW	3.75 kW
COP Tj = +7°C	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh
-		



Model: ARIANEXT LITE 90 M LINK

General Data	
Power supply	1x230V 50Hz

Heating

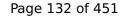
EN 14511-2			
	Low temperature	Medium temperature	
Heat output	8.49 kW	7.59 kW	
El input	1.66 kW	2.50 kW	
СОР	5.10	3.04	
Indoor water flow rate	1.49 m³/h	0.82 m³/h	

EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81



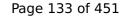


Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

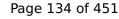
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = $+7^{\circ}$ C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W





PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	15 dB(A)	15 dB(A)	
Sound power level outdoor	63 dB(A)	63 dB(A)	

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW



$$\operatorname{\textit{Page}}\ 135$$ of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

This information was get		
COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = $+7^{\circ}$ C	3.68 kW	3.75 kW
COP Tj = +7°C	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh
-		



Model: ARIANEXT LITE 90 M

General Data	
Power supply	1x230V 50Hz

Heating

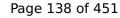
EN 14511-2			
	Low temperature	Medium temperature	
Heat output	8.49 kW	7.59 kW	
El input	1.66 kW	2.50 kW	
СОР	5.10	3.04	
Indoor water flow rate	1.49 m³/h	0.82 m³/h	

EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	



EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	15 dB(A)	15 dB(A)	
Sound power level outdoor	63 dB(A)	63 dB(A)	

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
$COP Tj = +7^{\circ}C$	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81



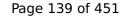


Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

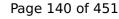
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 1	4825	
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = +7°C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W





PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW



Page 141 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

This information was ge	Tieracea by the Till RETI-	ANN database on 17 Dec 2020
COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = +7°C	3.68 kW	3.75 kW
$COP Tj = +7^{\circ}C$	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh



Model: ARIANEXT PLUS 90 M LINK

General Data	
Power supply	1x230V 50Hz

Heating

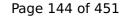
EN 14511-2		
	Low temperature	Medium temperature
Heat output	8.49 kW	7.59 kW
El input	1.66 kW	2.50 kW
СОР	5.10	3.04
Indoor water flow rate	1.49 m³/h	0.82 m³/h

EN 14511-4	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81



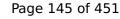


Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

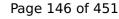
EN 12102-1				
	Low temperature	Medium temperature		
Sound power level indoor	15 dB(A)	15 dB(A)		
Sound power level outdoor	63 dB(A)	63 dB(A)		

EN 14825		
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = +7°C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W





PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW



Page 147 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

	<u> </u>	
COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = +7°C	3.68 kW	3.75 kW
$COP Tj = +7^{\circ}C$	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh



Model: ARIANEXT PLUS 90 M

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	8.49 kW	7.59 kW	
El input	1.66 kW	2.50 kW	
СОР	5.10	3.04	
Indoor water flow rate	1.49 m³/h	0.82 m³/h	

EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81





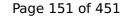
$$\operatorname{\textit{Page}}\ 150$$ of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

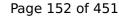
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = +7°C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W





PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	15 dB(A)	15 dB(A)	
Sound power level outdoor	63 dB(A)	63 dB(A)	

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW



Page 153 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

This information was get	Terated by the Til RETIN	ANN database on 17 Dec 2020
COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = +7°C	3.68 kW	3.75 kW
$COP Tj = +7^{\circ}C$	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh



Model: NIMBUS PLUS 90 M NET

General Data		
Power supply 1x230V 50Hz		

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	8.49 kW	7.59 kW	
El input	1.66 kW	2.50 kW	
СОР	5.10	3.04	
Indoor water flow rate	1.49 m³/h	0.82 m³/h	

EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	15 dB(A)	15 dB(A)	
Sound power level outdoor	63 dB(A)	63 dB(A)	

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81



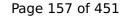


Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

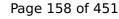
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 1	4825	
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = $+7^{\circ}$ C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W





PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW



Page 159 of 451

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

COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = +7°C	3.68 kW	3.75 kW
$COP Tj = +7^{\circ}C$	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh



Model: NIMBUS POCKET 90 M NET

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8.49 kW	7.59 kW
El input	1.66 kW	2.50 kW
СОР	5.10	3.04
Indoor water flow rate	1.49 m³/h	0.82 m³/h

EN 14511-4	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81



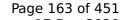


Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = $+7^{\circ}$ C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W





PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW



Page 165 of 451

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

This information was get		
COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = $+7^{\circ}$ C	3.68 kW	3.75 kW
COP Tj = +7°C	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh
-		



Model: AEROTOP MONO 09M-CRX

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8.49 kW	7.59 kW
El input	1.66 kW	2.50 kW
СОР	5.10	3.04
Indoor water flow rate	1.49 m³/h	0.82 m³/h

EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81





Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

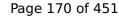
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = +7°C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W





PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW



Page 171 of 451

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

	· · · · · · · · · · · · · · · · · · ·	
COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = $+7^{\circ}$ C	3.68 kW	3.75 kW
$COP Tj = +7^{\circ}C$	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh

Domestic Hot Water (DHW)



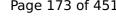
Average Climate

EN 16147	
Declared load profile	XL
Efficiency ηDHW	106 %
СОР	2.56
Heating up time	01:28 h:min
Standby power input	52.0 W
Reference hot water temperature	53.6 °C
Mixed water at 40°C	251 l

Warmer Climate

EN 16147	
Declared load profile	XL
Efficiency ηDHW	111 %
СОР	2.70
Heating up time	01:16 h:min
Standby power input	39.0 W
Reference hot water temperature	53.2 °C
Mixed water at 40°C	248 I

Colder Climate





 $$\operatorname{\textit{Page}}\xspace$ 173 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 16147	
Declared load profile	XL
Efficiency ηDHW	89 %
СОР	2.15
Heating up time	01:49 h:min
Standby power input	57.0 W
Reference hot water temperature	53.6 °C
Mixed water at 40°C	250 l



Model: ARIANEXT COMPACT 90 M LINK

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8.49 kW	7.59 kW
El input	1.66 kW	2.50 kW
СОР	5.10	3.04
Indoor water flow rate	1.49 m³/h	0.82 m³/h

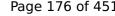
EN 14511-4	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81





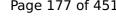
$$\operatorname{\textit{Page}}\xspace$ 176 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

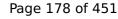
EN 1	4825	
	Low temperature	Medium temperature





 $$\operatorname{\textit{Page}}\xspace$ 177 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = +7°C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W



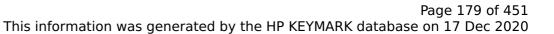


PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW





COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = $+7^{\circ}$ C	3.68 kW	3.75 kW
$COPTj = +7^{\circ}C$	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
PTO	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh

Domestic Hot Water (DHW)



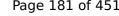
Average Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	106 %	
СОР	2.56	
Heating up time	01:28 h:min	
Standby power input	52.0 W	
Reference hot water temperature	53.6 °C	
Mixed water at 40°C	251	

Warmer Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	111 %	
СОР	2.70	
Heating up time	01:16 h:min	
Standby power input	39.0 W	
Reference hot water temperature	53.2 °C	
Mixed water at 40°C	248	

Colder Climate





$$\operatorname{\textit{Page}}\xspace$ 181 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	89 %	
СОР	2.15	
Heating up time	01:49 h:min	
Standby power input	57.0 W	
Reference hot water temperature	53.6 °C	
Mixed water at 40°C	250 l	



Model: ARIANEXT FLEX 90 M LINK

General Data		
Power supply 1x230V 50Hz		

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8.49 kW	7.59 kW
El input	1.66 kW	2.50 kW
СОР	5.10	3.04
Indoor water flow rate	1.49 m³/h	0.82 m³/h

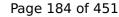
EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit		
	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81



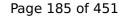


Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = +7°C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W



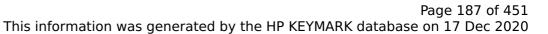


PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{S}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW





	· · · · · · · · · · · · · · · · · · ·	
COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = $+7^{\circ}$ C	3.68 kW	3.75 kW
$COP Tj = +7^{\circ}C$	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh

Domestic Hot Water (DHW)



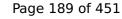
Average Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	106 %	
СОР	2.56	
Heating up time	01:28 h:min	
Standby power input	52.0 W	
Reference hot water temperature	53.6 °C	
Mixed water at 40°C	251	

Warmer Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	111 %	
СОР	2.70	
Heating up time	01:16 h:min	
Standby power input	39.0 W	
Reference hot water temperature	53.2 °C	
Mixed water at 40°C	248	

Colder Climate





EN 16147		
Declared load profile	XL	
Efficiency ηDHW	89 %	
СОР	2.15	
Heating up time	01:49 h:min	
Standby power input	57.0 W	
Reference hot water temperature	53.6 °C	
Mixed water at 40°C	250 I	



Model: ARIANEXT FLEX 90 M - 300 LINK

General Data		
Power supply	1x230V 50Hz	

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	8.49 kW	7.59 kW	
El input	1.66 kW	2.50 kW	
СОР	5.10	3.04	
Indoor water flow rate	1.49 m³/h	0.82 m³/h	

EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81





Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

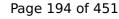
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = $+7^{\circ}$ C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W





PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW





COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = +7°C	3.68 kW	3.75 kW
COP Tj = +7°C	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh
I	1	

Domestic Hot Water (DHW)

Average Climate

EN 16147	
Declared load profile	XXL
Efficiency ηDHW	122 %
СОР	3.06
Heating up time	01:52 h:min
Standby power input	53.0 W
Reference hot water temperature	54.5 °C
Mixed water at 40°C	434

Warmer Climate

EN 16147	
Declared load profile	XXL
Efficiency ηDHW	132 %
СОР	3.30
Heating up time	01:34 h:min
Standby power input	48.0 W
Reference hot water temperature	54.2 °C
Mixed water at 40°C	430

Colder Climate





 $$\operatorname{\textit{Page}}\xspace$ 197 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 16147	
Declared load profile	XXL
Efficiency ηDHW	97 %
СОР	2.43
Heating up time	02:15 h:min
Standby power input	63.0 W
Reference hot water temperature	53.4 °C
Mixed water at 40°C	422 I



Model: NIMBUS COMPACT 90 M NET

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8.49 kW	7.59 kW
El input	1.66 kW	2.50 kW
СОР	5.10	3.04
Indoor water flow rate	1.49 m³/h	0.82 m³/h

EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81





Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = $+7^{\circ}$ C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W



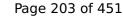


PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	15 dB(A)	15 dB(A)	
Sound power level outdoor	63 dB(A)	63 dB(A)	

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW





COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = $+7^{\circ}$ C	3.68 kW	3.75 kW
$COP Tj = +7^{\circ}C$	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
PTO	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh

Domestic Hot Water (DHW)

251 I

Average Climate

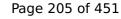
EN 16147 Declared load profile XLEfficiency ηDHW 106 % COP 2.56 Heating up time 01:28 h:min Standby power input 52.0 W Reference hot water temperature 53.6 °C

Warmer Climate

Mixed water at 40°C

EN 16147	
Declared load profile	XL
Efficiency ηDHW	111 %
СОР	2.70
Heating up time	01:16 h:min
Standby power input	39.0 W
Reference hot water temperature	53.2 °C
Mixed water at 40°C	248 I

Colder Climate





EN 16147	
Declared load profile	XL
Efficiency ηDHW	89 %
СОР	2.15
Heating up time	01:49 h:min
Standby power input	57.0 W
Reference hot water temperature	53.6 °C
Mixed water at 40°C	250 I



Model: NIMBUS FLEX 90 M NET

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8.49 kW	7.59 kW
El input	1.66 kW	2.50 kW
СОР	5.10	3.04
Indoor water flow rate	1.49 m³/h	0.82 m³/h

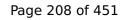
EN 14511-4	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81





1	
9.38 kW	8.31 kW
3.29	2.32
9.14 kW	9.32 kW
2.77	1.68
0.90	0.90
60 °C	60 °C
20 W	20 W
electricity	electricity
1.47 kW	0.07 kW
4561 kWh	5878 kWh
	3.29 9.14 kW 2.77 0.90 60 °C 20 W 20 W 20 W electricity 1.47 kW

Warmer Climate

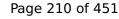
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
n _s	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = +7°C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W



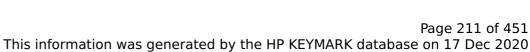


PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW



Page 211 of 451

	· · · · · · · · · · · · · · · · · · ·	
COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = $+7^{\circ}$ C	3.68 kW	3.75 kW
$COP Tj = +7^{\circ}C$	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh

Domestic Hot Water (DHW)



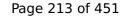
Average Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	106 %	
СОР	2.56	
Heating up time	01:28 h:min	
Standby power input	52.0 W	
Reference hot water temperature	53.6 °C	
Mixed water at 40°C	251 l	

Warmer Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	111 %	
СОР	2.70	
Heating up time	01:16 h:min	
Standby power input	39.0 W	
Reference hot water temperature	53.2 °C	
Mixed water at 40°C	248 I	

Colder Climate





EN 16147		
Declared load profile	XL	
Efficiency ηDHW	89 %	
СОР	2.15	
Heating up time	01:49 h:min	
Standby power input	57.0 W	
Reference hot water temperature	53.6 °C	
Mixed water at 40°C	250 I	



Model: NIMBUS FLEX 90 M - 300 NET

General Data		
Power supply	1x230V 50Hz	

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	8.49 kW	7.59 kW	
El input	1.66 kW	2.50 kW	
СОР	5.10	3.04	
Indoor water flow rate	1.49 m³/h	0.82 m³/h	

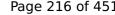
EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81





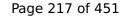
$$\operatorname{\textit{Page}}\xspace$ 216 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

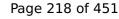
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = $+7^{\circ}$ C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W



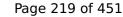


PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW





COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = $+7^{\circ}$ C	3.68 kW	3.75 kW
COP Tj = +7°C	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh

Domestic Hot Water (DHW)



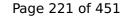
Average Climate

EN 16147		
Declared load profile	XXL	
Efficiency ηDHW	122 %	
СОР	3.06	
Heating up time	01:52 h:min	
Standby power input	53.0 W	
Reference hot water temperature	54.5 °C	
Mixed water at 40°C	434	

Warmer Climate

EN 16147		
Declared load profile	XXL	
Efficiency ηDHW	132 %	
СОР	3.30	
Heating up time	01:34 h:min	
Standby power input	48.0 W	
Reference hot water temperature	54.2 °C	
Mixed water at 40°C	430 I	

Colder Climate





EN 16147	
Declared load profile	XXL
Efficiency ηDHW	97 %
СОР	2.43
Heating up time	02:15 h:min
Standby power input	63.0 W
Reference hot water temperature	53.4 °C
Mixed water at 40°C	422 I



Model: ARIANEXT COMPACT 90 M

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	8.49 kW	7.59 kW	
El input	1.66 kW	2.50 kW	
СОР	5.10	3.04	
Indoor water flow rate	1.49 m³/h	0.82 m³/h	

EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit		
Shutting off the heat transfer medium flow		
Complete power supply failure		
Defrost test	passed	



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

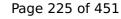
EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81



Page 224 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

This information was generated by the Fill RETPIARR database on 17 Dec 2020		
Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Domestic Hot Water (DHW)





EN 16147	
Declared load profile	L
Efficiency ηDHW	127 %
СОР	3.01
Heating up time	00:47 h:min
Standby power input	38.0 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	247



Model: ARIANEXT FLEX 90 M

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8.49 kW	7.59 kW
El input	1.66 kW	2.50 kW
СОР	5.10	3.04
Indoor water flow rate	1.49 m³/h	0.82 m³/h

EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81

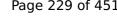


Page 228 of 451

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

	-	
Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Domestic Hot Water (DHW)





$$\operatorname{\textit{Page}}\xspace$ 229 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 16147	
Declared load profile	L
Efficiency ηDHW	127 %
СОР	3.01
Heating up time	00:47 h:min
Standby power input	38.0 W
Reference hot water temperature	52.5 °C
Mixed water at 40°C	247 I



Model: ARIANEXT FLEX 90 M - 300

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8.49 kW	7.59 kW
El input	1.66 kW	2.50 kW
СОР	5.10	3.04
Indoor water flow rate	1.49 m³/h	0.82 m³/h

EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81

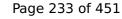


Page 232 of 451

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

	· · · · · · · · · · · · · · · · · · ·	
Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Domestic Hot Water (DHW)





EN 16147	
Declared load profile	XL
Efficiency ηDHW	131 %
СОР	3.10
Heating up time	01:52 h:min
Standby power input	61.0 W
Reference hot water temperature	54.4 °C
Mixed water at 40°C	434



Model: ENERGION M PLUS 9

General Data		
Power supply 1x230V 50Hz		

Heating

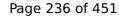
EN 14511-2		
	Low temperature	Medium temperature
Heat output	8.49 kW	7.59 kW
El input	1.66 kW	2.50 kW
СОР	5.10	3.04
Indoor water flow rate	1.49 m³/h	0.82 m³/h

EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81



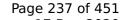


	T	Title database on 17 Bee 2020
Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
PTO	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

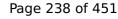
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = $+7^{\circ}$ C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W





PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	15 dB(A)	15 dB(A)	
Sound power level outdoor	63 dB(A)	63 dB(A)	

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW



Page 239 of 451

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

COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = +7°C	3.68 kW	3.75 kW
$COP Tj = +7^{\circ}C$	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh



Model: ENERGION M PLUS 9 T

General Data	
Power supply	3x230V 50Hz

Heating

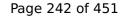
EN 14511-2			
	Low temperature	Medium temperature	
Heat output	8.49 kW	7.59 kW	
El input	1.66 kW	2.50 kW	
СОР	5.10	3.04	
Indoor water flow rate	1.49 m³/h	0.82 m³/h	

EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit		
	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81



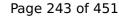


Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

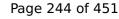
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 1	4825	
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = $+7^{\circ}$ C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W





PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW



Page 245 of 451

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

COP Tj = -7°C	3.67	2.77
	3.07	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = +7°C	3.68 kW	3.75 kW
$COP Tj = +7^{\circ}C$	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh
	•	



Model: ENERGION M LIGHT 9

General Data	
Power supply	1x230V 50Hz

Heating

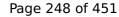
EN 14511-2		
	Low temperature	Medium temperature
Heat output	8.49 kW	7.59 kW
El input	1.66 kW	2.50 kW
СОР	5.10	3.04
Indoor water flow rate	1.49 m³/h	0.82 m³/h

EN 14511-4	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81



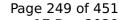


	·	
Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = +7°C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W





PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW



Page 251 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

This information was g	cherated by the Hill KETI	ANN database on 17 Dec 202
COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = +7°C	3.68 kW	3.75 kW
COP Tj = +7°C	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
РСК	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh
t	1	1



Model: ENERGION M LIGHT 9 T

General Data	
Power supply	3x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8.49 kW	7.59 kW
El input	1.66 kW	2.50 kW
СОР	5.10	3.04
Indoor water flow rate	1.49 m³/h	0.82 m³/h

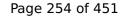
EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	



 $$\operatorname{\textit{Page}}\xspace$ 253 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81



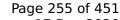


Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

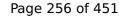
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 1	4825	
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = $+7^{\circ}$ C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W





PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW



$$\operatorname{\textit{Page}}\xspace$ 257 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

This information was get		
COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = $+7^{\circ}$ C	3.68 kW	3.75 kW
COP Tj = +7°C	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh
-		



Model: ENERGION M FLEX 9 180 e

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	8.49 kW	7.59 kW	
El input	1.66 kW	2.50 kW	
СОР	5.10	3.04	
Indoor water flow rate	1.49 m³/h	0.82 m³/h	

EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81



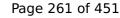


	· · · · · · · · · · · · · · · · · · ·	
Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

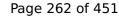
EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	15 dB(A)	15 dB(A)	
Sound power level outdoor	63 dB(A)	63 dB(A)	

EN 14825		
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = $+7^{\circ}$ C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W





PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW





COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = $+7^{\circ}$ C	3.68 kW	3.75 kW
$COP Tj = +7^{\circ}C$	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
PTO	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh

Domestic Hot Water (DHW)



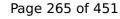
Average Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	106 %	
СОР	2.56	
Heating up time	01:28 h:min	
Standby power input	52.0 W	
Reference hot water temperature	53.6 °C	
Mixed water at 40°C	251 I	

Warmer Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	111 %	
СОР	2.70	
Heating up time	01:16 h:min	
Standby power input	39.0 W	
Reference hot water temperature	53.2 °C	
Mixed water at 40°C	248	

Colder Climate





EN 16147		
Declared load profile	XL	
Efficiency ηDHW	89 %	
СОР	2.15	
Heating up time	01:49 h:min	
Standby power input	57.0 W	
Reference hot water temperature	53.6 °C	
Mixed water at 40°C	250 I	



Model: ENERGION M FLEX 9 T 180 e

General Data	
Power supply	3x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8.49 kW	7.59 kW
El input	1.66 kW	2.50 kW
СОР	5.10	3.04
Indoor water flow rate	1.49 m³/h	0.82 m³/h

EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81



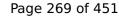


This morniation was generated by the in Kernin was detailed for			
Pdh Tj = Tbiv	9.38 kW	8.31 kW	
COP Tj = Tbiv	3.29	2.32	
Pdh Tj = TOL	9.14 kW	9.32 kW	
COP Tj = TOL	2.77	1.68	
Cdh	0.90	0.90	
WTOL	60 °C	60 °C	
Poff	20 W	20 W	
РТО	20 W	20 W	
PSB	20 W	20 W	
PCK	20 W	20 W	
Supplementary Heater: Type of energy input	electricity	electricity	
Supplementary Heater: PSUP	1.47 kW	0.07 kW	
Annual energy consumption Qhe	4561 kWh	5878 kWh	

Warmer Climate

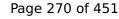
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = +7°C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W





PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	15 dB(A)	15 dB(A)	
Sound power level outdoor	63 dB(A)	63 dB(A)	

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW





COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = $+7^{\circ}$ C	3.68 kW	3.75 kW
$COP Tj = +7^{\circ}C$	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
PTO	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh

Domestic Hot Water (DHW)



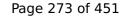
Average Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	106 %	
СОР	2.56	
Heating up time	01:28 h:min	
Standby power input	52.0 W	
Reference hot water temperature	53.6 °C	
Mixed water at 40°C	251 I	

Warmer Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	111 %	
СОР	2.70	
Heating up time	01:16 h:min	
Standby power input	39.0 W	
Reference hot water temperature	53.2 °C	
Mixed water at 40°C	248 I	

Colder Climate





EN 16147		
Declared load profile	XL	
Efficiency ηDHW	89 %	
СОР	2.15	
Heating up time	01:49 h:min	
Standby power input	57.0 W	
Reference hot water temperature	53.6 °C	
Mixed water at 40°C	250 I	



Model: ENERGION M FLEX 9 300 e

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	8.49 kW	7.59 kW	
El input	1.66 kW	2.50 kW	
СОР	5.10	3.04	
Indoor water flow rate	1.49 m³/h	0.82 m³/h	

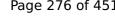
EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81





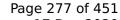
$$\operatorname{\textit{Page}}\xspace$ 276 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

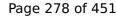
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 1	4825	
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = +7°C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W



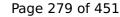


PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW





COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = $+7^{\circ}$ C	3.68 kW	3.75 kW
COP Tj = +7°C	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh

Domestic Hot Water (DHW)

Average Climate

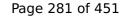
This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 16147	
Declared load profile	XXL
Efficiency ηDHW	122 %
СОР	3.06
Heating up time	01:52 h:min
Standby power input	53.0 W
Reference hot water temperature	54.5 °C
Mixed water at 40°C	434

Warmer Climate

EN 16147	
Declared load profile	XXL
Efficiency ηDHW	132 %
СОР	3.30
Heating up time	01:34 h:min
Standby power input	48.0 W
Reference hot water temperature	54.2 °C
Mixed water at 40°C	430 I

Colder Climate





EN 16147	
Declared load profile	XXL
Efficiency ηDHW	97 %
СОР	2.43
Heating up time	02:15 h:min
Standby power input	63.0 W
Reference hot water temperature	53.4 °C
Mixed water at 40°C	422 I

Model: ENERGION M FLEX 9 T 300 e

General Data	
Power supply	3x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8.49 kW	7.59 kW
El input	1.66 kW	2.50 kW
СОР	5.10	3.04
Indoor water flow rate	1.49 m³/h	0.82 m³/h

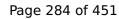
EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81



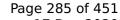


9.38 kW	8.31 kW
3.29	2.32
9.14 kW	9.32 kW
2.77	1.68
0.90	0.90
60 °C	60 °C
20 W	20 W
electricity	electricity
1.47 kW	0.07 kW
4561 kWh	5878 kWh
	3.29 9.14 kW 2.77 0.90 60 °C 20 W 20 W 20 W electricity 1.47 kW

Warmer Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	15 dB(A)	15 dB(A)	
Sound power level outdoor	63 dB(A)	63 dB(A)	

EN 14825		
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = +7°C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W



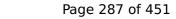


PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	15 dB(A)	15 dB(A)	
Sound power level outdoor	63 dB(A)	63 dB(A)	

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW





COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = +7°C	3.68 kW	3.75 kW
$COP Tj = +7^{\circ}C$	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh

Domestic Hot Water (DHW)

Average Climate

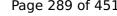
This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 16147		
Declared load profile	XXL	
Efficiency ηDHW	122 %	
СОР	3.06	
Heating up time	01:52 h:min	
Standby power input	53.0 W	
Reference hot water temperature	54.5 °C	
Mixed water at 40°C	434	

Warmer Climate

EN 16147	
Declared load profile	XXL
Efficiency ηDHW	132 %
СОР	3.30
Heating up time	01:34 h:min
Standby power input	48.0 W
Reference hot water temperature	54.2 °C
Mixed water at 40°C	430

Colder Climate





$$\operatorname{\textit{Page}}\xspace$ 289 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 16147		
Declared load profile	XXL	
Efficiency ηDHW	97 %	
СОР	2.43	
Heating up time	02:15 h:min	
Standby power input	63.0 W	
Reference hot water temperature	53.4 °C	
Mixed water at 40°C	422 I	



Model: ENERGION M COMPACT 9

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8.49 kW	7.59 kW
El input	1.66 kW	2.50 kW
СОР	5.10	3.04
Indoor water flow rate	1.49 m³/h	0.82 m³/h

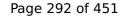
EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81



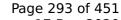


Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
n _s	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = +7°C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W





PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW





COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
$COP Tj = +2^{\circ}C$	5.17	3.67
Pdh Tj = $+7^{\circ}$ C	3.68 kW	3.75 kW
$COP Tj = +7^{\circ}C$	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh

Domestic Hot Water (DHW)

Average Climate

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

EN 16147	
Declared load profile	XL
Efficiency ηDHW	106 %
СОР	2.56
Heating up time	01:28 h:min
Standby power input	52.0 W
Reference hot water temperature	53.6 °C
Mixed water at 40°C	251 l

Warmer Climate

EN 16147	
Declared load profile	XL
Efficiency ηDHW	111 %
СОР	2.70
Heating up time	01:16 h:min
Standby power input	39.0 W
Reference hot water temperature	53.2 °C
Mixed water at 40°C	248 I

Colder Climate





EN 16147	
Declared load profile	XL
Efficiency ηDHW	89 %
СОР	2.15
Heating up time	01:49 h:min
Standby power input	57.0 W
Reference hot water temperature	53.6 °C
Mixed water at 40°C	250 I



Model: ENERGION M COMPACT 9 T

General Data	
Power supply	3x230V 50Hz

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	8.49 kW	7.59 kW	
El input	1.66 kW	2.50 kW	
СОР	5.10	3.04	
Indoor water flow rate	1.49 m³/h	0.82 m³/h	

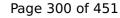
EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81



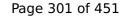


	· · · · · · · · · · · · · · · · · · ·	
Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = $+7^{\circ}$ C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W





PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW





COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = $+7^{\circ}$ C	3.68 kW	3.75 kW
$COP Tj = +7^{\circ}C$	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	electricity	electricity
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh

Domestic Hot Water (DHW)



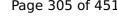
Average Climate

EN 16147	
Declared load profile	XL
Efficiency ηDHW	106 %
СОР	2.56
Heating up time	01:28 h:min
Standby power input	52.0 W
Reference hot water temperature	53.6 °C
Mixed water at 40°C	251 l

Warmer Climate

EN 16147	
Declared lead profile	XL
Declared load profile	AL .
Efficiency ηDHW	111 %
СОР	2.70
Heating up time	01:16 h:min
Standby power input	39.0 W
Reference hot water temperature	53.2 °C
Mixed water at 40°C	248

Colder Climate





$$\operatorname{\textit{Page}}\xspace$ 305 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 16147	
Declared load profile	XL
Efficiency ηDHW	89 %
СОР	2.15
Heating up time	01:49 h:min
Standby power input	57.0 W
Reference hot water temperature	53.6 °C
Mixed water at 40°C	250 l



Model: ENERGION M HYBRIDall 9

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8.49 kW	7.59 kW
El input	1.66 kW	2.50 kW
СОР	5.10	3.04
Indoor water flow rate	1.49 m³/h	0.82 m³/h

EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81



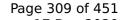


Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

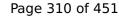
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 1	4825	
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = +7°C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W





PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW



Page 311 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

This information was ge	nerated by the HF KETM	ARK database on 17 Dec 2020
COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = +7°C	3.68 kW	3.75 kW
$COP Tj = +7^{\circ}C$	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	8.06 kW	11.11 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh



Model: ENERGION M HYBRIDall 9 T

General Data	
Power supply	3x230V 50Hz

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	8.49 kW	7.59 kW	
El input	1.66 kW	2.50 kW	
СОР	5.10	3.04	
Indoor water flow rate	1.49 m³/h	0.82 m³/h	

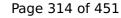
EN 14511-4	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81



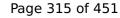


9.38 kW	8.31 kW
3.29	2.32
9.14 kW	9.32 kW
2.77	1.68
0.90	0.90
60 °C	60 °C
20 W	20 W
gas	gas
1.47 kW	0.07 kW
4561 kWh	5878 kWh
	3.29 9.14 kW 2.77 0.90 60 °C 20 W 20 W 20 W 20 W 1.47 kW

Warmer Climate

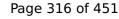
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 1	4825	
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = +7°C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W





PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW



Page 317 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

This information was ge	Tieratea by the Till RETIN	ANN database on 17 Dec 2020
COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = +7°C	3.68 kW	3.75 kW
$COP Tj = +7^{\circ}C$	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	8.06 kW	11.11 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh



Model: ATAG p ENERGION M HYBRIDzone 9

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	8.49 kW	7.59 kW	
El input	1.66 kW	2.50 kW	
СОР	5.10	3.04	
Indoor water flow rate	1.49 m³/h	0.82 m³/h	

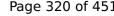
EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81





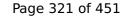
$$\operatorname{\textit{Page}}\xspace$ 320 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

	· · · · · · · · · · · · · · · · · · ·	
Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh
	•	

Warmer Climate

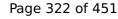
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 1	4825	
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
n _s	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = +7°C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W





PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	15 dB(A)	15 dB(A)	
Sound power level outdoor	63 dB(A)	63 dB(A)	

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW



Page 323 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

This information was go	Theracea by the Thinke The	ANN database on 17 Dec 2020
COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = +7°C	3.68 kW	3.75 kW
$COP Tj = +7^{\circ}C$	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	8.06 kW	11.11 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh

Model: ATAG p ENERGION M HYBRIDzone 9 T

General Data		
Power supply	3x230V 50Hz	

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8.49 kW	7.59 kW
El input	1.66 kW	2.50 kW
СОР	5.10	3.04
Indoor water flow rate	1.49 m³/h	0.82 m³/h

EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81





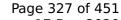
$$\operatorname{\textit{Page}}\xspace$ 326 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

	· · · · · · · · · · · · · · · · · · ·	
Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh
	•	

Warmer Climate

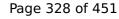
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 1	4825	
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
n _s	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = +7°C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W





PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW



Page 329 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

This information was generated by the HP KETMARK database on 17 Dec 2020			
COP Tj = -7°C	3.67	2.77	
Pdh Tj = +2°C	5.61 kW	5.12 kW	
COP Tj = +2°C	5.17	3.67	
Pdh Tj = $+7^{\circ}$ C	3.68 kW	3.75 kW	
$COP Tj = +7^{\circ}C$	6.75	5.12	
Pdh Tj = 12°C	4.43 kW	4.30 kW	
COP Tj = 12°C	8.92	6.96	
Pdh Tj = Tbiv	9.18 kW	8.42 kW	
COP Tj = Tbiv	3.67	2.77	
Pdh Tj = TOL	6.31 kW	2.06 kW	
COP Tj = TOL	2.18	0.54	
Cdh	0.90	0.90	
WTOL	60 °C	60 °C	
Poff	20 W	20 W	
РТО	20 W	20 W	
PSB	20 W	20 W	
PCK	20 W	20 W	
Supplementary Heater: Type of energy input	gas	gas	
Supplementary Heater: PSUP	8.06 kW	11.11 kW	
Annual energy consumption Qhe	9625 kWh	12191 kWh	
Annual energy consumption Qhe	9625 kWh	12191 kWh	



Model: ATAG i ENERGION M HYBRIDzone 9

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	8.49 kW	7.59 kW	
El input	1.66 kW	2.50 kW	
СОР	5.10	3.04	
Indoor water flow rate	1.49 m³/h	0.82 m³/h	

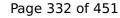
EN 14511-4	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	
	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81



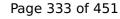


Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
PTO	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 1	4825	
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
n _s	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = +7°C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W





PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW



Page 335 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

IIIS IIIIOIIIIatioii was ge	nerated by the HF KLTM	ARK database on 17 Dec 2020
COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
$COP Tj = +2^{\circ}C$	5.17	3.67
Pdh Tj = +7°C	3.68 kW	3.75 kW
$COP Tj = +7^{\circ}C$	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	8.06 kW	11.11 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh



Model: ATAG i ENERGION M HYBRIDzone 9 T

General Data	
Power supply	3x230V 50Hz

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	8.49 kW	7.59 kW	
El input	1.66 kW	2.50 kW	
СОР	5.10	3.04	
Indoor water flow rate	1.49 m³/h	0.82 m³/h	

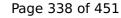
EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81



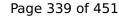


Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

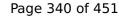
EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	15 dB(A)	15 dB(A)	
Sound power level outdoor	63 dB(A)	63 dB(A)	

EN 1	4825	
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = $+7^{\circ}$ C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W





PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	15 dB(A)	15 dB(A)	
Sound power level outdoor	63 dB(A)	63 dB(A)	

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW



Page 341 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

	<u> </u>	
COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = +7°C	3.68 kW	3.75 kW
$COP Tj = +7^{\circ}C$	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	8.06 kW	11.11 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh



Model: NIMBUS M HYBRID 9 NET

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8.49 kW	7.59 kW
El input	1.66 kW	2.50 kW
СОР	5.10	3.04
Indoor water flow rate	1.49 m³/h	0.82 m³/h

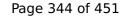
EN 14511-4	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81



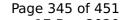


Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 1	4825	
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = $+7^{\circ}$ C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W





PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW



Page 347 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

This information was g	encrated by the fit RETI	ANN database on 17 Dec 202
COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = +7°C	3.68 kW	3.75 kW
$COP Tj = +7^{\circ}C$	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh



Model: NIMBUS M HYBRID 9 T NET

General Data	
Power supply 3x230V 50Hz	

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	8.49 kW	7.59 kW	
El input	1.66 kW	2.50 kW	
СОР	5.10	3.04	
Indoor water flow rate	1.49 m³/h	0.82 m³/h	

EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81



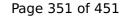


Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

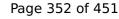
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = $+7^{\circ}$ C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W





PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW



Page 353 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

This information was generated by the Hir KLIMAKK database on 17 Dec 202			
COP Tj = -7°C	3.67	2.77	
Pdh Tj = +2°C	5.61 kW	5.12 kW	
COP Tj = +2°C	5.17	3.67	
Pdh Tj = +7°C	3.68 kW	3.75 kW	
$COP Tj = +7^{\circ}C$	6.75	5.12	
Pdh Tj = 12°C	4.43 kW	4.30 kW	
COP Tj = 12°C	8.92	6.96	
Pdh Tj = Tbiv	9.18 kW	8.42 kW	
COP Tj = Tbiv	3.67	2.77	
Pdh Tj = TOL	6.31 kW	2.06 kW	
COP Tj = TOL	2.18	0.54	
Cdh	0.90	0.90	
WTOL	60 °C	60 °C	
Poff	20 W	20 W	
РТО	20 W	20 W	
PSB	20 W	20 W	
PCK	20 W	20 W	
Supplementary Heater: Type of energy input	gas	gas	
Supplementary Heater: PSUP	6.00 kW	6.00 kW	
Annual energy consumption Qhe	9625 kWh	12191 kWh	



Model: NIMBUS M HYBRID FLEX 9 NET

General Data		
Power supply	1x230V 50Hz	

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	8.49 kW	7.59 kW	
El input	1.66 kW	2.50 kW	
СОР	5.10	3.04	
Indoor water flow rate	1.49 m³/h	0.82 m³/h	

EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81



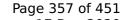


Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = $+7^{\circ}$ C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W



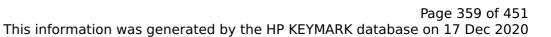


PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1				
	Low temperature	Medium temperature		
Sound power level indoor	15 dB(A)	15 dB(A)		
Sound power level outdoor	63 dB(A)	63 dB(A)		

EN 14825			
	Low temperature	Medium temperature	
Pdesignh	15.17 kW	13.91 kW	
η_{s}	152 %	109 %	
Prated	6.90 kW	6.20 kW	
SCOP	3.88	2.81	
Tbiv	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	9.18 kW	8.42 kW	





COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = $+7^{\circ}$ C	3.68 kW	3.75 kW
$COP Tj = +7^{\circ}C$	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
PTO	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh

Domestic Hot Water (DHW)



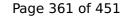
Average Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	106 %	
СОР	2.56	
Heating up time	01:28 h:min	
Standby power input	52.0 W	
Reference hot water temperature	53.6 °C	
Mixed water at 40°C	251 I	

Warmer Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	111 %	
COP	2.70	
Heating up time	01:16 h:min	
	39.0 W	
Standby power input		
Reference hot water temperature	53.2 °C	
Mixed water at 40°C	248	

Colder Climate





EN 16147		
Declared load profile	XL	
Efficiency ηDHW	89 %	
СОР	2.15	
Heating up time	01:49 h:min	
Standby power input	57.0 W	
Reference hot water temperature	53.6 °C	
Mixed water at 40°C	250 l	



Model: NIMBUS M HYBRID FLEX 9 T NET

General Data	
Power supply	3x230V 50Hz

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	8.49 kW	7.59 kW	
El input	1.66 kW	2.50 kW	
СОР	5.10	3.04	
Indoor water flow rate	1.49 m³/h	0.82 m³/h	

EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81





Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
n _s	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = +7°C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W



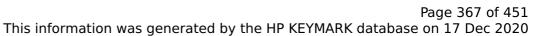


PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW





COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = $+7^{\circ}$ C	3.68 kW	3.75 kW
$COP Tj = +7^{\circ}C$	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
PTO	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh

Domestic Hot Water (DHW)



Average Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	106 %	
СОР	2.56	
Heating up time	01:28 h:min	
Standby power input	52.0 W	
Reference hot water temperature	53.6 °C	
Mixed water at 40°C	251	

Warmer Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	111 %	
СОР	2.70	
Heating up time	01:16 h:min	
Standby power input	39.0 W	
Reference hot water temperature	53.2 °C	
Mixed water at 40°C	248 I	

Colder Climate





EN 16147		
Declared load profile	XL	
Efficiency ηDHW	89 %	
СОР	2.15	
Heating up time	01:49 h:min	
Standby power input	57.0 W	
Reference hot water temperature	53.6 °C	
Mixed water at 40°C	250 I	



Model: NIMBUS M HYBRID UNIVERSAL 9 NET

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	8.49 kW	7.59 kW	
El input	1.66 kW	2.50 kW	
СОР	5.10	3.04	
Indoor water flow rate	1.49 m³/h	0.82 m³/h	

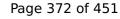
EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure		
Defrost test	passed	

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81



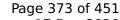


Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

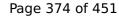
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = $+7^{\circ}$ C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W





PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	15 dB(A)	15 dB(A)	
Sound power level outdoor	63 dB(A)	63 dB(A)	

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW



Page 375 of 451

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

COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
$COP Tj = +2^{\circ}C$	5.17	3.67
Pdh Tj = +7°C	3.68 kW	3.75 kW
$COP Tj = +7^{\circ}C$	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh



Model: NIMBUS M HYBRID UNIVERSAL 9 T NET

General Data	
Power supply 3x230V 50Hz	

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	8.49 kW	7.59 kW	
El input	1.66 kW	2.50 kW	
СОР	5.10	3.04	
Indoor water flow rate	1.49 m³/h	0.82 m³/h	

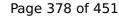
EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81



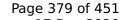


Pdh Tj = Tbiv	9.38 kW	8.31 kW
ruii ij – ibiv	9.30 KW	0.51 KW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

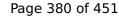
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 1	4825	
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = $+7^{\circ}$ C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W





PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW



Page 381 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

IIIIS IIIIOITIIALIOII WAS GE	Herated by the HP KETM	ARK database on 17 Dec 202
COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = +7°C	3.68 kW	3.75 kW
$COP Tj = +7^{\circ}C$	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh

Model: ARIANEXT M HYBRID 9 LINK

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8.49 kW	7.59 kW
El input	1.66 kW	2.50 kW
СОР	5.10	3.04
Indoor water flow rate	1.49 m³/h	0.82 m³/h

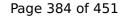
EN 14511-4	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81



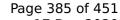


Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
n _s	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = +7°C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W





PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW



Page 387 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = +7°C	3.68 kW	3.75 kW
COP Tj = +7°C	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh



Model: ARIANEXT M HYBRID 9 T LINK

General Data	
Power supply 3x230V 50Hz	

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8.49 kW	7.59 kW
El input	1.66 kW	2.50 kW
СОР	5.10	3.04
Indoor water flow rate	1.49 m³/h	0.82 m³/h

EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81



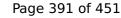


	· · · · · · · · · · · · · · · · · · ·	
Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = $+7^{\circ}$ C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W





PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW



Page 393 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

This information was 9	cherated by the Hi KETI	ANN database on 17 Dec 202
COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = +7°C	3.68 kW	3.75 kW
$COP Tj = +7^{\circ}C$	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh



Model: ARIANEXT M HYBRID FLEX 9 LINK

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8.49 kW	7.59 kW
El input	1.66 kW	2.50 kW
СОР	5.10	3.04
Indoor water flow rate	1.49 m³/h	0.82 m³/h

EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	15 dB(A)	15 dB(A)	
Sound power level outdoor	63 dB(A)	63 dB(A)	

EN 14825			
	Low temperature	Medium temperature	
Pdesignh	10.61 kW	9.39 kW	
η_{s}	189 %	129 %	
Prated	8.70 kW	7.70 kW	
SCOP	4.80	3.30	
Tbiv	-7 °C	-7 °C	
TOL	-10 °C	-10 °C	
Pdh Tj = -7°C	9.38 kW	8.31 kW	
COP Tj = -7°C	3.29	2.32	
Pdh Tj = +2°C	5.71 kW	5.33 kW	
COP Tj = +2°C	4.67	3.33	
Pdh Tj = +7°C	3.67 kW	3.48 kW	
COP Tj = +7°C	6.01	3.80	
Pdh Tj = 12°C	4.44 kW	4.02 kW	
COP Tj = 12°C	8.76	5.81	



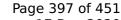


Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

EN 12102-1				
	Low temperature	Medium temperature		
Sound power level indoor	15 dB(A)	15 dB(A)		
Sound power level outdoor	63 dB(A)	63 dB(A)		

EN 14825			
	Low temperature	Medium temperature	





Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = $+7^{\circ}$ C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W



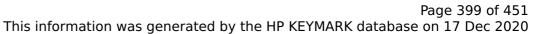


PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW





	T.	
COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = $+7^{\circ}$ C	3.68 kW	3.75 kW
$COP Tj = +7^{\circ}C$	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh

Domestic Hot Water (DHW)



Average Climate

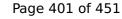
This information was generated by the HP KEYMARK database on 17 Dec 2020

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	106 %	
СОР	2.56	
Heating up time	01:28 h:min	
Standby power input	52.0 W	
Reference hot water temperature	53.6 °C	
Mixed water at 40°C	251 I	

Warmer Climate

EN 16147		
Declared lead profile	XL	
Declared load profile	AL .	
Efficiency ηDHW	111 %	
СОР	2.70	
Heating up time	01:16 h:min	
Standby power input	39.0 W	
Reference hot water temperature	53.2 °C	
Mixed water at 40°C	248	

Colder Climate





EN 16147		
Declared load profile	XL	
Efficiency ηDHW	89 %	
СОР	2.15	
Heating up time	01:49 h:min	
Standby power input	57.0 W	
Reference hot water temperature	53.6 °C	
Mixed water at 40°C	250 I	



Model: ARIANEXT M HYBRID FLEX 9 T LINK

General Data	
Power supply 3x230V 50Hz	

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	8.49 kW	7.59 kW	
El input	1.66 kW	2.50 kW	
СОР	5.10	3.04	
Indoor water flow rate	1.49 m³/h	0.82 m³/h	

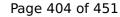
EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit		
Shutting off the heat transfer medium flow		
Complete power supply failure		
Defrost test	passed	

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81



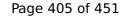


-	
9.38 kW	8.31 kW
3.29	2.32
9.14 kW	9.32 kW
2.77	1.68
0.90	0.90
60 °C	60 °C
20 W	20 W
gas	gas
1.47 kW	0.07 kW
4561 kWh	5878 kWh
	3.29 9.14 kW 2.77 0.90 60 °C 20 W 20 W 20 W 20 W 1.47 kW

Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = +7°C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W





PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW





COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = $+7^{\circ}$ C	3.68 kW	3.75 kW
$COP Tj = +7^{\circ}C$	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh

Domestic Hot Water (DHW)

Average Climate

EN 16147	
Declared load profile	XL
Efficiency ηDHW	106 %
СОР	2.56
Heating up time	01:28 h:min
Standby power input	52.0 W
Reference hot water temperature	53.6 °C
Mixed water at 40°C	251 I

Warmer Climate

EN 16147	
Declared load profile	XL
Efficiency ηDHW	111 %
COP	2.70
Heating up time	01:16 h:min
	39.0 W
Standby power input	
Reference hot water temperature	53.2 °C
Mixed water at 40°C	248

Colder Climate





EN 16147	
Declared load profile	XL
Efficiency ηDHW	89 %
СОР	2.15
Heating up time	01:49 h:min
Standby power input	57.0 W
Reference hot water temperature	53.6 °C
Mixed water at 40°C	250 I



Model: ARIANEXT M HYBRID UNIVERSAL 9 LINK

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8.49 kW	7.59 kW
El input	1.66 kW	2.50 kW
СОР	5.10	3.04
Indoor water flow rate	1.49 m³/h	0.82 m³/h

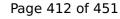
EN 14511-4	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed

Average Climate



	EN 12102-1	
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81



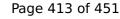


	·	
Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

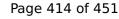
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 1	4825	
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = +7°C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W





PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW



Page 415 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

ins institution was get	iciated by the in item.	Time database on 17 Dec 2020
COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
COP Tj = +2°C	5.17	3.67
Pdh Tj = +7°C	3.68 kW	3.75 kW
$COP Tj = +7^{\circ}C$	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh

Model: AEROTOP HYBRID MINI EVO 9

General Data	
Power supply 3x230V 50Hz	

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	8.49 kW	7.59 kW	
El input	1.66 kW	2.50 kW	
СОР	5.10	3.04	
Indoor water flow rate	1.49 m³/h	0.82 m³/h	

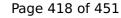
EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81



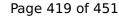


Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

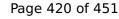
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = $+7^{\circ}$ C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W





PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW



Page 421 of 451 This information was generated by the HP KEYMARK database on 17 Dec 2020

61 kW	2.77 5.12 kW
17	2.67
	3.67
68 kW	3.75 kW
75	5.12
43 kW	4.30 kW
92	6.96
18 kW	8.42 kW
67	2.77
31 kW	2.06 kW
18	0.54
90	0.90
) °C	60 °C
) W	20 W
as	gas
00 kW	6.00 kW
525 kWh	12191 kWh
118 99 118 118 118 118 118	5



Model: AEROTOP HYBRID UNIVERSAL 9

General Data	
Power supply	3x230V 50Hz

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	8.49 kW	7.59 kW	
El input	1.66 kW	2.50 kW	
СОР	5.10	3.04	
Indoor water flow rate	1.49 m³/h	0.82 m³/h	

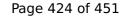
EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81



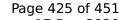


Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

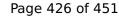
EN 12102-1 Low temperature Medium temperature Sound power level indoor 15 dB(A) 15 dB(A) Sound power level outdoor 63 dB(A) 63 dB(A)

EN 14825		
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = $+7^{\circ}$ C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W





PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW



Page 427 of 451

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

COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
$COP Tj = +2^{\circ}C$	5.17	3.67
Pdh Tj = +7°C	3.68 kW	3.75 kW
$COP Tj = +7^{\circ}C$	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh



Model: ARIANEXT M HYBRID UNIVERSAL 9 T LINK

General Data		
Power supply	3x230V 50Hz	

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	8.49 kW	7.59 kW	
El input	1.66 kW	2.50 kW	
СОР	5.10	3.04	
Indoor water flow rate	1.49 m³/h	0.82 m³/h	

EN 14511-4		
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed	
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed	
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	

Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81



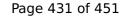


Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	1.47 kW	0.07 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Warmer Climate

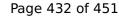
EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	15 dB(A)	15 dB(A)	
Sound power level outdoor	63 dB(A)	63 dB(A)	

EN 14825		
	Low temperature	Medium temperature





Pdesignh	6.65 kW	6.26 kW
η_{s}	234 %	153 %
Prated	8.70 kW	8.30 kW
SCOP	6.07	3.91
Tbiv	2 °C	2 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	6.65 kW	6.26 kW
COP Tj = +2°C	3.90	2.33
Pdh Tj = +7°C	4.46 kW	4.18 kW
COP Tj = +7°C	5.44	3.31
Pdh Tj = 12°C	4.36 kW	4.12 kW
COP Tj = 12°C	8.45	5.73
Pdh Tj = Tbiv	6.65 kW	6.26 kW
COP Tj = Tbiv	3.90	2.33
Pdh Tj = TOL	6.65 kW	6.26 kW
COP Tj = TOL	3.90	2.33
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W





PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	1464 kWh	2142 kWh

Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	15.17 kW	13.91 kW
η_{s}	152 %	109 %
Prated	6.90 kW	6.20 kW
SCOP	3.88	2.81
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	9.18 kW	8.42 kW



Page 433 of 451

COP Tj = -7°C	3.67	2.77
Pdh Tj = +2°C	5.61 kW	5.12 kW
$COP Tj = +2^{\circ}C$	5.17	3.67
Pdh Tj = +7°C	3.68 kW	3.75 kW
$COP Tj = +7^{\circ}C$	6.75	5.12
Pdh Tj = 12°C	4.43 kW	4.30 kW
COP Tj = 12°C	8.92	6.96
Pdh Tj = Tbiv	9.18 kW	8.42 kW
COP Tj = Tbiv	3.67	2.77
Pdh Tj = TOL	6.31 kW	2.06 kW
COP Tj = TOL	2.18	0.54
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	6.00 kW	6.00 kW
Annual energy consumption Qhe	9625 kWh	12191 kWh



Model: NIMBUS M FLEX IN 9 NET

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8.49 kW	7.59 kW
El input	1.66 kW	2.50 kW
СОР	5.10	3.04
Indoor water flow rate	1.49 m³/h	0.82 m³/h

EN 14511-4	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	0 dB(A)	0 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81



Page 436 of 451

Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	1.50 kW	0.10 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh



Model: NIMBUS M FLEX IN 9 T NET

General Data	
Power supply	3x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8.49 kW	7.59 kW
El input	1.66 kW	2.50 kW
СОР	5.10	3.04
Indoor water flow rate	1.49 m³/h	0.82 m³/h

EN 14511-4	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	0 dB(A)	0 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81



Page 439 of 451

Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	1.50 kW	0.10 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh

Model: ARIANEXT M FLEX IN 9 LINK

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8.49 kW	7.59 kW
El input	1.66 kW	2.50 kW
СОР	5.10	3.04
Indoor water flow rate	1.49 m³/h	0.82 m³/h

EN 14511-4	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	0 dB(A)	0 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81



Page 442 of 451

	· · · · · · · · · · · · · · · · · · ·	
Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	1.50 kW	0.10 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh



Model: ARIANEXT M FLEX IN 9 T LINK

General Data	
Power supply	3x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8.49 kW	7.59 kW
El input	1.66 kW	2.50 kW
СОР	5.10	3.04
Indoor water flow rate	1.49 m³/h	0.82 m³/h

EN 14511-4	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	0 dB(A)	0 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81



Page 445 of 451

Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
PTO	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	1.50 kW	0.10 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh



Model: AEROTOP MONO BUILT-IN 09M-CRX

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8.49 kW	7.59 kW
El input	1.66 kW	2.50 kW
СОР	5.10	3.04
Indoor water flow rate	1.49 m³/h	0.82 m³/h

EN 14511-4	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	0 dB(A)	0 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81



Page 448 of 451

Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
PTO	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	1.50 kW	0.10 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh



Model: AEROTOP MONO BUILT-IN 09M-CR

General Data	
Power supply	3x230V 50Hz

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8.49 kW	7.59 kW
El input	1.66 kW	2.50 kW
СОР	5.10	3.04
Indoor water flow rate	1.49 m³/h	0.82 m³/h

EN 14511-4	
Operating range outdoor exchanger/indoor exchanger lower limit/lower limit	passed
Operating range outdoor exchanger/indoor exchanger upper limit/upper limit	passed
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	0 dB(A)	0 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	10.61 kW	9.39 kW
η_{s}	189 %	129 %
Prated	8.70 kW	7.70 kW
SCOP	4.80	3.30
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	9.38 kW	8.31 kW
COP Tj = -7°C	3.29	2.32
Pdh Tj = +2°C	5.71 kW	5.33 kW
COP Tj = +2°C	4.67	3.33
Pdh Tj = +7°C	3.67 kW	3.48 kW
COP Tj = +7°C	6.01	3.80
Pdh Tj = 12°C	4.44 kW	4.02 kW
COP Tj = 12°C	8.76	5.81



Page 451 of 451

Pdh Tj = Tbiv	9.38 kW	8.31 kW
COP Tj = Tbiv	3.29	2.32
Pdh Tj = TOL	9.14 kW	9.32 kW
COP Tj = TOL	2.77	1.68
Cdh	0.90	0.90
WTOL	60 °C	60 °C
Poff	20 W	20 W
РТО	20 W	20 W
PSB	20 W	20 W
PCK	20 W	20 W
Supplementary Heater: Type of energy input	gas	gas
Supplementary Heater: PSUP	1.50 kW	0.10 kW
Annual energy consumption Qhe	4561 kWh	5878 kWh