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Summary of	NIMBUS/ARIANEXT/AEROTOP/ENERGION 35/50 S - Plus	Reg. No.	ICIM-PDC-000114
Certificate Holder			
Name	Ariston Thermo Group		
Address	Viale Aristide Merloni 45	Zip	I-60044
City	Fabriano (AN)	Country	Italy
Certification Body	ICIM S.p.A.		
Subtype title	NIMBUS/ARIANEXT/AEROTOP/ENERGION 35/50 S - Plus		
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 35 S NET R32

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

General Data	
Power supply	1x230V 50Hz

### Heating

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

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

### Cooling

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**EN 14511-2**

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

**EN 14825**

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

## Warmer Climate

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### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	52 dB(A)	52 dB(A)

### EN 14825

	Low temperature	Medium temperature
P <sub>designh</sub>	2.84 kW	2.35 kW
$\eta_s$	239 %	137 %
P <sub>rated</sub>	2.84 kW	2.35 kW
SCOP	6.06	3.49
T <sub>biv</sub>	2 °C	2 °C
TOL	-20 °C	-20 °C
P <sub>dh</sub> T <sub>j</sub> = +2°C	2.84 kW	2.35 kW
COP T <sub>j</sub> = +2°C	4.00	2.19
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.982	0.988
P <sub>dh</sub> T <sub>j</sub> = +7°C	1.88 kW	1.60 kW
COP T <sub>j</sub> = +7°C	5.57	2.80
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.961	0.977
P <sub>dh</sub> T <sub>j</sub> = 12°C	1.91 kW	1.81 kW
COP T <sub>j</sub> = 12°C	7.94	5.10

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

## Colder Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	52 dB(A)	52 dB(A)

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

**EN 14825**

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

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

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

## Average Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	52 dB(A)	52 dB(A)

<b>EN 14825</b>
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This information was generated by the HP KEYMARK database on 5 Jul 2022

	<b>Low temperature</b>	<b>Medium temperature</b>
P <sub>designh</sub>	5.20 kW	4.63 kW
$\eta_s$	192 %	134 %
P <sub>rated</sub>	5.20 kW	4.63 kW
SCOP	4.89	3.43
T <sub>biv</sub>	-7 °C	-7 °C
TOL	-20 °C	-20 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	4.60 kW	4.10 kW
COP T <sub>j</sub> = -7°C	3.21	2.28
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.991	0.993
P <sub>dh</sub> T <sub>j</sub> = +2°C	2.88 kW	2.63 kW
COP T <sub>j</sub> = +2°C	4.66	3.35
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.979	0.983
P <sub>dh</sub> T <sub>j</sub> = +7°C	1.85 kW	1.76 kW
COP T <sub>j</sub> = +7°C	6.56	4.22
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.954	0.969
P <sub>dh</sub> T <sub>j</sub> = 12°C	1.92 kW	1.88 kW
COP T <sub>j</sub> = 12°C	8.49	6.30
C <sub>dh</sub> T <sub>j</sub> = +12 °C	0.942	0.956
P <sub>dh</sub> T <sub>j</sub> = T <sub>biv</sub>	4.60 kW	4.10 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.21	2.28

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

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

## Model: NIMBUS PLUS 50 S NET R32

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

General Data	
Power supply	1x230V 50Hz

### Heating

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

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

### Cooling

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

### EN 14511-2

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

### EN 14825

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

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

## Warmer Climate

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

### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

### EN 14825

	Low temperature	Medium temperature
P <sub>designh</sub>	3.44 kW	2.97 kW
$\eta_s$	245 %	151 %
P <sub>rated</sub>	3.44 kW	2.97 kW
SCOP	6.20	3.84
T <sub>biv</sub>	2 °C	2 °C
TOL	-20 °C	-20 °C
P <sub>dh</sub> T <sub>j</sub> = +2°C	3.44 kW	2.97 kW
COP T <sub>j</sub> = +2°C	3.88	2.33
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.985	0.989
P <sub>dh</sub> T <sub>j</sub> = +7°C	2.22 kW	2.02 kW
COP T <sub>j</sub> = +7°C	5.66	3.16
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.965	0.979
P <sub>dh</sub> T <sub>j</sub> = 12°C	1.86 kW	1.76 kW
COP T <sub>j</sub> = 12°C	8.01	5.40

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

## Colder Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

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

**EN 14825**

	Low temperature	Medium temperature
P <sub>designh</sub>	8.26 kW	8.26 kW
$\eta_s$	150 %	118 %
P <sub>rated</sub>	8.26 kW	8.26 kW
SCOP	3.85	3.84
T <sub>biv</sub>	-7 °C	-7 °C
TOL	-20 °C	-20 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	5.00 kW	5.00 kW
COP T <sub>j</sub> = -7°C	3.50	2.71
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.991	0.993
P <sub>dh</sub> T <sub>j</sub> = +2°C	3.00 kW	3.11 kW
COP T <sub>j</sub> = +2°C	5.15	3.81
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.978	0.983
P <sub>dh</sub> T <sub>j</sub> = +7°C	1.99 kW	2.28 kW
COP T <sub>j</sub> = +7°C	7.20	5.29
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.953	0.968
P <sub>dh</sub> T <sub>j</sub> = 12°C	1.87 kW	1.87 kW
COP T <sub>j</sub> = 12°C	8.70	6.88
C <sub>dh</sub> T <sub>j</sub> = +12 °C	0.949	0.950
P <sub>dh</sub> T <sub>j</sub> = T <sub>biv</sub>	5.00 kW	5.00 kW



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

## Average Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

<b>EN 14825</b>
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This information was generated by the HP KEYMARK database on 5 Jul 2022

	<b>Low temperature</b>	<b>Medium temperature</b>
P <sub>designh</sub>	5.65 kW	5.65 kW
$\eta_s$	183 %	136 %
P <sub>rated</sub>	5.65 kW	5.65 kW
SCOP	4.66	3.48
T <sub>biv</sub>	-7 °C	-7 °C
TOL	-20 °C	-20 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	5.00 kW	5.00 kW
COP T <sub>j</sub> = -7°C	3.10	2.28
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.992	0.994
P <sub>dh</sub> T <sub>j</sub> = +2°C	3.11 kW	3.11 kW
COP T <sub>j</sub> = +2°C	4.32	3.30
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.981	0.986
P <sub>dh</sub> T <sub>j</sub> = +7°C	1.96 kW	2.19 kW
COP T <sub>j</sub> = +7°C	6.48	4.58
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.955	0.972
P <sub>dh</sub> T <sub>j</sub> = 12°C	1.86 kW	1.84 kW
COP T <sub>j</sub> = 12°C	8.41	6.33
C <sub>dh</sub> T <sub>j</sub> = +12 °C	0.939	0.953
P <sub>dh</sub> T <sub>j</sub> = T <sub>biv</sub>	5.00 kW	5.00 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.10	2.28

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

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

## Model: ARIANEXT PLUS 35 S LINK R32

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

General Data	
Power supply	1x230V 50Hz

### Heating

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

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

### Cooling

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

**EN 14511-2**

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

**EN 14825**

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

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

## Warmer Climate

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

### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	52 dB(A)	52 dB(A)

### EN 14825

	Low temperature	Medium temperature
P <sub>designh</sub>	2.84 kW	2.35 kW
$\eta_s$	239 %	137 %
P <sub>rated</sub>	2.84 kW	2.35 kW
SCOP	6.06	3.49
T <sub>biv</sub>	2 °C	2 °C
TOL	-20 °C	-20 °C
P <sub>dh</sub> T <sub>j</sub> = +2°C	2.84 kW	2.35 kW
COP T <sub>j</sub> = +2°C	4.00	2.19
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.982	0.988
P <sub>dh</sub> T <sub>j</sub> = +7°C	1.88 kW	1.60 kW
COP T <sub>j</sub> = +7°C	5.57	2.80
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.961	0.977
P <sub>dh</sub> T <sub>j</sub> = 12°C	1.91 kW	1.81 kW
COP T <sub>j</sub> = 12°C	7.94	5.10

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

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

## Colder Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	52 dB(A)	52 dB(A)



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

**EN 14825**

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

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

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

## Average Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	52 dB(A)	52 dB(A)

<b>EN 14825</b>
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This information was generated by the HP KEYMARK database on 5 Jul 2022

	<b>Low temperature</b>	<b>Medium temperature</b>
P <sub>designh</sub>	5.20 kW	4.63 kW
$\eta_s$	192 %	134 %
P <sub>rated</sub>	5.20 kW	4.63 kW
SCOP	4.89	3.43
T <sub>biv</sub>	-7 °C	-7 °C
TOL	-20 °C	-20 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	4.60 kW	4.10 kW
COP T <sub>j</sub> = -7°C	3.21	2.28
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.991	0.993
P <sub>dh</sub> T <sub>j</sub> = +2°C	2.88 kW	2.63 kW
COP T <sub>j</sub> = +2°C	4.66	3.35
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.979	0.983
P <sub>dh</sub> T <sub>j</sub> = +7°C	1.85 kW	1.76 kW
COP T <sub>j</sub> = +7°C	6.56	4.22
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.954	0.969
P <sub>dh</sub> T <sub>j</sub> = 12°C	1.92 kW	1.88 kW
COP T <sub>j</sub> = 12°C	8.49	6.30
C <sub>dh</sub> T <sub>j</sub> = +12 °C	0.942	0.956
P <sub>dh</sub> T <sub>j</sub> = T <sub>biv</sub>	4.60 kW	4.10 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.21	2.28

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

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

## Model: ARIANEXT PLUS 50 S LINK R32

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

General Data	
Power supply	1x230V 50Hz

### Heating

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

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

### Cooling

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

### EN 14511-2

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

### EN 14825

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

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

## Warmer Climate

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

### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

### EN 14825

	Low temperature	Medium temperature
P <sub>designh</sub>	3.44 kW	2.97 kW
$\eta_s$	245 %	151 %
P <sub>rated</sub>	3.44 kW	2.97 kW
SCOP	6.20	3.84
T <sub>biv</sub>	2 °C	2 °C
TOL	-20 °C	-20 °C
P <sub>dh</sub> T <sub>j</sub> = +2°C	3.44 kW	2.97 kW
COP T <sub>j</sub> = +2°C	3.88	2.33
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.985	0.989
P <sub>dh</sub> T <sub>j</sub> = +7°C	2.22 kW	2.02 kW
COP T <sub>j</sub> = +7°C	5.66	3.16
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.965	0.979
P <sub>dh</sub> T <sub>j</sub> = 12°C	1.86 kW	1.76 kW
COP T <sub>j</sub> = 12°C	8.01	5.40



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

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

## Colder Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

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

**EN 14825**

	Low temperature	Medium temperature
P <sub>designh</sub>	8.26 kW	8.26 kW
$\eta_s$	150 %	118 %
P <sub>rated</sub>	8.26 kW	8.26 kW
SCOP	3.85	3.84
T <sub>biv</sub>	-7 °C	-7 °C
TOL	-20 °C	-20 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	5.00 kW	5.00 kW
COP T <sub>j</sub> = -7°C	3.50	2.71
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.991	0.993
P <sub>dh</sub> T <sub>j</sub> = +2°C	3.00 kW	3.11 kW
COP T <sub>j</sub> = +2°C	5.15	3.81
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.978	0.983
P <sub>dh</sub> T <sub>j</sub> = +7°C	1.99 kW	2.28 kW
COP T <sub>j</sub> = +7°C	7.20	5.29
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.953	0.968
P <sub>dh</sub> T <sub>j</sub> = 12°C	1.87 kW	1.87 kW
COP T <sub>j</sub> = 12°C	8.70	6.88
C <sub>dh</sub> T <sub>j</sub> = +12 °C	0.949	0.950
P <sub>dh</sub> T <sub>j</sub> = T <sub>biv</sub>	5.00 kW	5.00 kW

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

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

## Average Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

<b>EN 14825</b>
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This information was generated by the HP KEYMARK database on 5 Jul 2022

	<b>Low temperature</b>	<b>Medium temperature</b>
P <sub>designh</sub>	5.65 kW	5.65 kW
$\eta_s$	183 %	136 %
P <sub>rated</sub>	5.65 kW	5.65 kW
SCOP	4.66	3.48
T <sub>biv</sub>	-7 °C	-7 °C
TOL	-20 °C	-20 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	5.00 kW	5.00 kW
COP T <sub>j</sub> = -7°C	3.10	2.28
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.992	0.994
P <sub>dh</sub> T <sub>j</sub> = +2°C	3.11 kW	3.11 kW
COP T <sub>j</sub> = +2°C	4.32	3.30
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.981	0.986
P <sub>dh</sub> T <sub>j</sub> = +7°C	1.96 kW	2.19 kW
COP T <sub>j</sub> = +7°C	6.48	4.58
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.955	0.972
P <sub>dh</sub> T <sub>j</sub> = 12°C	1.86 kW	1.84 kW
COP T <sub>j</sub> = 12°C	8.41	6.33
C <sub>dh</sub> T <sub>j</sub> = +12 °C	0.939	0.953
P <sub>dh</sub> T <sub>j</sub> = T <sub>biv</sub>	5.00 kW	5.00 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.10	2.28

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

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

## Model: AEROTOP SPLIT 04.2 M-RX

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

General Data	
Power supply	1x230V 50Hz

### Heating

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

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

### Cooling

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

**EN 14511-2**

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

**EN 14825**

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

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

## Warmer Climate



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

### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	52 dB(A)	52 dB(A)

### EN 14825

	Low temperature	Medium temperature
P <sub>designh</sub>	2.84 kW	2.35 kW
$\eta_s$	239 %	137 %
P <sub>rated</sub>	2.84 kW	2.35 kW
SCOP	6.06	3.49
T <sub>biv</sub>	2 °C	2 °C
TOL	-20 °C	-20 °C
P <sub>dh</sub> T <sub>j</sub> = +2°C	2.84 kW	2.35 kW
COP T <sub>j</sub> = +2°C	4.00	2.19
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.982	0.988
P <sub>dh</sub> T <sub>j</sub> = +7°C	1.88 kW	1.60 kW
COP T <sub>j</sub> = +7°C	5.57	2.80
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.961	0.977
P <sub>dh</sub> T <sub>j</sub> = 12°C	1.91 kW	1.81 kW
COP T <sub>j</sub> = 12°C	7.94	5.10

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

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

## Colder Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	52 dB(A)	52 dB(A)

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

**EN 14825**

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

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

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

## Average Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	52 dB(A)	52 dB(A)

<b>EN 14825</b>
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This information was generated by the HP KEYMARK database on 5 Jul 2022

	<b>Low temperature</b>	<b>Medium temperature</b>
P <sub>designh</sub>	5.20 kW	4.63 kW
$\eta_s$	192 %	134 %
P <sub>rated</sub>	5.20 kW	4.63 kW
SCOP	4.89	3.43
T <sub>biv</sub>	-7 °C	-7 °C
TOL	-20 °C	-20 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	4.60 kW	4.10 kW
COP T <sub>j</sub> = -7°C	3.21	2.28
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.991	0.993
P <sub>dh</sub> T <sub>j</sub> = +2°C	2.88 kW	2.63 kW
COP T <sub>j</sub> = +2°C	4.66	3.35
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.979	0.983
P <sub>dh</sub> T <sub>j</sub> = +7°C	1.85 kW	1.76 kW
COP T <sub>j</sub> = +7°C	6.56	4.22
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.954	0.969
P <sub>dh</sub> T <sub>j</sub> = 12°C	1.92 kW	1.88 kW
COP T <sub>j</sub> = 12°C	8.49	6.30
C <sub>dh</sub> T <sub>j</sub> = +12 °C	0.942	0.956
P <sub>dh</sub> T <sub>j</sub> = T <sub>biv</sub>	4.60 kW	4.10 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.21	2.28

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

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

## Model: AEROTOP SPLIT 05.2 M-RX

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

General Data	
Power supply	1x230V 50Hz

### Heating

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

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

### Cooling

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

### EN 14511-2

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

### EN 14825



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

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

## Warmer Climate

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

### EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

### EN 14825

	Low temperature	Medium temperature
P <sub>designh</sub>	3.44 kW	2.97 kW
$\eta_s$	245 %	151 %
P <sub>rated</sub>	3.44 kW	2.97 kW
SCOP	6.20	3.84
T <sub>biv</sub>	2 °C	2 °C
TOL	-20 °C	-20 °C
P <sub>dh</sub> T <sub>j</sub> = +2°C	3.44 kW	2.97 kW
COP T <sub>j</sub> = +2°C	3.88	2.33
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.985	0.989
P <sub>dh</sub> T <sub>j</sub> = +7°C	2.22 kW	2.02 kW
COP T <sub>j</sub> = +7°C	5.66	3.16
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.965	0.979
P <sub>dh</sub> T <sub>j</sub> = 12°C	1.86 kW	1.76 kW
COP T <sub>j</sub> = 12°C	8.01	5.40

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

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

## Colder Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

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

**EN 14825**

	Low temperature	Medium temperature
P <sub>designh</sub>	8.26 kW	8.26 kW
$\eta_s$	150 %	118 %
P <sub>rated</sub>	8.26 kW	8.26 kW
SCOP	3.85	3.84
T <sub>biv</sub>	-7 °C	-7 °C
TOL	-20 °C	-20 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	5.00 kW	5.00 kW
COP T <sub>j</sub> = -7°C	3.50	2.71
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.991	0.993
P <sub>dh</sub> T <sub>j</sub> = +2°C	3.00 kW	3.11 kW
COP T <sub>j</sub> = +2°C	5.15	3.81
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.978	0.983
P <sub>dh</sub> T <sub>j</sub> = +7°C	1.99 kW	2.28 kW
COP T <sub>j</sub> = +7°C	7.20	5.29
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.953	0.968
P <sub>dh</sub> T <sub>j</sub> = 12°C	1.87 kW	1.87 kW
COP T <sub>j</sub> = 12°C	8.70	6.88
C <sub>dh</sub> T <sub>j</sub> = +12 °C	0.949	0.950
P <sub>dh</sub> T <sub>j</sub> = T <sub>biv</sub>	5.00 kW	5.00 kW

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

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

## Average Climate

<b>EN 12102-1</b>		
	<b>Low temperature</b>	<b>Medium temperature</b>
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	54 dB(A)	54 dB(A)

<b>EN 14825</b>
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This information was generated by the HP KEYMARK database on 5 Jul 2022

	<b>Low temperature</b>	<b>Medium temperature</b>
P <sub>designh</sub>	5.65 kW	5.65 kW
$\eta_s$	183 %	136 %
P <sub>rated</sub>	5.65 kW	5.65 kW
SCOP	4.66	3.48
T <sub>biv</sub>	-7 °C	-7 °C
TOL	-20 °C	-20 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	5.00 kW	5.00 kW
COP T <sub>j</sub> = -7°C	3.10	2.28
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.992	0.994
P <sub>dh</sub> T <sub>j</sub> = +2°C	3.11 kW	3.11 kW
COP T <sub>j</sub> = +2°C	4.32	3.30
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.981	0.986
P <sub>dh</sub> T <sub>j</sub> = +7°C	1.96 kW	2.19 kW
COP T <sub>j</sub> = +7°C	6.48	4.58
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.955	0.972
P <sub>dh</sub> T <sub>j</sub> = 12°C	1.86 kW	1.84 kW
COP T <sub>j</sub> = 12°C	8.41	6.33
C <sub>dh</sub> T <sub>j</sub> = +12 °C	0.939	0.953
P <sub>dh</sub> T <sub>j</sub> = T <sub>biv</sub>	5.00 kW	5.00 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.10	2.28

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

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