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Summary of	NIMBUS/ARIANEXT/AEROTOP/ENERGION 80 M - Plus/LB	Reg. No.	ICIM-PDC-000117
Certificate Holder			
Name	Ariston Thermo Group		
Address	Viale Aristide Merloni 45	Zip	I-60044
City	Fabriano (AN)	Country	Italy
Certification Body	ICIM S.p.A.		
Subtype title	NIMBUS/ARIANEXT/AEROTOP/ENERGION 80 M - Plus/LB		
Heat Pump Type	Outdoor Air/Water		
Refrigerant	R32		
Mass of Refrigerant	1.4 kg		
Certification Date	05.07.2022		
Testing basis	Heat Pump KEYMARK rev9		



## **Model: NIMBUS PLUS 80 M NET R32**

Configure model			
Model name	NIMBUS PLUS 80 M NET R32		
Application	Heating (medium temp)		
Units	Indoor + Outdoor		
Climate Zone	Colder Climate + Warmer Climate		
Reversibility	Yes		
Cooling mode application (optional)	+7°C/12°C		

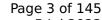
General Data		
Power supply	1x230V 50Hz	

## Heating

EN 14511-2				
Low temperature Medium temperature				
Heat output	8.00 kW	5.80 kW		
El input	1.67 kW	1.97 kW		
СОР	4.80	2.95		

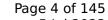
EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

## Cooling





EN 14511-2				
+7°C/+12°C +18°C/+23°C				
El input	2.26 kW	1.49 kW		
Cooling capacity	7	7.00		
EER	3.10	4.70		





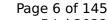
	+7°C/+12°C
Pdesignc	7 kW
SEER	4.64
Pdc Tj = 35°C	7 kW
EER Tj = 35°C	3.1
Pdc Tj = 30°C	5.17 kW
EER Tj = 30°C	4.13
Cdc Tj = 30 °C	0.99
Pdc Tj = 25°C	3.32 kW
EER Tj = 25°C	4.89
Cdc Tj = 25 °C	0.98
Pdc Tj = 20°C	3.19 kW
EER Tj = 20°C	6.85
Cdc Tj = 20 °C	0.97
Poff	14 W
РТО	14 W
PSB	14 W
PCK	0 W
Annual energy consumption Qce	1381 kWh

## Warmer Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	57 dB(A)	57 dB(A)

EN 14825			
	Low temperature	Medium temperature	
Pdesignh	4.93 kW	4.48 kW	
$\eta_{s}$	242 %	151 %	
Prated	4.93 kW	4.48 kW	
SCOP	6.14	3.84	
Tbiv	2 °C	2 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = +2°C	4.93 kW	4.48 kW	
COP Tj = +2°C	4.05	2.53	
Cdh Tj = +2 °C	0.989	0.992	
Pdh Tj = +7°C	3.10 kW	2.81 kW	
COP Tj = +7°C	5.70	3.08	
Cdh Tj = +7 °C	0.975	0.985	
Pdh Tj = 12°C	3.28 kW	3.16 kW	
COP Tj = 12°C	7.86	5.45	





Cdh Tj = +12 °C	0.967	0.977
Pdh Tj = Tbiv	4.93 kW	4.48 kW
COP Tj = Tbiv	4.05	2.53
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.51 kW	4.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.51
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	60 °C	60 °C
Poff	14 W	14 W
РТО	14 W	14 W
PSB	14 W	14 W
PCK	14 W	14 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	1073 kWh	1557 kWh

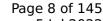
## Colder Climate

# EN 12102-1 Low temperature Medium temperature Sound power level indoor 35 dB(A) 35 dB(A) Sound power level outdoor 57 dB(A) 57 dB(A)





	Low temperature	Medium temperature
Pdesignh	11.78 kW	11.53 kW
$\eta_{s}$	154 %	120 %
Prated	11.78 kW	11.53 kW
SCOP	3.93	3.08
ГЬіν	-7 °C	-7 °C
ГОL	-20 °C	-20 °C
Pdh Tj = -7°C	7.13 kW	6.98 kW
COP Tj = -7°C	3.47	2.73
Cdh Tj = -7 °C	0.993	0.995
Pdh Tj = +2°C	4.51 kW	4.20 kW
COP Tj = +2°C	5.32	4.07
Cdh Tj = +2 °C	0.984	0.987
Pdh Tj = +7°C	3.06 kW	2.84 kW
COP Tj = +7°C	7.24	5.15
Cdh Tj = +7 °C	0.968	0.975
Pdh Tj = 12°C	3.18 kW	3.24 kW
COP Tj = 12°C	8.02	6.47
Cdh Tj = +12 °C	0.966	0.973
Pdh Tj = Tbiv	7.13 kW	6.98 kW





Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh       5.51 kW       4.90 kW         COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh       2.22       1.51         Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh       0.993       0.995         WTOL       60 °C       60 °C         Poff       14 W       14 W         PTO       14 W       14 W         PCK       14 W       14 W         Supplementary Heater: Type of energy input       Electricity       Electricity         Supplementary Heater: PSUP       11.16 kW       10.93 kW         Backup Heater       4.00 kW       4.00 kW         Annual energy consumption Qhe       7398 kWh       9226 kWh         Pdh Tj = -15°C (if TOL<-20°C)       COP Tj = -15°C (if TOL<-20°C)		<u> </u>	<u> </u>
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh  2.22  1.51  Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh  0.993  0.995  WTOL  60 °C  60 °C  Poff  14 W  14 W  PTO  14 W  14 W  PSB  14 W  14 W  PCK  14 W  14 W  Supplementary Heater: Type of energy input  Electricity  Electricity  Supplementary Heater: PSUP  11.16 kW  10.93 kW  Annual energy consumption Qhe  7398 kWh  Pdh Tj = -15°C (if TOL<-20°C)  COP Tj = -15°C (if TOL<-20°C)	COP Tj = Tbiv	3.47	2.70
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.51 kW	4.90 kW
WTOL 60 °C 60 °C  Poff 14 W 14 W 14 W  PTO 14 W 14 W  PSB 14 W 14 W  PCK 14 W 14 W  Supplementary Heater: Type of energy input Electricity Electricity Supplementary Heater: PSUP 11.16 kW 10.93 kW  Backup Heater 4.00 kW 4.00 kW  Annual energy consumption Qhe 7398 kWh 9226 kWh  Pdh Tj = -15°C (if TOL<-20°C)	COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.51
Poff       14 W       14 W         PTO       14 W       14 W         PSB       14 W       14 W         PCK       14 W       14 W         Supplementary Heater: Type of energy input       Electricity       Electricity         Supplementary Heater: PSUP       11.16 kW       10.93 kW         Backup Heater       4.00 kW       4.00 kW         Annual energy consumption Qhe       7398 kWh       9226 kWh         Pdh Tj = -15°C (if TOL<-20°C)	Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.993	0.995
PTO 14 W 14 W  PSB 14 W 14 W  PCK 14 W 14 W  Supplementary Heater: Type of energy input Electricity Electricity  Supplementary Heater: PSUP 11.16 kW 10.93 kW  Backup Heater 4.00 kW 4.00 kW  Annual energy consumption Qhe 7398 kWh 9226 kWh  Pdh Tj = -15°C (if TOL<-20°C)  COP Tj = -15°C (if TOL<-20°C)	WTOL	60 °C	60 °C
PSB 14 W 14 W  PCK 14 W 14 W  Supplementary Heater: Type of energy input Electricity Electricity  Supplementary Heater: PSUP 11.16 kW 10.93 kW  Backup Heater 4.00 kW 4.00 kW  Annual energy consumption Qhe 7398 kWh 9226 kWh  Pdh Tj = -15°C (if TOL<-20°C)  COP Tj = -15°C (if TOL<-20°C)	Poff	14 W	14 W
PCK  14 W  Supplementary Heater: Type of energy input  Electricity  Electricity  Supplementary Heater: PSUP  11.16 kW  10.93 kW  Backup Heater  4.00 kW  4.00 kW  Annual energy consumption Qhe  7398 kWh  9226 kWh  Pdh Tj = -15°C (if TOL<-20°C)  COP Tj = -15°C (if TOL<-20°C)	РТО	14 W	14 W
Supplementary Heater: Type of energy input  Electricity  Electricity  11.16 kW  10.93 kW  4.00 kW  4.00 kW  Annual energy consumption Qhe  7398 kWh  Pdh Tj = -15°C (if TOL<-20°C)  COP Tj = -15°C (if TOL<-20°C)	PSB	14 W	14 W
Supplementary Heater: PSUP  11.16 kW  10.93 kW  4.00 kW  4.00 kW  Annual energy consumption Qhe  7398 kWh  9226 kWh  Pdh Tj = -15°C (if TOL<-20°C)  COP Tj = -15°C (if TOL<-20°C)	PCK	14 W	14 W
Backup Heater 4.00 kW 4.00 kW  Annual energy consumption Qhe 7398 kWh 9226 kWh  Pdh Tj = -15°C (if TOL<-20°C)  COP Tj = -15°C (if TOL<-20°C)	Supplementary Heater: Type of energy input	Electricity	Electricity
Annual energy consumption Qhe 7398 kWh 9226 kWh  Pdh Tj = $-15^{\circ}$ C (if TOL< $-20^{\circ}$ C)  COP Tj = $-15^{\circ}$ C (if TOL< $-20^{\circ}$ C)	Supplementary Heater: PSUP	11.16 kW	10.93 kW
Pdh Tj = -15°C (if TOL<-20°C)  COP Tj = -15°C (if TOL<-20°C)	Backup Heater	4.00 kW	4.00 kW
COP Tj = -15°C (if TOL<-20°C)	Annual energy consumption Qhe	7398 kWh	9226 kWh
	Pdh Tj = -15°C (if TOL<-20°C)		
Cdh Tj = -15 °C	COP Tj = -15°C (if TOL $<$ -20°C)		
	Cdh Tj = -15 °C		

## Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	57 dB(A)	57 dB(A)



#### EN 14825

	Low temperature	Medium temperature
Pdesignh	8.37 kW	7.62 kW
$\eta_{s}$	195 %	140 %
Prated	8.37 kW	7.62 kW
SCOP	4.95	3.57
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	7.40 kW	6.74 kW
COP Tj = -7°C	3.10	2.29
Cdh Tj = -7 °C	0.994	0.995
Pdh Tj = +2°C	4.54 kW	4.22 kW
COP Tj = +2°C	4.80	3.51
Cdh Tj = +2 °C	0.986	0.989
Pdh Tj = +7°C	2.94 kW	2.74 kW
COP Tj = +7°C	6.61	4.36
Cdh Tj = +7 °C	0.969	0.978
Pdh Tj = 12°C	3.16 kW	3.28 kW
COP Tj = 12°C	8.15	6.50
Cdh Tj = +12 °C	0.965	0.973
Pdh Tj = Tbiv	7.40 kW	6.74 kW



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COP Tj = Tbiv	3.10	2.29
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.51 kW	4.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.51
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.994	0.995
WTOL	60 °C	60 °C
Poff	14 W	14 W
РТО	14 W	14 W
PSB	14 W	14 W
PCK	14 W	14 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.86 kW	2.72 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	3490 kWh	4405 kWh

## Model: NIMBUS PLUS 80 M-T NET R32

Configure model		
Model name	NIMBUS PLUS 80 M-T NET R32	
Application	Heating (medium temp)	
Units	Indoor + Outdoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	Yes	
Cooling mode application (optional)	+7°C/12°C	

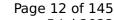
General Data		
Power supply	3x400V 50Hz	

## Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8.00 kW	5.80 kW
El input	1.67 kW	1.97 kW
СОР	4.80	2.95

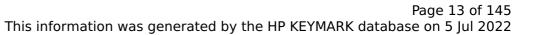
EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

## Cooling





EN 14511-2			
+7°C/+12°C +18°C/+23°C			
El input	2.26 kW	1.49 kW	
Cooling capacity	7	7.00	
EER	3.10	4.70	





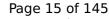
	+7°C/+12°C
Pdesignc	7 kW
SEER	4.64
Pdc Tj = 35°C	7 kW
EER Tj = 35°C	3.1
Pdc Tj = 30°C	5.17 kW
EER Tj = 30°C	4.13
Cdc Tj = 30 °C	0.99
Pdc Tj = 25°C	3.32 kW
EER Tj = 25°C	4.89
Cdc Tj = 25 °C	0.98
Pdc Tj = 20°C	3.19 kW
EER Tj = 20°C	6.85
Cdc Tj = 20 °C	0.97
Poff	14 W
РТО	14 W
PSB	14 W
PCK	o w
Annual energy consumption Qce	1381 kWh

## Warmer Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	57 dB(A)	57 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	4.93 kW	4.48 kW
$\eta_{s}$	242 %	151 %
Prated	4.93 kW	4.48 kW
SCOP	6.14	3.84
Tbiv	2 °C	2 °C
TOL	-20 °C	-20 °C
Pdh Tj = +2°C	4.93 kW	4.48 kW
COP Tj = +2°C	4.05	2.53
Cdh Tj = +2 °C	0.989	0.992
Pdh Tj = +7°C	3.10 kW	2.81 kW
COP Tj = +7°C	5.70	3.08
Cdh Tj = +7 °C	0.975	0.985
Pdh Tj = 12°C	3.28 kW	3.16 kW
COP Tj = 12°C	7.86	5.45





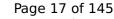
Cdh Tj = +12 °C	0.967	0.977
Pdh Tj = Tbiv	4.93 kW	4.48 kW
COP Tj = Tbiv	4.05	2.53
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.51 kW	4.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.51
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	14 W	14 W
PSB	14 W	14 W
PCK	14 W	14 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	1073 kWh	1557 kWh

## Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	57 dB(A)	57 dB(A)



	Low temperature	Medium temperature
Pdesignh	11.78 kW	11.53 kW
$\eta_{s}$	154 %	120 %
Prated	11.78 kW	11.53 kW
SCOP	3.93	3.08
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	7.13 kW	6.98 kW
COP Tj = -7°C	3.47	2.73
Cdh Tj = -7 °C	0.993	0.995
Pdh Tj = +2°C	4.51 kW	4.20 kW
COP Tj = +2°C	5.32	4.07
Cdh Tj = +2 °C	0.984	0.987
Pdh Tj = +7°C	3.06 kW	2.84 kW
$COP Tj = +7^{\circ}C$	7.24	5.15
Cdh Tj = +7 °C	0.968	0.975
Pdh Tj = 12°C	3.18 kW	3.24 kW
COP Tj = 12°C	8.02	6.47
Cdh Tj = +12 °C	0.966	0.973
Pdh Tj = Tbiv	7.13 kW	6.98 kW

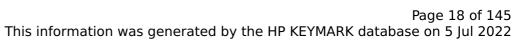




COP Tj = Tbiv	3.47	2.70
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.51 kW	4.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.51
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.993	0.995
WTOL	60 °C	60 °C
Poff	14 W	14 W
РТО	14 W	14 W
PSB	14 W	14 W
PCK	14 W	14 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	11.16 kW	10.93 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	7398 kWh	9226 kWh

## **Average Climate**

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	57 dB(A)	57 dB(A)





	Low temperature	Medium temperature
Pdesignh	8.37 kW	7.62 kW
$\eta_{s}$	195 %	140 %
Prated	8.37 kW	7.62 kW
SCOP	4.95	3.57
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	7.40 kW	6.74 kW
COP Tj = -7°C	3.10	2.29
Cdh Tj = -7 °C	0.994	0.995
Pdh Tj = +2°C	4.54 kW	4.22 kW
COP Tj = +2°C	4.80	3.51
Cdh Tj = +2 °C	0.986	0.989
Pdh Tj = +7°C	2.94 kW	2.74 kW
COP Tj = +7°C	6.61	4.36
Cdh Tj = +7 °C	0.969	0.978
Pdh Tj = 12°C	3.16 kW	3.28 kW
COP Tj = 12°C	8.15	6.50
Cdh Tj = +12 °C	0.965	0.973
Pdh Tj = Tbiv	7.40 kW	6.74 kW
COP Tj = Tbiv	3.10	2.29



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	•	
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.51 kW	4.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.51
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.994	0.995
WTOL	60 °C	60 °C
Poff	14 W	14 W
РТО	14 W	14 W
PSB	14 W	14 W
PCK	14 W	14 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.86 kW	2.72 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	3490 kWh	4405 kWh

## **Model: NIMBUS POCKET 80 M NET R32**

Configure model		
Model name	NIMBUS POCKET 80 M NET R32	
Application	Heating (medium temp)	
Units	Indoor + Outdoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	Yes	
Cooling mode application (optional)	+7°C/12°C	

General Data		
Power supply	1x230V 50Hz	

## Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8.00 kW	5.80 kW
El input	1.67 kW	1.97 kW
СОР	4.80	2.95

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

## Cooling





EN 14511-2			
+7°C/+12°C +18°C/+23°C			
El input	2.26 kW	1.49 kW	
Cooling capacity	7	7.00	
EER	3.10	4.70	





	+7°C/+12°C
Pdesignc	7 kW
SEER	4.64
Pdc Tj = 35°C	7 kW
EER Tj = 35°C	3.1
Pdc Tj = 30°C	5.17 kW
EER Tj = 30°C	4.13
Cdc Tj = 30 °C	0.99
Pdc Tj = 25°C	3.32 kW
EER Tj = 25°C	4.89
Cdc Tj = 25 °C	0.98
Pdc Tj = 20°C	3.19 kW
EER Tj = 20°C	6.85
Cdc Tj = 20 °C	0.97
Poff	14 W
РТО	14 W
PSB	14 W
РСК	o w
Annual energy consumption Qce	1381 kWh

## Warmer Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	57 dB(A)	57 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	4.93 kW	4.48 kW
$\eta_{s}$	242 %	151 %
Prated	4.93 kW	4.48 kW
SCOP	6.14	3.84
Tbiv	2 °C	2 °C
TOL	-20 °C	-20 °C
Pdh Tj = +2°C	4.93 kW	4.48 kW
COP Tj = +2°C	4.05	2.53
Cdh Tj = +2 °C	0.989	0.992
Pdh Tj = +7°C	3.10 kW	2.81 kW
COP Tj = +7°C	5.70	3.08
Cdh Tj = +7 °C	0.975	0.985
Pdh Tj = 12°C	3.28 kW	3.16 kW
COP Tj = 12°C	7.86	5.45





Cdh Tj = +12 °C	0.967	0.977
Pdh Tj = Tbiv	4.93 kW	4.48 kW
COP Tj = Tbiv	4.05	2.53
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.51 kW	4.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.51
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	14 W	14 W
PSB	14 W	14 W
PCK	14 W	14 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	1073 kWh	1557 kWh

## Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	57 dB(A)	57 dB(A)



	Low temperature	Medium temperature
Pdesignh	11.78 kW	11.53 kW
$\eta_{s}$	154 %	120 %
Prated	11.78 kW	11.53 kW
SCOP	3.93	3.08
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	7.13 kW	6.98 kW
COP Tj = -7°C	3.47	2.73
Cdh Tj = -7 °C	0.993	0.995
Pdh Tj = +2°C	4.51 kW	4.20 kW
COP Tj = +2°C	5.32	4.07
Cdh Tj = +2 °C	0.984	0.987
Pdh Tj = +7°C	3.06 kW	2.84 kW
COP Tj = +7°C	7.24	5.15
Cdh Tj = +7 °C	0.968	0.975
Pdh Tj = 12°C	3.18 kW	3.24 kW
COP Tj = 12°C	8.02	6.47
Cdh Tj = +12 °C	0.966	0.973
Pdh Tj = Tbiv	7.13 kW	6.98 kW

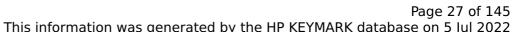




COP Tj = Tbiv	3.47	2.70
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.51 kW	4.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.51
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.993	0.995
WTOL	60 °C	60 °C
Poff	14 W	14 W
РТО	14 W	14 W
PSB	14 W	14 W
PCK	14 W	14 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	11.16 kW	10.93 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	7398 kWh	9226 kWh

## **Average Climate**

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	57 dB(A)	57 dB(A)





	Low temperature	Medium temperature
Pdesignh	8.37 kW	7.62 kW
$\eta_{s}$	195 %	140 %
Prated	8.37 kW	7.62 kW
SCOP	4.95	3.57
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	7.40 kW	6.74 kW
COP Tj = -7°C	3.10	2.29
Cdh Tj = -7 °C	0.994	0.995
Pdh Tj = +2°C	4.54 kW	4.22 kW
COP Tj = +2°C	4.80	3.51
Cdh Tj = +2 °C	0.986	0.989
Pdh Tj = +7°C	2.94 kW	2.74 kW
COP Tj = +7°C	6.61	4.36
Cdh Tj = +7 °C	0.969	0.978
Pdh Tj = 12°C	3.16 kW	3.28 kW
COP Tj = 12°C	8.15	6.50
Cdh Tj = +12 °C	0.965	0.973
Pdh Tj = Tbiv	7.40 kW	6.74 kW
COP Tj = Tbiv	3.10	2.29



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Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.51 kW	4.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.51
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.994	0.995
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	14 W	14 W
PSB	14 W	14 W
PCK	14 W	14 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.86 kW	2.72 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	3490 kWh	4405 kWh

## **Model: NIMBUS POCKET 80 M-T NET R32**

Configure model		
Model name	NIMBUS POCKET 80 M-T NET R32	
Application	Heating (medium temp)	
Units	Indoor + Outdoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	Yes	
Cooling mode application (optional)	+7°C/12°C	

General Data		
Power supply 3x400V 50Hz		

## Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	8.00 kW	5.80 kW	
El input	1.67 kW	1.97 kW	
СОР	4.80	2.95	

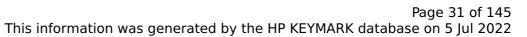
EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

## Cooling





EN 14511-2		
	+7°C/+12°C	+18°C/+23°C
El input	2.26 kW	1.49 kW
Cooling capacity	7	7.00
EER	3.10	4.70





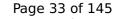
	+7°C/+12°C
Pdesignc	7 kW
SEER	4.64
Pdc Tj = 35°C	7 kW
EER Tj = 35°C	3.1
Pdc Tj = 30°C	5.17 kW
EER Tj = 30°C	4.13
Cdc Tj = 30 °C	0.99
Pdc Tj = 25°C	3.32 kW
EER Tj = 25°C	4.89
Cdc Tj = 25 °C	0.98
Pdc Tj = 20°C	3.19 kW
EER Tj = 20°C	6.85
Cdc Tj = 20 °C	0.97
Poff	14 W
PTO	14 W
PSB	14 W
PCK	o w
Annual energy consumption Qce	1381 kWh

## Warmer Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	57 dB(A)	57 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	4.93 kW	4.48 kW
$\eta_{s}$	242 %	151 %
Prated	4.93 kW	4.48 kW
SCOP	6.14	3.84
Tbiv	2 °C	2 °C
TOL	-20 °C	-20 °C
Pdh Tj = +2°C	4.93 kW	4.48 kW
COP Tj = +2°C	4.05	2.53
Cdh Tj = +2 °C	0.989	0.992
Pdh Tj = +7°C	3.10 kW	2.81 kW
COP Tj = +7°C	5.70	3.08
Cdh Tj = +7 °C	0.975	0.985
Pdh Tj = 12°C	3.28 kW	3.16 kW
COP Tj = 12°C	7.86	5.45

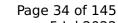




Cdh Tj = +12 °C	0.967	0.977
Pdh Tj = Tbiv	4.93 kW	4.48 kW
COP Tj = Tbiv	4.05	2.53
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.51 kW	4.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.51
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	14 W	14 W
PSB	14 W	14 W
PCK	14 W	14 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	1073 kWh	1557 kWh

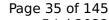
## Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	57 dB(A)	57 dB(A)





	Low temperature	Medium temperature
Pdesignh	11.78 kW	11.53 kW
$\eta_{s}$	154 %	120 %
Prated	11.78 kW	11.53 kW
SCOP	3.93	3.08
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	7.13 kW	6.98 kW
COP Tj = -7°C	3.47	2.73
Cdh Tj = -7 °C	0.993	0.995
Pdh Tj = +2°C	4.51 kW	4.20 kW
COP Tj = +2°C	5.32	4.07
Cdh Tj = +2 °C	0.984	0.987
Pdh Tj = +7°C	3.06 kW	2.84 kW
COP Tj = +7°C	7.24	5.15
Cdh Tj = +7 °C	0.968	0.975
Pdh Tj = 12°C	3.18 kW	3.24 kW
COP Tj = 12°C	8.02	6.47
Cdh Tj = +12 °C	0.966	0.973
Pdh Tj = Tbiv	7.13 kW	6.98 kW





COP Tj = Tbiv	3.47	2.70
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.51 kW	4.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.51
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.993	0.995
WTOL	60 °C	60 °C
Poff	14 W	14 W
РТО	14 W	14 W
PSB	14 W	14 W
PCK	14 W	14 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	11.16 kW	10.93 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	7398 kWh	9226 kWh

## **Average Climate**

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	57 dB(A)	57 dB(A)





Low temperature Medium		
Pdesignh	8.37 kW	7.62 kW
$\eta_{s}$	195 %	140 %
Prated	8.37 kW	7.62 kW
SCOP	4.95	3.57
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	7.40 kW	6.74 kW
COP Tj = -7°C	3.10	2.29
Cdh Tj = -7 °C	0.994	0.995
Pdh Tj = +2°C	4.54 kW	4.22 kW
COP Tj = +2°C	4.80	3.51
Cdh Tj = +2 °C	0.986	0.989
Pdh Tj = +7°C	2.94 kW	2.74 kW
COP Tj = +7°C	6.61	4.36
Cdh Tj = +7 °C	0.969	0.978
Pdh Tj = 12°C	3.16 kW	3.28 kW
COP Tj = 12°C	8.15	6.50
Cdh Tj = +12 °C	0.965	0.973
Pdh Tj = Tbiv	7.40 kW	6.74 kW
COP Tj = Tbiv	3.10	2.29



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Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.51 kW	4.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.51
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.994	0.995
WTOL	60 °C	60 °C
Poff	14 W	14 W
РТО	14 W	14 W
PSB	14 W	14 W
PCK	14 W	14 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.86 kW	2.72 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	3490 kWh	4405 kWh

# **Model: ARIANEXT PLUS 80 M LINK R32**

Configure model		
Model name	ARIANEXT PLUS 80 M LINK R32	
Application Heating (medium temp)		
Units	Indoor + Outdoor	
Climate Zone	ne Colder Climate + Warmer Climate	
Reversibility	ility Yes	
Cooling mode application (optional)	+7°C/12°C	

General Data		
Power supply	1x230V 50Hz	

# Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8.00 kW	5.80 kW
El input	1.67 kW	1.97 kW
СОР	4.80	2.95

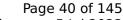
EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

# Cooling





EN 14511-2		
+7°C/+12°C +18°C/+23°C		
El input	2.26 kW	1.49 kW
Cooling capacity	7	7.00
EER	3.10	4.70





	+7°C/+12°C
Pdesignc	7 kW
SEER	4.64
Pdc Tj = 35°C	7 kW
EER Tj = 35°C	3.1
Pdc Tj = 30°C	5.17 kW
EER Tj = 30°C	4.13
Cdc Tj = 30 °C	0.99
Pdc Tj = 25°C	3.32 kW
EER Tj = 25°C	4.89
Cdc Tj = 25 °C	0.98
Pdc Tj = 20°C	3.19 kW
EER Tj = 20°C	6.85
Cdc Tj = 20 °C	0.97
Poff	14 W
PTO	14 W
PSB	14 W
PCK	o w
Annual energy consumption Qce	1381 kWh

# Warmer Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	57 dB(A)	57 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	4.93 kW	4.48 kW
$\eta_{s}$	242 %	151 %
Prated	4.93 kW	4.48 kW
SCOP	6.14	3.84
Tbiv	2 °C	2 °C
TOL	-20 °C	-20 °C
Pdh Tj = +2°C	4.93 kW	4.48 kW
COP Tj = +2°C	4.05	2.53
Cdh Tj = +2 °C	0.989	0.992
Pdh Tj = +7°C	3.10 kW	2.81 kW
COP Tj = +7°C	5.70	3.08
Cdh Tj = +7 °C	0.975	0.985
Pdh Tj = 12°C	3.28 kW	3.16 kW
COP Tj = 12°C	7.86	5.45





Cdh Tj = +12 °C	0.967	0.977
Pdh Tj = Tbiv	4.93 kW	4.48 kW
COP Tj = Tbiv	4.05	2.53
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.51 kW	4.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.51
WTOL	60 °C	60 °C
Poff	14 W	14 W
РТО	14 W	14 W
PSB	14 W	14 W
PCK	14 W	14 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	1073 kWh	1557 kWh

# Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	57 dB(A)	57 dB(A)



	Low temperature	Medium temperature
Pdesignh	11.78 kW	11.53 kW
$\eta_{s}$	154 %	120 %
Prated	11.78 kW	11.53 kW
SCOP	3.93	3.08
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	7.13 kW	6.98 kW
COP Tj = -7°C	3.47	2.73
Cdh Tj = -7 °C	0.993	0.995
Pdh Tj = +2°C	4.51 kW	4.20 kW
COP Tj = +2°C	5.32	4.07
Cdh Tj = +2 °C	0.984	0.987
Pdh Tj = +7°C	3.06 kW	2.84 kW
COP Tj = +7°C	7.24	5.15
Cdh Tj = +7 °C	0.968	0.975
Pdh Tj = 12°C	3.18 kW	3.24 kW
COP Tj = 12°C	8.02	6.47
Cdh Tj = +12 °C	0.966	0.973
Pdh Tj = Tbiv	7.13 kW	6.98 kW

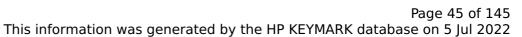




COP Tj = Tbiv	3.47	2.70
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.51 kW	4.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.51
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.993	0.995
WTOL	60 °C	60 °C
Poff	14 W	14 W
РТО	14 W	14 W
PSB	14 W	14 W
PCK	14 W	14 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	11.16 kW	10.93 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	7398 kWh	9226 kWh

# Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	57 dB(A)	57 dB(A)





	Low temperature	Medium temperature
Pdesignh	8.37 kW	7.62 kW
$\eta_{S}$	195 %	140 %
Prated	8.37 kW	7.62 kW
SCOP	4.95	3.57
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	7.40 kW	6.74 kW
COP Tj = -7°C	3.10	2.29
Cdh Tj = -7 °C	0.994	0.995
Pdh Tj = $+2$ °C	4.54 kW	4.22 kW
COP Tj = +2°C	4.80	3.51
Cdh Tj = +2 °C	0.986	0.989
Pdh Tj = $+7^{\circ}$ C	2.94 kW	2.74 kW
COP Tj = +7°C	6.61	4.36
Cdh Tj = +7 °C	0.969	0.978
Pdh Tj = 12°C	3.16 kW	3.28 kW
COP Tj = 12°C	8.15	6.50
Cdh Tj = +12 °C	0.965	0.973
Pdh Tj = Tbiv	7.40 kW	6.74 kW
COP Tj = Tbiv	3.10	2.29



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

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.51 kW	4.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.51
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.994	0.995
WTOL	60 °C	60 °C
Poff	14 W	14 W
РТО	14 W	14 W
PSB	14 W	14 W
PCK	14 W	14 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.86 kW	2.72 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	3490 kWh	4405 kWh

# **Model: ARIANEXT PLUS 80 M-T LINK R32**

Configure model	
Model name	ARIANEXT PLUS 80 M-T LINK R32
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C

General Data		
Power supply	Power supply 3x400V 50Hz	

# Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8.00 kW	5.80 kW
El input	1.67 kW	1.97 kW
СОР	4.80	2.95

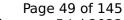
EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

# Cooling





EN 14511-2		
+7°C/+12°C +18°C/+23°C		
El input	2.26 kW	1.49 kW
Cooling capacity	7	7.00
EER	3.10	4.70





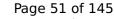
	+7°C/+12°C
Pdesignc	7 kW
SEER	4.64
Pdc Tj = 35°C	7 kW
EER Tj = 35°C	3.1
Pdc Tj = 30°C	5.17 kW
EER Tj = 30°C	4.13
Cdc Tj = 30 °C	0.99
Pdc Tj = 25°C	3.32 kW
EER Tj = 25°C	4.89
Cdc Tj = 25 °C	0.98
Pdc Tj = 20°C	3.19 kW
EER Tj = 20°C	6.85
Cdc Tj = 20 °C	0.97
Poff	14 W
PTO	14 W
PSB	14 W
PCK	0 W
Annual energy consumption Qce	1381 kWh

# Warmer Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	57 dB(A)	57 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	4.93 kW	4.48 kW
$\eta_{s}$	242 %	151 %
Prated	4.93 kW	4.48 kW
SCOP	6.14	3.84
Tbiv	2 °C	2 °C
TOL	-20 °C	-20 °C
Pdh Tj = +2°C	4.93 kW	4.48 kW
COP Tj = +2°C	4.05	2.53
Cdh Tj = +2 °C	0.989	0.992
Pdh Tj = +7°C	3.10 kW	2.81 kW
COP Tj = +7°C	5.70	3.08
Cdh Tj = +7 °C	0.975	0.985
Pdh Tj = 12°C	3.28 kW	3.16 kW
COP Tj = 12°C	7.86	5.45

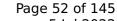




Cdh Tj = +12 °C	0.967	0.977
Pdh Tj = Tbiv	4.93 kW	4.48 kW
COP Tj = Tbiv	4.05	2.53
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.51 kW	4.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.51
WTOL	60 °C	60 °C
Poff	14 W	14 W
РТО	14 W	14 W
PSB	14 W	14 W
PCK	14 W	14 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	1073 kWh	1557 kWh

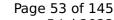
# Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	57 dB(A)	57 dB(A)





	Low temperature	Medium temperature
Pdesignh	11.78 kW	11.53 kW
$\eta_{s}$	154 %	120 %
Prated	11.78 kW	11.53 kW
SCOP	3.93	3.08
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	7.13 kW	6.98 kW
COP Tj = -7°C	3.47	2.73
Cdh Tj = -7 °C	0.993	0.995
Pdh Tj = +2°C	4.51 kW	4.20 kW
COP Tj = +2°C	5.32	4.07
Cdh Tj = +2 °C	0.984	0.987
Pdh Tj = +7°C	3.06 kW	2.84 kW
COP Tj = +7°C	7.24	5.15
Cdh Tj = +7 °C	0.968	0.975
Pdh Tj = 12°C	3.18 kW	3.24 kW
COP Tj = 12°C	8.02	6.47
Cdh Tj = +12 °C	0.966	0.973
Pdh Tj = Tbiv	7.13 kW	6.98 kW





COP Tj = Tbiv	3.47	2.70
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.51 kW	4.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.51
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.993	0.995
WTOL	60 °C	60 °C
Poff	14 W	14 W
РТО	14 W	14 W
PSB	14 W	14 W
PCK	14 W	14 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	11.16 kW	10.93 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	7398 kWh	9226 kWh

# Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	57 dB(A)	57 dB(A)





	Low temperature	Medium temperature
Pdesignh	8.37 kW	7.62 kW
$\eta_{s}$	195 %	140 %
Prated	8.37 kW	7.62 kW
SCOP	4.95	3.57
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	7.40 kW	6.74 kW
COP Tj = -7°C	3.10	2.29
Cdh Tj = -7 °C	0.994	0.995
Pdh Tj = +2°C	4.54 kW	4.22 kW
$COPTj = +2^{\circ}C$	4.80	3.51
Cdh Tj = +2 °C	0.986	0.989
Pdh Tj = +7°C	2.94 kW	2.74 kW
$COP Tj = +7^{\circ}C$	6.61	4.36
Cdh Tj = +7 °C	0.969	0.978
Pdh Tj = 12°C	3.16 kW	3.28 kW
COP Tj = 12°C	8.15	6.50
Cdh Tj = +12 °C	0.965	0.973
Pdh Tj = Tbiv	7.40 kW	6.74 kW
COP Tj = Tbiv	3.10	2.29



		<u> </u>
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.51 kW	4.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.51
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.994	0.995
WTOL	60 °C	60 °C
Poff	14 W	14 W
РТО	14 W	14 W
PSB	14 W	14 W
PCK	14 W	14 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.86 kW	2.72 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	3490 kWh	4405 kWh



# **Model: ARIANEXT LITE 80 M LINK R32**

Configure model		
Model name	ARIANEXT LITE 80 M LINK R32	
Application	Heating (medium temp)	
Units	Indoor + Outdoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	Yes	
Cooling mode application (optional)	+7°C/12°C	

General Data		
Power supply	1x230V 50Hz	

# Heating

COP

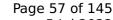
4.80

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8.00 kW	5.80 kW
El input	1.67 kW	1.97 kW

2.95

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

# Cooling





EN 14511-2		
+7°C/+12°C +18°C/+23°C		
El input	2.26 kW	1.49 kW
Cooling capacity	7	7.00
EER	3.10	4.70





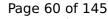
	+7°C/+12°C
Pdesignc	7 kW
SEER	4.64
Pdc Tj = 35°C	7 kW
EER Tj = 35°C	3.1
Pdc Tj = 30°C	5.17 kW
EER Tj = 30°C	4.13
Cdc Tj = 30 °C	0.99
Pdc Tj = 25°C	3.32 kW
EER Tj = 25°C	4.89
Cdc Tj = 25 °C	0.98
Pdc Tj = 20°C	3.19 kW
EER Tj = 20°C	6.85
Cdc Tj = 20 °C	0.97
Poff	14 W
РТО	14 W
PSB	14 W
РСК	o w
Annual energy consumption Qce	1381 kWh

# Warmer Climate



# EN 12102-1 Low temperature Medium temperature Sound power level indoor 15 dB(A) 15 dB(A) Sound power level outdoor 57 dB(A) 57 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	4.93 kW	4.48 kW
$\eta_{s}$	242 %	151 %
Prated	4.93 kW	4.48 kW
SCOP	6.14	3.84
Tbiv	2 °C	2 °C
TOL	-20 °C	-20 °C
Pdh Tj = +2°C	4.93 kW	4.48 kW
COP Tj = +2°C	4.05	2.53
Cdh Tj = +2 °C	0.989	0.992
Pdh Tj = +7°C	3.10 kW	2.81 kW
COP Tj = +7°C	5.70	3.08
Cdh Tj = +7 °C	0.975	0.985
Pdh Tj = 12°C	3.28 kW	3.16 kW
COP Tj = 12°C	7.86	5.45

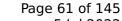




	0.977 4.48 kW 2.53 4.90 kW 1.51 60 °C
COP Tj = Tbiv  4.05  Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh  5.51 kW  COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh  2.22	2.53 4.90 kW 1.51
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh 5.51 kW  COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh 2.22	4.90 kW 1.51
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh 2.22	1.51
WTOL 60 °C	60 °C
	00 C
Poff 14 W	14 W
PTO 14 W	14 W
PSB 14 W	14 W
PCK 14 W	14 W
Supplementary Heater: Type of energy input Electricity	Electricity
Supplementary Heater: PSUP 0.00 kW	0.00 kW
Backup Heater 4.00 kW	4.00 kW
Annual energy consumption Qhe 1073 kWh	1557 kWh

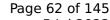
# Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	57 dB(A)	57 dB(A)





	Low temperature	Medium temperature
Pdesignh	11.78 kW	11.53 kW
$\eta_{s}$	154 %	120 %
Prated	11.78 kW	11.53 kW
SCOP	3.93	3.08
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	7.13 kW	6.98 kW
COP Tj = -7°C	3.47	2.73
Cdh Tj = -7 °C	0.993	0.995
Pdh Tj = +2°C	4.51 kW	4.20 kW
COP Tj = +2°C	5.32	4.07
Cdh Tj = +2 °C	0.984	0.987
Pdh Tj = +7°C	3.06 kW	2.84 kW
COP Tj = +7°C	7.24	5.15
Cdh Tj = +7 °C	0.968	0.975
Pdh Tj = 12°C	3.18 kW	3.24 kW
COP Tj = 12°C	8.02	6.47
Cdh Tj = +12 °C	0.966	0.973
Pdh Tj = Tbiv	7.13 kW	6.98 kW





COP Tj = Tbiv	3.47	2.70
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.51 kW	4.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.51
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.993	0.995
WTOL	60 °C	60 °C
Poff	14 W	14 W
РТО	14 W	14 W
PSB	14 W	14 W
PCK	14 W	14 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	11.16 kW	10.93 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	7398 kWh	9226 kWh

# Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	57 dB(A)	57 dB(A)





	Low temperature	Medium temperature
Pdesignh	8.37 kW	7.62 kW
$\eta_{s}$	195 %	140 %
Prated	8.37 kW	7.62 kW
SCOP	4.95	3.57
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	7.40 kW	6.74 kW
COP Tj = -7°C	3.10	2.29
Cdh Tj = -7 °C	0.994	0.995
Pdh Tj = +2°C	4.54 kW	4.22 kW
COP Tj = +2°C	4.80	3.51
Cdh Tj = +2 °C	0.986	0.989
Pdh Tj = +7°C	2.94 kW	2.74 kW
COP Tj = +7°C	6.61	4.36
Cdh Tj = +7 °C	0.969	0.978
Pdh Tj = 12°C	3.16 kW	3.28 kW
COP Tj = 12°C	8.15	6.50
Cdh Tj = +12 °C	0.965	0.973
Pdh Tj = Tbiv	7.40 kW	6.74 kW
COP Tj = Tbiv	3.10	2.29



s in simulation was gene	nated by the in Rein	ATTIC GOLDONS ON 5 Jul 2022
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.51 kW	4.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.51
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.994	0.995
WTOL	60 °C	60 °C
Poff	14 W	14 W
РТО	14 W	14 W
PSB	14 W	14 W
PCK	14 W	14 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.86 kW	2.72 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	3490 kWh	4405 kWh

# **Model: ARIANEXT LITE 80 M-T LINK R32**

Configure model		
Model name	ARIANEXT LITE 80 M-T LINK R32	
Application	Heating (medium temp)	
Units	Indoor + Outdoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	Yes	
Cooling mode application (optional)	+7°C/12°C	

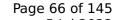
General Data		
Power supply 3x400V 50Hz		

# Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8.00 kW	5.80 kW
El input	1.67 kW	1.97 kW
СОР	4.80	2.95

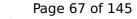
EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

# Cooling





EN 14511-2		
+7°C/+12°C +18°C/+23°C		
El input	2.26 kW	1.49 kW
Cooling capacity	7	7.00
EER	3.10	4.70





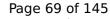
	+7°C/+12°C
Pdesignc	7 kW
SEER	4.64
Pdc Tj = 35°C	7 kW
EER Tj = 35°C	3.1
Pdc Tj = 30°C	5.17 kW
EER Tj = 30°C	4.13
Cdc Tj = 30 °C	0.99
Pdc Tj = 25°C	3.32 kW
EER Tj = 25°C	4.89
Cdc Tj = 25 °C	0.98
Pdc Tj = 20°C	3.19 kW
EER Tj = 20°C	6.85
Cdc Tj = 20 °C	0.97
Poff	14 W
РТО	14 W
PSB	14 W
PCK	0 W
Annual energy consumption Qce	1381 kWh

# Warmer Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	57 dB(A)	57 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	4.93 kW	4.48 kW
$\eta_{s}$	242 %	151 %
Prated	4.93 kW	4.48 kW
SCOP	6.14	3.84
Tbiv	2 °C	2 °C
TOL	-20 °C	-20 °C
Pdh Tj = +2°C	4.93 kW	4.48 kW
COP Tj = +2°C	4.05	2.53
Cdh Tj = +2 °C	0.989	0.992
Pdh Tj = +7°C	3.10 kW	2.81 kW
COP Tj = +7°C	5.70	3.08
Cdh Tj = +7 °C	0.975	0.985
Pdh Tj = 12°C	3.28 kW	3.16 kW
COP Tj = 12°C	7.86	5.45

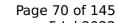




Cdh Tj = +12 °C	0.967	0.977
Pdh Tj = Tbiv	4.93 kW	4.48 kW
COP Tj = Tbiv	4.05	2.53
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.51 kW	4.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.51
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	14 W	14 W
PSB	14 W	14 W
PCK	14 W	14 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	1073 kWh	1557 kWh

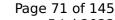
#### Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	57 dB(A)	57 dB(A)





	Low temperature	Medium temperature
Pdesignh	11.78 kW	11.53 kW
$\eta_{s}$	154 %	120 %
Prated	11.78 kW	11.53 kW
SCOP	3.93	3.08
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	7.13 kW	6.98 kW
COP Tj = -7°C	3.47	2.73
Cdh Tj = -7 °C	0.993	0.995
Pdh Tj = +2°C	4.51 kW	4.20 kW
COP Tj = +2°C	5.32	4.07
Cdh Tj = +2 °C	0.984	0.987
Pdh Tj = +7°C	3.06 kW	2.84 kW
COP Tj = +7°C	7.24	5.15
Cdh Tj = +7 °C	0.968	0.975
Pdh Tj = 12°C	3.18 kW	3.24 kW
COP Tj = 12°C	8.02	6.47
Cdh Tj = +12 °C	0.966	0.973
Pdh Tj = Tbiv	7.13 kW	6.98 kW





COP Tj = Tbiv	3.47	2.70
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.51 kW	4.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.51
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.993	0.995
WTOL	60 °C	60 °C
Poff	14 W	14 W
РТО	14 W	14 W
PSB	14 W	14 W
PCK	14 W	14 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	11.16 kW	10.93 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	7398 kWh	9226 kWh

# Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	57 dB(A)	57 dB(A)





This information was gene	This information was generated by the HP KEYMARK database on 5 Jul 2022		
	Low temperature	Medium temperature	

	3	•
	Low temperature	Medium temperature
Pdesignh	8.37 kW	7.62 kW
$\eta_{s}$	195 %	140 %
Prated	8.37 kW	7.62 kW
SCOP	4.95	3.57
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	7.40 kW	6.74 kW
COP Tj = -7°C	3.10	2.29
Cdh Tj = -7 °C	0.994	0.995
Pdh Tj = +2°C	4.54 kW	4.22 kW
COP Tj = +2°C	4.80	3.51
Cdh Tj = +2 °C	0.986	0.989
Pdh Tj = $+7^{\circ}$ C	2.94 kW	2.74 kW
COP Tj = +7°C	6.61	4.36
Cdh Tj = +7 °C	0.969	0.978
Pdh Tj = 12°C	3.16 kW	3.28 kW
COP Tj = 12°C	8.15	6.50
Cdh Tj = +12 °C	0.965	0.973
Pdh Tj = Tbiv	7.40 kW	6.74 kW
COP Tj = Tbiv	3.10	2.29



# $$\operatorname{Page}\ 73$$ of 145 This information was generated by the HP KEYMARK database on 5 Jul 2022

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.51 kW	4.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.51
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.994	0.995
WTOL	60 °C	60 °C
Poff	14 W	14 W
РТО	14 W	14 W
PSB	14 W	14 W
PCK	14 W	14 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.86 kW	2.72 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	3490 kWh	4405 kWh



### **Model: AEROTOP MONO 08.2 M-RX**

Configure model		
Model name	AEROTOP MONO 08.2 M-RX	
Application	Heating (medium temp)	
Units	Indoor + Outdoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	Yes	
Cooling mode application (optional)	+7°C/12°C	

General Data		
Power supply	1x230V 50Hz	

### Heating

COP

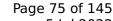
4.80

EN 14511-2		
Low temperature Medium temperature		
Heat output	8.00 kW	5.80 kW
El input	1.67 kW	1.97 kW

2.95

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

### Cooling





EN 14511-2		
	+7°C/+12°C	+18°C/+23°C
El input	2.26 kW	1.49 kW
Cooling capacity	7	7.00
EER	3.10	4.70





	+7°C/+12°C
Pdesignc	7 kW
SEER	4.64
Pdc Tj = 35°C	7 kW
EER Tj = 35°C	3.1
Pdc Tj = 30°C	5.17 kW
EER Tj = 30°C	4.13
Cdc Tj = 30 °C	0.99
Pdc Tj = 25°C	3.32 kW
EER Tj = 25°C	4.89
Cdc Tj = 25 °C	0.98
Pdc Tj = 20°C	3.19 kW
EER Tj = 20°C	6.85
Cdc Tj = 20 °C	0.97
Poff	14 W
РТО	14 W
PSB	14 W
PCK	0 W
Annual energy consumption Qce	1381 kWh

### Warmer Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	57 dB(A)	57 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	4.93 kW	4.48 kW
$\eta_{s}$	242 %	151 %
Prated	4.93 kW	4.48 kW
SCOP	6.14	3.84
Tbiv	2 °C	2 °C
TOL	-20 °C	-20 °C
Pdh Tj = +2°C	4.93 kW	4.48 kW
COP Tj = +2°C	4.05	2.53
Cdh Tj = +2 °C	0.989	0.992
Pdh Tj = +7°C	3.10 kW	2.81 kW
COP Tj = +7°C	5.70	3.08
Cdh Tj = +7 °C	0.975	0.985
Pdh Tj = 12°C	3.28 kW	3.16 kW
COP Tj = 12°C	7.86	5.45





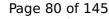
Pdh Tj = Tbiv       4.93 kW       4.48 kW         COP Tj = Tbiv       4.05       2.53         Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh       5.51 kW       4.90 kW         COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh       2.22       1.51         WTOL       60 °C       60 °C         Poff       14 W       14 W         PTO       14 W       14 W         PSB       14 W       14 W         PCK       14 W       14 W         Supplementary Heater: Type of energy input       n/a       n/a         Supplementary Heater: PSUP       0.00 kW       0.00 kW         Backup Heater       4.00 kW       4.00 kW			
COP Tj = Tbiv  4.05  2.53  Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh  5.51 kW  4.90 kW  COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh  2.22  1.51  WTOL  60 °C  60 °C  Poff  14 W  14 W  PTO  14 W  14 W  PSB  14 W  14 W  PCK  14 W  14 W  Supplementary Heater: Type of energy input  N/a  Supplementary Heater: PSUP  0.00 kW  0.00 kW  Backup Heater  4.00 kW  4.00 kW	Cdh Tj = +12 °C	0.967	0.977
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	Pdh Tj = Tbiv	4.93 kW	4.48 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh  2.22  1.51  WTOL  60 °C  60 °C  Poff  14 W  14 W  PTO  14 W  14 W  PSB  14 W  14 W  PCK  14 W  14 W  14 W  Supplementary Heater: Type of energy input  n/a  Supplementary Heater: PSUP  0.00 kW  4.00 kW  4.00 kW	COP Tj = Tbiv	4.05	2.53
WTOL       60 °C       60 °C         Poff       14 W       14 W         PTO       14 W       14 W         PSB       14 W       14 W         PCK       14 W       14 W         Supplementary Heater: Type of energy input       n/a       n/a         Supplementary Heater: PSUP       0.00 kW       0.00 kW         Backup Heater       4.00 kW       4.00 kW	Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.51 kW	4.90 kW
Poff       14 W       14 W         PTO       14 W       14 W         PSB       14 W       14 W         PCK       14 W       14 W         Supplementary Heater: Type of energy input       n/a       n/a         Supplementary Heater: PSUP       0.00 kW       0.00 kW         Backup Heater       4.00 kW       4.00 kW	COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.51
PTO       14 W       14 W         PSB       14 W       14 W         PCK       14 W       14 W         Supplementary Heater: Type of energy input       n/a       n/a         Supplementary Heater: PSUP       0.00 kW       0.00 kW         Backup Heater       4.00 kW       4.00 kW	WTOL	60 °C	60 °C
PSB 14 W 14 W  PCK 14 W 14 W  Supplementary Heater: Type of energy input n/a n/a  Supplementary Heater: PSUP 0.00 kW 0.00 kW  Backup Heater 4.00 kW 4.00 kW	Poff	14 W	14 W
PCK  14 W  14 W  Supplementary Heater: Type of energy input  n/a  n/a  Supplementary Heater: PSUP  0.00 kW  0.00 kW  4.00 kW	РТО	14 W	14 W
Supplementary Heater: Type of energy input n/a n/a  Supplementary Heater: PSUP 0.00 kW 0.00 kW  Backup Heater 4.00 kW 4.00 kW	PSB	14 W	14 W
Supplementary Heater: PSUP  0.00 kW  0.00 kW  4.00 kW  4.00 kW	PCK	14 W	14 W
Backup Heater 4.00 kW 4.00 kW	Supplementary Heater: Type of energy input	n/a	n/a
	Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe 1073 kWh 1557 kWh	Backup Heater	4.00 kW	4.00 kW
	Annual energy consumption Qhe	1073 kWh	1557 kWh

### Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	57 dB(A)	57 dB(A)



	Low temperature	Medium temperature
Pdesignh	11.78 kW	11.53 kW
$\eta_{s}$	154 %	120 %
Prated	11.78 kW	11.53 kW
SCOP	3.93	3.08
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	7.13 kW	6.98 kW
COP Tj = -7°C	3.47	2.73
Cdh Tj = -7 °C	0.993	0.995
Pdh Tj = +2°C	4.51 kW	4.20 kW
COP Tj = +2°C	5.32	4.07
Cdh Tj = +2 °C	0.984	0.987
Pdh Tj = +7°C	3.06 kW	2.84 kW
COP Tj = +7°C	7.24	5.15
Cdh Tj = +7 °C	0.968	0.975
Pdh Tj = 12°C	3.18 kW	3.24 kW
COP Tj = 12°C	8.02	6.47
Cdh Tj = +12 °C	0.966	0.973
Pdh Tj = Tbiv	7.13 kW	6.98 kW





COP Tj = Tbiv	3.47	2.70
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.51 kW	4.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.51
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.993	0.995
WTOL	60 °C	60 °C
Poff	14 W	14 W
РТО	14 W	14 W
PSB	14 W	14 W
PCK	14 W	14 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	11.16 kW	10.93 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	7398 kWh	9226 kWh

### Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	57 dB(A)	57 dB(A)



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	Low temperature	Medium temperature
Pdesignh	8.37 kW	7.62 kW
$\eta_{s}$	195 %	140 %
Prated	8.37 kW	7.62 kW
SCOP	4.95	3.57
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	7.40 kW	6.74 kW
COP Tj = -7°C	3.10	2.29
Cdh Tj = -7 °C	0.994	0.995
Pdh Tj = +2°C	4.54 kW	4.22 kW
COP Tj = +2°C	4.80	3.51
Cdh Tj = +2 °C	0.986	0.989
Pdh Tj = +7°C	2.94 kW	2.74 kW
COP Tj = +7°C	6.61	4.36
Cdh Tj = +7 °C	0.969	0.978
Pdh Tj = 12°C	3.16 kW	3.28 kW
COP Tj = 12°C	8.15	6.50
Cdh Tj = +12 °C	0.965	0.973
Pdh Tj = Tbiv	7.40 kW	6.74 kW
COP Tj = Tbiv	3.10	2.29



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

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.51 kW	4.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.51
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.994	0.995
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	14 W	14 W
PSB	14 W	14 W
PCK	14 W	14 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.86 kW	2.72 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	3490 kWh	4405 kWh

### **Model: AEROTOP MONO 08.2 M-R**

Configure model		
Model name	AEROTOP MONO 08.2 M-R	
Application	Heating (medium temp)	
Units	Indoor + Outdoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	Yes	
Cooling mode application (optional)	+7°C/12°C	

General Data		
Power supply	3x400V 50Hz	

### Heating

EN 14511-2		
Low temperature Medium temperature		Medium temperature
Heat output	8.00 kW	5.80 kW
El input	1.67 kW	1.97 kW
СОР	4.80	2.95

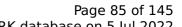
EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

### Cooling





EN 14511-2		
	+7°C/+12°C	+18°C/+23°C
El input	2.26 kW	1.49 kW
Cooling capacity	7	7.00
EER	3.10	4.70





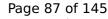
	+7°C/+12°C
Pdesignc	7 kW
SEER	4.64
Pdc Tj = 35°C	7 kW
EER Tj = 35°C	3.1
Pdc Tj = 30°C	5.17 kW
EER Tj = 30°C	4.13
Cdc Tj = 30 °C	0.99
Pdc Tj = 25°C	3.32 kW
EER Tj = 25°C	4.89
Cdc Tj = 25 °C	0.98
Pdc Tj = 20°C	3.19 kW
EER Tj = 20°C	6.85
Cdc Tj = 20 °C	0.97
Poff	14 W
PTO	14 W
PSB	14 W
PCK	o w
Annual energy consumption Qce	1381 kWh

### Warmer Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	57 dB(A)	57 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	4.93 kW	4.48 kW
$\eta_{s}$	242 %	151 %
Prated	4.93 kW	4.48 kW
SCOP	6.14	3.84
Tbiv	2 °C	2 °C
TOL	-20 °C	-20 °C
Pdh Tj = +2°C	4.93 kW	4.48 kW
COP Tj = +2°C	4.05	2.53
Cdh Tj = +2 °C	0.989	0.992
Pdh Tj = +7°C	3.10 kW	2.81 kW
COP Tj = +7°C	5.70	3.08
Cdh Tj = +7 °C	0.975	0.985
Pdh Tj = 12°C	3.28 kW	3.16 kW
COP Tj = 12°C	7.86	5.45

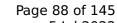




Pdh Tj = Tbiv       4.93 kW       4.48 kW         COP Tj = Tbiv       4.05       2.53         Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh       5.51 kW       4.90 kW         COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh       2.22       1.51         WTOL       60 °C       60 °C         Poff       14 W       14 W         PTO       14 W       14 W         PCK       14 W       14 W         Supplementary Heater: Type of energy input       Electricity       Electricity         Supplementary Heater: PSUP       0.00 kW       0.00 kW         Backup Heater       4.00 kW       4.00 kW			
COP Tj = Tbiv	Cdh Tj = +12 °C	0.967	0.977
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	Pdh Tj = Tbiv	4.93 kW	4.48 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	COP Tj = Tbiv	4.05	2.53
WTOL  60 °C  60 °C  14 W  14 W  14 W  PTO  14 W  14 W  PSB  14 W  14 W  PCK  14 W  14 W  14 W  Electricity  Supplementary Heater: Type of energy input  Electricity  Electricity  U.00 kW  4.00 kW  4.00 kW	Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.51 kW	4.90 kW
Poff 14 W 14 W  PTO 14 W 14 W  PSB 14 W 14 W  PCK 14 W 14 W  Supplementary Heater: Type of energy input Electricity Electricity  Supplementary Heater: PSUP 0.00 kW 0.00 kW  Backup Heater 4.00 kW 4.00 kW	COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.51
PTO 14 W 14 W  PSB 14 W 14 W  PCK 14 W 14 W  Supplementary Heater: Type of energy input Electricity Electricity  Supplementary Heater: PSUP 0.00 kW 0.00 kW  Backup Heater 4.00 kW 4.00 kW	WTOL	60 °C	60 °C
PSB 14 W 14 W  PCK 14 W 14 W  Supplementary Heater: Type of energy input Electricity Electricity  Supplementary Heater: PSUP 0.00 kW 0.00 kW  Backup Heater 4.00 kW 4.00 kW	Poff	14 W	14 W
PCK 14 W 14 W  Supplementary Heater: Type of energy input Electricity Electricity  Supplementary Heater: PSUP 0.00 kW 0.00 kW  Backup Heater 4.00 kW 4.00 kW	РТО	14 W	14 W
Supplementary Heater: Type of energy input  Electricity  Electricity  O.00 kW  Backup Heater  4.00 kW  4.00 kW	PSB	14 W	14 W
Supplementary Heater: PSUP  0.00 kW  0.00 kW  4.00 kW  4.00 kW	PCK	14 W	14 W
Backup Heater 4.00 kW 4.00 kW	Supplementary Heater: Type of energy input	Electricity	Electricity
	Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe 1073 kWh 1557 kWh	Backup Heater	4.00 kW	4.00 kW
	Annual energy consumption Qhe	1073 kWh	1557 kWh

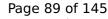
### Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	57 dB(A)	57 dB(A)





	Low temperature	Medium temperature
Pdesignh	11.78 kW	11.53 kW
$\eta_{s}$	154 %	120 %
Prated	11.78 kW	11.53 kW
SCOP	3.93	3.08
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	7.13 kW	6.98 kW
COP Tj = -7°C	3.47	2.73
Cdh Tj = -7 °C	0.993	0.995
Pdh Tj = +2°C	4.51 kW	4.20 kW
COP Tj = +2°C	5.32	4.07
Cdh Tj = +2 °C	0.984	0.987
Pdh Tj = +7°C	3.06 kW	2.84 kW
COP Tj = +7°C	7.24	5.15
Cdh Tj = +7 °C	0.968	0.975
Pdh Tj = 12°C	3.18 kW	3.24 kW
COP Tj = 12°C	8.02	6.47
Cdh Tj = +12 °C	0.966	0.973
Pdh Tj = Tbiv	7.13 kW	6.98 kW





COP Tj = Tbiv	3.47	2.70
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.51 kW	4.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.51
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.993	0.995
WTOL	60 °C	60 °C
Poff	14 W	14 W
РТО	14 W	14 W
PSB	14 W	14 W
PCK	14 W	14 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	11.16 kW	10.93 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	7398 kWh	9226 kWh

### Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	57 dB(A)	57 dB(A)





	Low temperature	Medium temperature
Pdesignh	8.37 kW	7.62 kW
$\eta_{S}$	195 %	140 %
Prated	8.37 kW	7.62 kW
SCOP	4.95	3.57
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = $-7^{\circ}$ C	7.40 kW	6.74 kW
COP Tj = -7°C	3.10	2.29
Cdh Tj = -7 °C	0.994	0.995
Pdh Tj = +2°C	4.54 kW	4.22 kW
COP Tj = +2°C	4.80	3.51
Cdh Tj = +2 °C	0.986	0.989
Pdh Tj = $+7^{\circ}$ C	2.94 kW	2.74 kW
$COP Tj = +7^{\circ}C$	6.61	4.36
Cdh Tj = +7 °C	0.969	0.978
Pdh Tj = 12°C	3.16 kW	3.28 kW
COP Tj = 12°C	8.15	6.50
Cdh Tj = +12 °C	0.965	0.973
Pdh Tj = Tbiv	7.40 kW	6.74 kW
COP Tj = Tbiv	3.10	2.29



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

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.51 kW	4.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.51
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.994	0.995
WTOL	60 °C	60 °C
Poff	14 W	14 W
РТО	14 W	14 W
PSB	14 W	14 W
PCK	14 W	14 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.86 kW	2.72 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	3490 kWh	4405 kWh

### **Model: AEROTOP MONO 08.2 M-RXL**

Configure model		
Model name	AEROTOP MONO 08.2 M-RXL	
Application	Heating (medium temp)	
Units	Indoor + Outdoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	Yes	
Cooling mode application (optional)	+7°C/12°C	

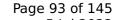
General Data	
Power supply 1x230V 50Hz	

### Heating

EN 14511-2		
Low temperature Medium temperature		
Heat output	8.00 kW	5.80 kW
El input	1.67 kW	1.97 kW
СОР	4.80	2.95

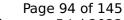
EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

### Cooling





EN 14511-2		
	+7°C/+12°C	+18°C/+23°C
El input	2.26 kW	1.49 kW
Cooling capacity	7	7.00
EER	3.10	4.70





	+7°C/+12°C
Pdesignc	7 kW
SEER	4.64
Pdc Tj = 35°C	7 kW
EER Tj = 35°C	3.1
Pdc Tj = 30°C	5.17 kW
EER Tj = 30°C	4.13
Cdc Tj = 30 °C	0.99
Pdc Tj = 25°C	3.32 kW
EER Tj = 25°C	4.89
Cdc Tj = 25 °C	0.98
Pdc Tj = 20°C	3.19 kW
EER Tj = 20°C	6.85
Cdc Tj = 20 °C	0.97
Poff	14 W
РТО	14 W
PSB	14 W
PCK	0 W
Annual energy consumption Qce	1381 kWh

### Warmer Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	57 dB(A)	57 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	4.93 kW	4.48 kW
$\eta_{s}$	242 %	151 %
Prated	4.93 kW	4.48 kW
SCOP	6.14	3.84
Tbiv	2 °C	2 °C
TOL	-20 °C	-20 °C
Pdh Tj = +2°C	4.93 kW	4.48 kW
COP Tj = +2°C	4.05	2.53
Cdh Tj = +2 °C	0.989	0.992
Pdh Tj = +7°C	3.10 kW	2.81 kW
COP Tj = +7°C	5.70	3.08
Cdh Tj = +7 °C	0.975	0.985
Pdh Tj = 12°C	3.28 kW	3.16 kW
COP Tj = 12°C	7.86	5.45





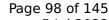
Cdh Tj = +12 °C	0.967	0.977
Pdh Tj = Tbiv	4.93 kW	4.48 kW
COP Tj = Tbiv	4.05	2.53
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.51 kW	4.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.51
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	14 W	14 W
PSB	14 W	14 W
PCK	14 W	14 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	1073 kWh	1557 kWh

### Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	57 dB(A)	57 dB(A)



	Low temperature	Medium temperature
Pdesignh	11.78 kW	11.53 kW
$\eta_{s}$	154 %	120 %
Prated	11.78 kW	11.53 kW
SCOP	3.93	3.08
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	7.13 kW	6.98 kW
COP Tj = -7°C	3.47	2.73
Cdh Tj = -7 °C	0.993	0.995
Pdh Tj = +2°C	4.51 kW	4.20 kW
COP Tj = +2°C	5.32	4.07
Cdh Tj = +2 °C	0.984	0.987
Pdh Tj = +7°C	3.06 kW	2.84 kW
COP Tj = +7°C	7.24	5.15
Cdh Tj = +7 °C	0.968	0.975
Pdh Tj = 12°C	3.18 kW	3.24 kW
COP Tj = 12°C	8.02	6.47
Cdh Tj = +12 °C	0.966	0.973
Pdh Tj = Tbiv	7.13 kW	6.98 kW

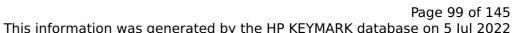




COP Tj = Tbiv	3.47	2.70
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.51 kW	4.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.51
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.993	0.995
WTOL	60 °C	60 °C
Poff	14 W	14 W
РТО	14 W	14 W
PSB	14 W	14 W
PCK	14 W	14 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	11.16 kW	10.93 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	7398 kWh	9226 kWh

### Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	57 dB(A)	57 dB(A)





	Low temperature	Medium temperature	
Pdesignh	8.37 kW	7.62 kW	
$\eta_{s}$	195 %	140 %	
Prated	8.37 kW	7.62 kW	
SCOP	4.95	3.57	
Tbiv	-7 °C	-7 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = -7°C	7.40 kW	6.74 kW	
COP Tj = -7°C	3.10	2.29	
Cdh Tj = -7 °C	0.994	0.995	
Pdh Tj = +2°C	4.54 kW	4.22 kW	
COP Tj = +2°C	4.80	3.51	
Cdh Tj = +2 °C	0.986	0.989	
Pdh Tj = +7°C	2.94 kW	2.74 kW	
COP Tj = +7°C	6.61	4.36	
Cdh Tj = +7 °C	0.969	0.978	
Pdh Tj = 12°C	3.16 kW	3.28 kW	
COP Tj = 12°C	8.15	6.50	
Cdh Tj = +12 °C	0.965	0.973	
Pdh Tj = Tbiv	7.40 kW	6.74 kW	
COP Tj = Tbiv	3.10	2.29	



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

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.51 kW	4.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.51
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.994	0.995
WTOL	60 °C	60 °C
Poff	14 W	14 W
РТО	14 W	14 W
PSB	14 W	14 W
PCK	14 W	14 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.86 kW	2.72 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	3490 kWh	4405 kWh



### **Model: AEROTOP MONO 08.2 M-RL**

Configure model		
Model name	AEROTOP MONO 08.2 M-RL	
Application	Heating (medium temp)	
Units	Indoor + Outdoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	Yes	
Cooling mode application (optional)	+7°C/12°C	

General Data		
Power supply	3x400V 50Hz	

### Heating

EN 14511-2				
Low temperature Medium temperature				
Heat output	8.00 kW	5.80 kW		
El input	1.67 kW	1.97 kW		
СОР	4.80	2.95		

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

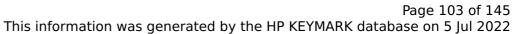
### Cooling





EN 14511-2			
	+7°C/+12°C	+18°C/+23°C	
El input	2.26 kW	1.49 kW	
Cooling capacity	7	7.00	
EER	3.10	4.70	

## EN 14825





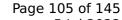
This information was generated by the fit	+7°C/+12°C
Pdesignc	7 kW
SEER	4.64
Pdc Tj = 35°C	7 kW
EER Tj = 35°C	3.1
Pdc Tj = 30°C	5.17 kW
EER Tj = 30°C	4.13
Cdc Tj = 30 °C	0.99
Pdc Tj = 25°C	3.32 kW
EER Tj = 25°C	4.89
Cdc Tj = 25 °C	0.98
Pdc Tj = 20°C	3.19 kW
EER Tj = 20°C	6.85
Cdc Tj = 20 °C	0.97
Poff	14 W
РТО	14 W
PSB	14 W
PCK	o w
Annual energy consumption Qce	1381 kWh

### Warmer Climate



EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	15 dB(A)	15 dB(A)	
Sound power level outdoor	57 dB(A)	57 dB(A)	

EN 14825			
	Low temperature	Medium temperature	
Pdesignh	4.93 kW	4.48 kW	
$\eta_{s}$	242 %	151 %	
Prated	4.93 kW	4.48 kW	
SCOP	6.14	3.84	
Tbiv	2 °C	2 °C	
TOL	-20 °C	-20 °C	
Pdh Tj = +2°C	4.93 kW	4.48 kW	
COP Tj = +2°C	4.05	2.53	
Cdh Tj = +2 °C	0.989	0.992	
Pdh Tj = +7°C	3.10 kW	2.81 kW	
COP Tj = +7°C	5.70	3.08	
Cdh Tj = +7 °C	0.975	0.985	
Pdh Tj = 12°C	3.28 kW	3.16 kW	
COP Tj = 12°C	7.86	5.45	





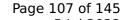
Pdh Tj = Tbiv       4.93 kW       4.48 kW         COP Tj = Tbiv       4.05       2.53         Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh       5.51 kW       4.90 kW         COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh       2.22       1.51         WTOL       60 °C       60 °C         Poff       14 W       14 W         PTO       14 W       14 W         PCK       14 W       14 W         Supplementary Heater: Type of energy input       Electricity       Electricity         Supplementary Heater: PSUP       0.00 kW       0.00 kW         Backup Heater       4.00 kW       4.00 kW			
COP Tj = Tbiv	Cdh Tj = +12 °C	0.967	0.977
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	Pdh Tj = Tbiv	4.93 kW	4.48 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	COP Tj = Tbiv	4.05	2.53
WTOL  60 °C  60 °C  14 W  14 W  14 W  PTO  14 W  14 W  PSB  14 W  14 W  PCK  14 W  14 W  14 W  Electricity  Supplementary Heater: Type of energy input  Electricity  Electricity  U.00 kW  4.00 kW  4.00 kW	Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.51 kW	4.90 kW
Poff 14 W 14 W  PTO 14 W 14 W  PSB 14 W 14 W  PCK 14 W 14 W  Supplementary Heater: Type of energy input Electricity Electricity  Supplementary Heater: PSUP 0.00 kW 0.00 kW  Backup Heater 4.00 kW 4.00 kW	COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.51
PTO 14 W 14 W  PSB 14 W 14 W  PCK 14 W 14 W  Supplementary Heater: Type of energy input Electricity Electricity  Supplementary Heater: PSUP 0.00 kW 0.00 kW  Backup Heater 4.00 kW 4.00 kW	WTOL	60 °C	60 °C
PSB 14 W 14 W  PCK 14 W 14 W  Supplementary Heater: Type of energy input Electricity Electricity  Supplementary Heater: PSUP 0.00 kW 0.00 kW  Backup Heater 4.00 kW 4.00 kW	Poff	14 W	14 W
PCK 14 W 14 W  Supplementary Heater: Type of energy input Electricity Electricity  Supplementary Heater: PSUP 0.00 kW 0.00 kW  Backup Heater 4.00 kW 4.00 kW	РТО	14 W	14 W
Supplementary Heater: Type of energy input  Electricity  Electricity  O.00 kW  Backup Heater  4.00 kW  4.00 kW	PSB	14 W	14 W
Supplementary Heater: PSUP  0.00 kW  0.00 kW  4.00 kW  4.00 kW	PCK	14 W	14 W
Backup Heater 4.00 kW 4.00 kW	Supplementary Heater: Type of energy input	Electricity	Electricity
	Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe 1073 kWh 1557 kWh	Backup Heater	4.00 kW	4.00 kW
	Annual energy consumption Qhe	1073 kWh	1557 kWh

### Colder Climate

EN 12102-1				
	Low temperature	Medium temperature		
Sound power level indoor	15 dB(A)	15 dB(A)		
Sound power level outdoor	57 dB(A)	57 dB(A)		



	Low temperature	Medium temperature
Pdesignh	11.78 kW	11.53 kW
$\eta_{s}$	154 %	120 %
Prated	11.78 kW	11.53 kW
SCOP	3.93	3.08
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	7.13 kW	6.98 kW
COP Tj = -7°C	3.47	2.73
Cdh Tj = -7 °C	0.993	0.995
Pdh Tj = +2°C	4.51 kW	4.20 kW
COP Tj = +2°C	5.32	4.07
Cdh Tj = +2 °C	0.984	0.987
Pdh Tj = +7°C	3.06 kW	2.84 kW
COP Tj = +7°C	7.24	5.15
Cdh Tj = +7 °C	0.968	0.975
Pdh Tj = 12°C	3.18 kW	3.24 kW
COP Tj = 12°C	8.02	6.47
Cdh Tj = +12 °C	0.966	0.973
Pdh Tj = Tbiv	7.13 kW	6.98 kW





COP Tj = Tbiv	3.47	2.70
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.51 kW	4.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.51
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.993	0.995
WTOL	60 °C	60 °C
Poff	14 W	14 W
РТО	14 W	14 W
PSB	14 W	14 W
PCK	14 W	14 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	11.16 kW	10.93 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	7398 kWh	9226 kWh

### Average Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	15 dB(A)	15 dB(A)	
Sound power level outdoor	57 dB(A)	57 dB(A)	



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

	Low temperature	Medium temperature
Pdesignh	8.37 kW	7.62 kW
$\eta_{S}$	195 %	140 %
Prated	8.37 kW	7.62 kW
SCOP	4.95	3.57
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = $-7^{\circ}$ C	7.40 kW	6.74 kW
COP Tj = -7°C	3.10	2.29
Cdh Tj = -7 °C	0.994	0.995
Pdh Tj = +2°C	4.54 kW	4.22 kW
COP Tj = +2°C	4.80	3.51
Cdh Tj = +2 °C	0.986	0.989
Pdh Tj = $+7^{\circ}$ C	2.94 kW	2.74 kW
$COP Tj = +7^{\circ}C$	6.61	4.36
Cdh Tj = +7 °C	0.969	0.978
Pdh Tj = 12°C	3.16 kW	3.28 kW
COP Tj = 12°C	8.15	6.50
Cdh Tj = +12 °C	0.965	0.973
Pdh Tj = Tbiv	7.40 kW	6.74 kW
COP Tj = Tbiv	3.10	2.29



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

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.51 kW	4.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.51
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.994	0.995
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	14 W	14 W
PSB	14 W	14 W
PCK	14 W	14 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.86 kW	2.72 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	3490 kWh	4405 kWh

# **Model: ENERGION M PLUS 80**

Configure model		
Model name ENERGION M PLUS 80		
Application	Heating (medium temp)	
Units	Indoor + Outdoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	Yes	
Cooling mode application (optional)	+7°C/12°C	

General Data		
Power supply	1x230V 50Hz	

# Heating

EN 14511-2			
Low temperature Medium temperature			
Heat output	8.00 kW	5.80 kW	
El input	1.67 kW	1.97 kW	
СОР	4.80	2.95	

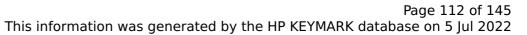
EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

# Cooling





EN 14511-2		
	+7°C/+12°C	+18°C/+23°C
El input	2.26 kW	1.49 kW
Cooling capacity	7	7.00
EER	3.10	4.70





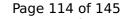
	+7°C/+12°C
Pdesignc	7 kW
SEER	4.64
Pdc Tj = 35°C	7 kW
EER Tj = 35°C	3.1
Pdc Tj = 30°C	5.17 kW
EER Tj = 30°C	4.13
Cdc Tj = 30 °C	0.99
Pdc Tj = 25°C	3.32 kW
EER Tj = 25°C	4.89
Cdc Tj = 25 °C	0.98
Pdc Tj = 20°C	3.19 kW
EER Tj = 20°C	6.85
Cdc Tj = 20 °C	0.97
Poff	14 W
РТО	14 W
PSB	14 W
PCK	o w
Annual energy consumption Qce	1381 kWh

# Warmer Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	57 dB(A)	57 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	4.93 kW	4.48 kW
$\eta_{s}$	242 %	151 %
Prated	4.93 kW	4.48 kW
SCOP	6.14	3.84
Tbiv	2 °C	2 °C
TOL	-20 °C	-20 °C
Pdh Tj = +2°C	4.93 kW	4.48 kW
COP Tj = +2°C	4.05	2.53
Cdh Tj = +2 °C	0.989	0.992
Pdh Tj = +7°C	3.10 kW	2.81 kW
COP Tj = +7°C	5.70	3.08
Cdh Tj = +7 °C	0.975	0.985
Pdh Tj = 12°C	3.28 kW	3.16 kW
COP Tj = 12°C	7.86	5.45





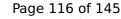
Cdh Tj = +12 °C       0.967       0.977         Pdh Tj = Tbiv       4.93 kW       4.48 kW         COP Tj = Tbiv       4.05       2.53         Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh       5.51 kW       4.90 kW         COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh       2.22       1.51         WTOL       60 °C       60 °C         Poff       14 W       14 W         PTO       14 W       14 W         PCK       14 W       14 W         Supplementary Heater: Type of energy input       n/a       n/a         Supplementary Heater: PSUP       0.00 kW       0.00 kW         Backup Heater       4.00 kW       4.00 kW         Annual energy consumption Qhe       1073 kWh       1557 kWh			
COP Tj = Tbiv	Cdh Tj = +12 °C	0.967	0.977
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	Pdh Tj = Tbiv	4.93 kW	4.48 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh  2.22  1.51  WTOL  60 °C  60 °C  Poff  14 W  14 W  PTO  14 W  14 W  PSB  14 W  14 W  PCK  14 W  14 W  14 W  Supplementary Heater: Type of energy input  n/a  Supplementary Heater: PSUP  0.00 kW  4.00 kW  4.00 kW	COP Tj = Tbiv	4.05	2.53
WTOL       60 °C       60 °C         Poff       14 W       14 W         PTO       14 W       14 W         PSB       14 W       14 W         PCK       14 W       14 W         Supplementary Heater: Type of energy input       n/a       n/a         Supplementary Heater: PSUP       0.00 kW       0.00 kW         Backup Heater       4.00 kW       4.00 kW	Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.51 kW	4.90 kW
Poff       14 W       14 W         PTO       14 W       14 W         PSB       14 W       14 W         PCK       14 W       14 W         Supplementary Heater: Type of energy input       n/a       n/a         Supplementary Heater: PSUP       0.00 kW       0.00 kW         Backup Heater       4.00 kW       4.00 kW	COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.51
PTO 14 W 14 W  PSB 14 W 14 W  PCK 14 W 14 W  Supplementary Heater: Type of energy input n/a n/a  Supplementary Heater: PSUP 0.00 kW 0.00 kW  Backup Heater 4.00 kW 4.00 kW	WTOL	60 °C	60 °C
PSB 14 W 14 W  PCK 14 W 14 W  Supplementary Heater: Type of energy input n/a n/a  Supplementary Heater: PSUP 0.00 kW 0.00 kW  Backup Heater 4.00 kW 4.00 kW	Poff	14 W	14 W
PCK 14 W 14 W  Supplementary Heater: Type of energy input n/a n/a  Supplementary Heater: PSUP 0.00 kW 0.00 kW  Backup Heater 4.00 kW 4.00 kW	РТО	14 W	14 W
Supplementary Heater: Type of energy input  Supplementary Heater: PSUP  0.00 kW  0.00 kW  4.00 kW	PSB	14 W	14 W
Supplementary Heater: PSUP  0.00 kW  0.00 kW  4.00 kW  4.00 kW	PCK	14 W	14 W
Backup Heater 4.00 kW 4.00 kW	Supplementary Heater: Type of energy input	n/a	n/a
	Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe 1073 kWh 1557 kWh	Backup Heater	4.00 kW	4.00 kW
	Annual energy consumption Qhe	1073 kWh	1557 kWh

# Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	57 dB(A)	57 dB(A)



	Low temperature	Medium temperature
Pdesignh	11.78 kW	11.53 kW
$\eta_{s}$	154 %	120 %
Prated	11.78 kW	11.53 kW
SCOP	3.93	3.08
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	7.13 kW	6.98 kW
COP Tj = -7°C	3.47	2.73
Cdh Tj = -7 °C	0.993	0.995
Pdh Tj = +2°C	4.51 kW	4.20 kW
COP Tj = +2°C	5.32	4.07
Cdh Tj = +2 °C	0.984	0.987
Pdh Tj = +7°C	3.06 kW	2.84 kW
COP Tj = +7°C	7.24	5.15
Cdh Tj = +7 °C	0.968	0.975
Pdh Tj = 12°C	3.18 kW	3.24 kW
COP Tj = 12°C	8.02	6.47
Cdh Tj = +12 °C	0.966	0.973
Pdh Tj = Tbiv	7.13 kW	6.98 kW





COP Tj = Tbiv	3.47	2.70
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.51 kW	4.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.51
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.993	0.995
WTOL	60 °C	60 °C
Poff	14 W	14 W
РТО	14 W	14 W
PSB	14 W	14 W
PCK	14 W	14 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	11.16 kW	10.93 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	7398 kWh	9226 kWh

# **Average Climate**

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	57 dB(A)	57 dB(A)



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

	Low temperature	Medium temperature
Pdesignh	8.37 kW	7.62 kW
$\eta_{s}$	195 %	140 %
Prated	8.37 kW	7.62 kW
SCOP	4.95	3.57
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	7.40 kW	6.74 kW
COP Tj = -7°C	3.10	2.29
Cdh Tj = -7 °C	0.994	0.995
Pdh Tj = +2°C	4.54 kW	4.22 kW
COP Tj = +2°C	4.80	3.51
Cdh Tj = +2 °C	0.986	0.989
Pdh Tj = +7°C	2.94 kW	2.74 kW
COP Tj = +7°C	6.61	4.36
Cdh Tj = +7 °C	0.969	0.978
Pdh Tj = 12°C	3.16 kW	3.28 kW
COP Tj = 12°C	8.15	6.50
Cdh Tj = +12 °C	0.965	0.973
Pdh Tj = Tbiv	7.40 kW	6.74 kW
COP Tj = Tbiv	3.10	2.29



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

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.51 kW	4.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.51
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.994	0.995
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	14 W	14 W
PSB	14 W	14 W
PCK	14 W	14 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.86 kW	2.72 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	3490 kWh	4405 kWh



# **Model: ENERGION M PLUS 80T**

Configure model	
Model name	ENERGION M PLUS 80T
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	Colder Climate + Warmer Climate
Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C

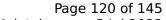
General Data		
Power supply	3x400V 50Hz	

# Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	8.00 kW	5.80 kW
El input	1.67 kW	1.97 kW
СОР	4.80	2.95

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

# Cooling





EN 14511-2		
	+7°C/+12°C	+18°C/+23°C
El input	2.26 kW	1.49 kW
Cooling capacity	7	7.00
EER	3.10	4.70





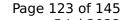
	+7°C/+12°C
Pdesignc	7 kW
SEER	4.64
Pdc Tj = 35°C	7 kW
EER Tj = 35°C	3.1
Pdc Tj = 30°C	5.17 kW
EER Tj = 30°C	4.13
Cdc Tj = 30 °C	0.99
Pdc Tj = 25°C	3.32 kW
EER Tj = 25°C	4.89
Cdc Tj = 25 °C	0.98
Pdc Tj = 20°C	3.19 kW
EER Tj = 20°C	6.85
Cdc Tj = 20 °C	0.97
Poff	14 W
PTO	14 W
PSB	14 W
PCK	0 W
Annual energy consumption Qce	1381 kWh

### Warmer Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	57 dB(A)	57 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	4.93 kW	4.48 kW
$\eta_{s}$	242 %	151 %
Prated	4.93 kW	4.48 kW
SCOP	6.14	3.84
Tbiv	2 °C	2 °C
TOL	-20 °C	-20 °C
Pdh Tj = +2°C	4.93 kW	4.48 kW
COP Tj = +2°C	4.05	2.53
Cdh Tj = +2 °C	0.989	0.992
Pdh Tj = +7°C	3.10 kW	2.81 kW
COP Tj = +7°C	5.70	3.08
Cdh Tj = +7 °C	0.975	0.985
Pdh Tj = 12°C	3.28 kW	3.16 kW
COP Tj = 12°C	7.86	5.45





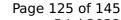
Cdh Tj = +12 °C	0.967	0.977
Pdh Tj = Tbiv	4.93 kW	4.48 kW
COP Tj = Tbiv	4.05	2.53
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.51 kW	4.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.51
WTOL	60 °C	60 °C
Poff	14 W	14 W
РТО	14 W	14 W
PSB	14 W	14 W
PCK	14 W	14 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	1073 kWh	1557 kWh

### Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	57 dB(A)	57 dB(A)



	Low temperature	Medium temperature
Pdesignh	11.78 kW	11.53 kW
$\eta_{s}$	154 %	120 %
Prated	11.78 kW	11.53 kW
SCOP	3.93	3.08
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	7.13 kW	6.98 kW
COP Tj = -7°C	3.47	2.73
Cdh Tj = -7 °C	0.993	0.995
Pdh Tj = +2°C	4.51 kW	4.20 kW
COP Tj = +2°C	5.32	4.07
Cdh Tj = +2 °C	0.984	0.987
Pdh Tj = +7°C	3.06 kW	2.84 kW
COP Tj = +7°C	7.24	5.15
Cdh Tj = +7 °C	0.968	0.975
Pdh Tj = 12°C	3.18 kW	3.24 kW
COP Tj = 12°C	8.02	6.47
Cdh Tj = +12 °C	0.966	0.973
Pdh Tj = Tbiv	7.13 kW	6.98 kW





COP Tj = Tbiv	3.47	2.70
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.51 kW	4.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.51
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.993	0.995
WTOL	60 °C	60 °C
Poff	14 W	14 W
РТО	14 W	14 W
PSB	14 W	14 W
PCK	14 W	14 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	11.16 kW	10.93 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	7398 kWh	9226 kWh

# **Average Climate**

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	35 dB(A)	35 dB(A)
Sound power level outdoor	57 dB(A)	57 dB(A)



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	Low temperature	Medium temperature
Pdesignh	8.37 kW	7.62 kW
$\eta_{S}$	195 %	140 %
Prated	8.37 kW	7.62 kW
SCOP	4.95	3.57
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	7.40 kW	6.74 kW
COP Tj = -7°C	3.10	2.29
Cdh Tj = -7 °C	0.994	0.995
Pdh Tj = +2°C	4.54 kW	4.22 kW
COP Tj = +2°C	4.80	3.51
Cdh Tj = +2 °C	0.986	0.989
Pdh Tj = $+7^{\circ}$ C	2.94 kW	2.74 kW
$COP Tj = +7^{\circ}C$	6.61	4.36
Cdh Tj = +7 °C	0.969	0.978
Pdh Tj = 12°C	3.16 kW	3.28 kW
COP Tj = 12°C	8.15	6.50
Cdh Tj = +12 °C	0.965	0.973
Pdh Tj = Tbiv	7.40 kW	6.74 kW
COP Tj = Tbiv	3.10	2.29



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Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.51 kW	4.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.51
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.994	0.995
WTOL	60 °C	60 °C
Poff	14 W	14 W
РТО	14 W	14 W
PSB	14 W	14 W
PCK	14 W	14 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.86 kW	2.72 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	3490 kWh	4405 kWh

# **Model: ENERGION M LIGHT 80**

Configure model		
Model name	ENERGION M LIGHT 80	
Application	Heating (medium temp)	
Units	Indoor + Outdoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	Yes	
Cooling mode application (optional)	+7°C/12°C	

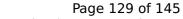
General Data		
Power supply 1x230V 50Hz		

# Heating

EN 14511-2		
Low temperature Medium temperature		
Heat output	8.00 kW	5.80 kW
El input	1.67 kW	1.97 kW
СОР	4.80	2.95

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

# Cooling





EN 14511-2		
	+7°C/+12°C	+18°C/+23°C
El input	2.26 kW	1.49 kW
Cooling capacity	7	7.00
EER	3.10	4.70





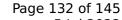
This information was generated by the file	+7°C/+12°C
Pdesignc	7 kW
SEER	4.64
Pdc Tj = 35°C	7 kW
EER Tj = 35°C	3.1
Pdc Tj = 30°C	5.17 kW
EER Tj = 30°C	4.13
Cdc Tj = 30 °C	0.99
Pdc Tj = 25°C	3.32 kW
EER Tj = 25°C	4.89
Cdc Tj = 25 °C	0.98
Pdc Tj = 20°C	3.19 kW
EER Tj = 20°C	6.85
Cdc Tj = 20 °C	0.97
Poff	14 W
РТО	14 W
PSB	14 W
PCK	o w
Annual energy consumption Qce	1381 kWh

# Warmer Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	57 dB(A)	57 dB(A)

EN 14825		
	Low temperature	Medium temperature
Pdesignh	4.93 kW	4.48 kW
$\eta_{s}$	242 %	151 %
Prated	4.93 kW	4.48 kW
SCOP	6.14	3.84
Tbiv	2 °C	2 °C
TOL	-20 °C	-20 °C
Pdh Tj = +2°C	4.93 kW	4.48 kW
COP Tj = +2°C	4.05	2.53
Cdh Tj = +2 °C	0.989	0.992
Pdh Tj = +7°C	3.10 kW	2.81 kW
COP Tj = +7°C	5.70	3.08
Cdh Tj = +7 °C	0.975	0.985
Pdh Tj = 12°C	3.28 kW	3.16 kW
COP Tj = 12°C	7.86	5.45





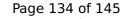
Cdh Tj = +12 °C	0.967	0.977
Pdh Tj = Tbiv	4.93 kW	4.48 kW
COP Tj = Tbiv	4.05	2.53
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.51 kW	4.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.51
WTOL	60 °C	60 °C
Poff	14 W	14 W
РТО	14 W	14 W
PSB	14 W	14 W
PCK	14 W	14 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	1073 kWh	1557 kWh

# Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	57 dB(A)	57 dB(A)



	Low temperature	Medium temperature
Pdesignh	11.78 kW	11.53 kW
$\eta_{s}$	154 %	120 %
Prated	11.78 kW	11.53 kW
SCOP	3.93	3.08
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	7.13 kW	6.98 kW
COP Tj = -7°C	3.47	2.73
Cdh Tj = -7 °C	0.993	0.995
Pdh Tj = +2°C	4.51 kW	4.20 kW
COP Tj = +2°C	5.32	4.07
Cdh Tj = +2 °C	0.984	0.987
Pdh Tj = +7°C	3.06 kW	2.84 kW
COP Tj = +7°C	7.24	5.15
Cdh Tj = +7 °C	0.968	0.975
Pdh Tj = 12°C	3.18 kW	3.24 kW
COP Tj = 12°C	8.02	6.47
Cdh Tj = +12 °C	0.966	0.973
Pdh Tj = Tbiv	7.13 kW	6.98 kW





COP Tj = Tbiv	3.47	2.70
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.51 kW	4.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.51
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.993	0.995
WTOL	60 °C	60 °C
Poff	14 W	14 W
РТО	14 W	14 W
PSB	14 W	14 W
PCK	14 W	14 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	11.16 kW	10.93 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	7398 kWh	9226 kWh

# **Average Climate**

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	15 dB(A)	15 dB(A)
Sound power level outdoor	57 dB(A)	57 dB(A)



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	Low temperature	Medium temperature
Pdesignh	8.37 kW	7.62 kW
$\eta_{S}$	195 %	140 %
Prated	8.37 kW	7.62 kW
SCOP	4.95	3.57
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	7.40 kW	6.74 kW
COP Tj = -7°C	3.10	2.29
Cdh Tj = -7 °C	0.994	0.995
Pdh Tj = +2°C	4.54 kW	4.22 kW
COP Tj = +2°C	4.80	3.51
Cdh Tj = +2 °C	0.986	0.989
Pdh Tj = $+7$ °C	2.94 kW	2.74 kW
$COP Tj = +7^{\circ}C$	6.61	4.36
Cdh Tj = +7 °C	0.969	0.978
Pdh Tj = 12°C	3.16 kW	3.28 kW
COP Tj = 12°C	8.15	6.50
Cdh Tj = +12 °C	0.965	0.973
Pdh Tj = Tbiv	7.40 kW	6.74 kW
COP Tj = Tbiv	3.10	2.29



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

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.51 kW	4.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.51
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.994	0.995
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	14 W	14 W
PSB	14 W	14 W
PCK	14 W	14 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.86 kW	2.72 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	3490 kWh	4405 kWh

# **Model: ENERGION M LIGHT 80T**

Configure model		
Model name	ENERGION M LIGHT 80T	
Application	Heating (medium temp)	
Units	Indoor + Outdoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	Yes	
Cooling mode application (optional)	+7°C/12°C	

General Data		
Power supply	3x400V 50Hz	

# Heating

EN 14511-2					
Low temperature Medium temperature					
Heat output	8.00 kW	5.80 kW			
El input	1.67 kW	1.97 kW			
СОР	4.80	2.95			

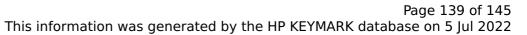
EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed
Starting and operating test	passed

# Cooling





EN 14511-2				
+7°C/+12°C +18°C/+23°C				
El input	2.26 kW	1.49 kW		
Cooling capacity	7	7.00		
EER	3.10	4.70		





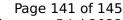
	+7°C/+12°C
Pdesignc	7 kW
SEER	4.64
Pdc Tj = 35°C	7 kW
EER Tj = 35°C	3.1
Pdc Tj = 30°C	5.17 kW
EER Tj = 30°C	4.13
Cdc Tj = 30 °C	0.99
Pdc Tj = 25°C	3.32 kW
EER Tj = 25°C	4.89
Cdc Tj = 25 °C	0.98
Pdc Tj = 20°C	3.19 kW
EER Tj = 20°C	6.85
Cdc Tj = 20 °C	0.97
Poff	14 W
PTO	14 W
PSB	14 W
PCK	0 W
Annual energy consumption Qce	1381 kWh

# Warmer Climate



EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	15 dB(A)	15 dB(A)	
Sound power level outdoor	57 dB(A)	57 dB(A)	

EN 14825		
	Low temperature	Medium temperature
Pdesignh	4.93 kW	4.48 kW
$\eta_{s}$	242 %	151 %
Prated	4.93 kW	4.48 kW
SCOP	6.14	3.84
Tbiv	2 °C	2 °C
TOL	-20 °C	-20 °C
Pdh Tj = +2°C	4.93 kW	4.48 kW
COP Tj = +2°C	4.05	2.53
Cdh Tj = +2 °C	0.989	0.992
Pdh Tj = +7°C	3.10 kW	2.81 kW
COP Tj = +7°C	5.70	3.08
Cdh Tj = +7 °C	0.975	0.985
Pdh Tj = 12°C	3.28 kW	3.16 kW
COP Tj = 12°C	7.86	5.45





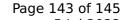
Pdh Tj = Tbiv       4.93 kW       4.48 kW         COP Tj = Tbiv       4.05       2.53         Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh       5.51 kW       4.90 kW         COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh       2.22       1.51         WTOL       60 °C       60 °C         Poff       14 W       14 W         PTO       14 W       14 W         PCK       14 W       14 W         Supplementary Heater: Type of energy input       Electricity       Electricity         Supplementary Heater: PSUP       0.00 kW       0.00 kW         Backup Heater       4.00 kW       4.00 kW			
COP Tj = Tbiv	Cdh Tj = +12 °C	0.967	0.977
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	Pdh Tj = Tbiv	4.93 kW	4.48 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	COP Tj = Tbiv	4.05	2.53
WTOL  60 °C  60 °C  14 W  14 W  14 W  PTO  14 W  14 W  PSB  14 W  14 W  PCK  14 W  14 W  14 W  Electricity  Supplementary Heater: Type of energy input  Electricity  Electricity  U.00 kW  4.00 kW  4.00 kW	Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.51 kW	4.90 kW
Poff 14 W 14 W  PTO 14 W 14 W  PSB 14 W 14 W  PCK 14 W 14 W  Supplementary Heater: Type of energy input Electricity Electricity  Supplementary Heater: PSUP 0.00 kW 0.00 kW  Backup Heater 4.00 kW 4.00 kW	COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.51
PTO 14 W 14 W  PSB 14 W 14 W  PCK 14 W 14 W  Supplementary Heater: Type of energy input Electricity Electricity  Supplementary Heater: PSUP 0.00 kW 0.00 kW  Backup Heater 4.00 kW 4.00 kW	WTOL	60 °C	60 °C
PSB 14 W 14 W  PCK 14 W 14 W  Supplementary Heater: Type of energy input Electricity Electricity  Supplementary Heater: PSUP 0.00 kW 0.00 kW  Backup Heater 4.00 kW 4.00 kW	Poff	14 W	14 W
PCK 14 W 14 W  Supplementary Heater: Type of energy input Electricity Electricity  Supplementary Heater: PSUP 0.00 kW 0.00 kW  Backup Heater 4.00 kW 4.00 kW	РТО	14 W	14 W
Supplementary Heater: Type of energy input  Electricity  Electricity  O.00 kW  Backup Heater  4.00 kW  4.00 kW	PSB	14 W	14 W
Supplementary Heater: PSUP  0.00 kW  0.00 kW  4.00 kW  4.00 kW	PCK	14 W	14 W
Backup Heater 4.00 kW 4.00 kW	Supplementary Heater: Type of energy input	Electricity	Electricity
	Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe 1073 kWh 1557 kWh	Backup Heater	4.00 kW	4.00 kW
	Annual energy consumption Qhe	1073 kWh	1557 kWh

# Colder Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	15 dB(A)	15 dB(A)	
Sound power level outdoor	57 dB(A)	57 dB(A)	



	Low temperature	Medium temperature
Pdesignh	11.78 kW	11.53 kW
$\eta_{s}$	154 %	120 %
Prated	11.78 kW	11.53 kW
SCOP	3.93	3.08
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	7.13 kW	6.98 kW
COP Tj = -7°C	3.47	2.73
Cdh Tj = -7 °C	0.993	0.995
Pdh Tj = +2°C	4.51 kW	4.20 kW
COP Tj = +2°C	5.32	4.07
Cdh Tj = +2 °C	0.984	0.987
Pdh Tj = +7°C	3.06 kW	2.84 kW
$COP Tj = +7^{\circ}C$	7.24	5.15
Cdh Tj = +7 °C	0.968	0.975
Pdh Tj = 12°C	3.18 kW	3.24 kW
COP Tj = 12°C	8.02	6.47
Cdh Tj = +12 °C	0.966	0.973
Pdh Tj = Tbiv	7.13 kW	6.98 kW





COP Tj = Tbiv	3.47	2.70
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.51 kW	4.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.51
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.993	0.995
WTOL	60 °C	60 °C
Poff	14 W	14 W
РТО	14 W	14 W
PSB	14 W	14 W
PCK	14 W	14 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	11.16 kW	10.93 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	7398 kWh	9226 kWh

### **Average Climate**

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	15 dB(A)	15 dB(A)	
Sound power level outdoor	57 dB(A)	57 dB(A)	



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	Low temperature	Medium temperature
Pdesignh	8.37 kW	7.62 kW
$\eta_{S}$	195 %	140 %
Prated	8.37 kW	7.62 kW
SCOP	4.95	3.57
Tbiv	-7 °C	-7 °C
TOL	-20 °C	-20 °C
Pdh Tj = -7°C	7.40 kW	6.74 kW
COP Tj = -7°C	3.10	2.29
Cdh Tj = -7 °C	0.994	0.995
Pdh Tj = +2°C	4.54 kW	4.22 kW
COP Tj = +2°C	4.80	3.51
Cdh Tj = +2 °C	0.986	0.989
Pdh Tj = $+7^{\circ}$ C	2.94 kW	2.74 kW
$COP Tj = +7^{\circ}C$	6.61	4.36
Cdh Tj = +7 °C	0.969	0.978
Pdh Tj = 12°C	3.16 kW	3.28 kW
COP Tj = 12°C	8.15	6.50
Cdh Tj = +12 °C	0.965	0.973
Pdh Tj = Tbiv	7.40 kW	6.74 kW
COP Tj = Tbiv	3.10	2.29



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

Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.51 kW	4.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.22	1.51
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.994	0.995
WTOL	60 °C	60 °C
Poff	14 W	14 W
PTO	14 W	14 W
PSB	14 W	14 W
PCK	14 W	14 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.86 kW	2.72 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Qhe	3490 kWh	4405 kWh