

## Subtype NIMBUS 35/50 S - FLEX-H

Certificate Holder	Ariston Thermo Group
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City	Fabriano (AN)
Country	IT
Certification Body	ICIM S.p.A.
Subtype title	NIMBUS 35/50 S - FLEX-H
Registration number	ICIM-PDC-000239
Heat Pump Type	Outdoor Air/Water
Refrigerant	R32
Mass of Refrigerant	1.4 kg
Certification Date	12.02.2024
Testing basis	V12

## Model NIMBUS FLEX-H 35 S NET R32

Model name	NIMBUS FLEX-H 35 S NET R32
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	Colder, Warmer, Warmer Climate, Colder Climate
Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C, +18°C/+23°C
Any additional heat sources	n/a

## General data

Power supply	1x230V 50Hz
Off-peak product	n/a

## Outdoor Air/Water

### EN 16147 | Average Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	141 %
COP	3.30
Heating up time	01:52 h:min
Standby power input	32.0 W
Reference hot water temperature	53 °C
Mixed water at 40°C	244 l

### EN 14511-4 | Heating

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

### EN 14511-2 | Heating

	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 14511-2 | Cooling

	+7°C/+12°C	+18°C/+23°C
El input	1.03 kW	0.77 kW
Cooling capacity	3.50	4.08
EER	3.40	5.29

### EN 12102-1 | Average Climate

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

#### EN 14825 | Average Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	5.20 kW	4.63 kW
η <sub>s</sub>	193 %	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	1.84 kW
COP T <sub>j</sub> = 12°C	8.49	6.33
C <sub>dh</sub> T <sub>j</sub> = +12 °C	0.943	0.955
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
P <sub>dh</sub> T <sub>j</sub> = TOL or P <sub>dh</sub> T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.03 kW	2.46 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	2.25	1.52
C <sub>dh</sub> T <sub>j</sub> = TOL or P <sub>dh</sub> T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	0.991	0.993
WTOL	60 °C	60 °C
P <sub>off</sub>	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 <sub>he</sub>	2198 kWh	2790 kWh

#### EN 12102-1 | Colder Climate

	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 | Colder Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	7.75 kW	7.43 kW
η <sub>s</sub>	151 %	120 %
P <sub>rated</sub>	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	0.951	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
COP T <sub>j</sub> = T <sub>biv</sub>	3.54	2.76
P <sub>dh</sub> T <sub>j</sub> = TOL or P <sub>dh</sub> T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.03 kW	2.46 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	2.25	1.52
C <sub>dh</sub> T <sub>j</sub> = TOL or P <sub>dh</sub> T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	0.990	0.992
WTOL	60 °C	60 °C
P <sub>off</sub>	13 W	13 W
PTO	13 W	13 W
PSB	13 W	13 W
PCK	13 W	13 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	7.34 kW	7.04 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Q <sub>he</sub>	4964 kWh	5968 kWh

#### EN 12102-1 | Warmer Climate

	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 | Warmer Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	2.84 kW	2.35 kW
η <sub>s</sub>	240 %	137 %

Prated	2.80 kW	2.35 kW
SCOP	6.06	3.50
Tbiv	2 °C	2 °C
TOL	-20 °C	-20 °C
Pdh Tj = +2°C	2.80 kW	2.35 kW
COP Tj = +2°C	4.10	2.26
Cdh Tj = +2 °C	0.981	0.987
Pdh Tj = +7°C	1.88 kW	1.60 kW
COP Tj = +7°C	5.57	2.80
Cdh Tj = +7 °C	0.961	0.977
Pdh Tj = 12°C	1.91 kW	1.81 kW
COP Tj = 12°C	7.94	5.10
Cdh Tj = +12 °C	0.946	0.963
Pdh Tj = Tbiv	2.80 kW	2.35 kW
COP Tj = Tbiv	4.10	2.26
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	617 kWh	897 kWh

#### EN 14825 | Cooling

	+7°C/+12°C	+18°C/+23°C
Pdesignc	3.5 kW	
SEER	4.87	
Pdc Tj = 35°C	3.5 kW	
EER Tj = 35°C	3	
Pdc Tj = 30°C	2.58 kW	
EER Tj = 30°C	4.33	
Cdc Tj = 30 °C	0.98	
Pdc Tj = 25°C	1.72 kW	
EER Tj = 25°C	5.86	
Cdc Tj = 25 °C	0.95	
Pdc Tj = 20°C	1.79 kW	
EER Tj = 20°C	7.24	
Cdc Tj = 20 °C	0.94	

Poff	14 W
PTO	14 W
PSB	14 W
PCK	0 W
Annual energy consumption Qce	628 kWh

## Model NIMBUS FLEX-H 50 S NET R32

Model name	NIMBUS FLEX-H 50 S NET R32
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	Colder, Warmer, Warmer Climate, Colder Climate
Reversibility	Yes
Cooling mode application (optional)	+7°C/12°C, +18°C/+23°C
Any additional heat sources	n/a

## General data

Power supply	1x230V 50Hz
Off-peak product	n/a

## Outdoor Air/Water

### EN 16147 | Average Climate

Declared load profile	L
Efficiency $\eta_{DHW}$	141 %
COP	3.30
Heating up time	01:30 h:min
Standby power input	32.0 W
Reference hot water temperature	53 °C
Mixed water at 40°C	244 l

### EN 14511-4 | Heating

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

### EN 14511-2 | Heating

	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 14511-2 | Cooling

	+7°C/+12°C	+18°C/+23°C
El input	1.75 kW	1.02 kW
Cooling capacity	5.00	4.63
EER	2.85	4.56

### EN 12102-1 | Average Climate

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

#### EN 14825 | Average Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	5.65 kW	5.65 kW
η <sub>s</sub>	184 %	136 %
P <sub>rated</sub>	5.65 kW	5.65 kW
SCOP	4.66	3.47
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	3.11	2.28
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.991	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	0.985
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	0.954	0.971
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	0.937	0.952
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>	3.11	2.28
P <sub>dh</sub> T <sub>j</sub> = TOL or P <sub>dh</sub> T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.69 kW	3.18 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	2.30	1.54
C <sub>dh</sub> T <sub>j</sub> = TOL or P <sub>dh</sub> T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	0.992	0.994
WTOL	60 °C	60 °C
P <sub>off</sub>	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	1.96 kW	2.47 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Q <sub>he</sub>	2504 kWh	3360 kWh

#### EN 12102-1 | Colder Climate

	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 | Colder Climate



	Low temperature	Medium temperature
P <sub>designh</sub>	8.26 kW	8.26 kW
η <sub>s</sub>	152 %	118 %
Prated	8.26 kW	8.26 kW
SCOP	3.89	3.02
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	0.990	0.992
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	0.976	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	7.22	5.29
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.949	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	0.935	0.948
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>	3.50	2.71
P <sub>dh</sub> T <sub>j</sub> = TOL or P <sub>dh</sub> T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	3.69 kW	4.90 kW
COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	2.30	1.51
C <sub>dh</sub> T <sub>j</sub> = TOL or P <sub>dh</sub> T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>	0.991	0.993
WTOL	60 °C	60 °C
P <sub>off</sub>	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	7.83 kW	7.83 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Q <sub>he</sub>	5240 kWh	6739 kWh

#### EN 12102-1 | Warmer Climate

	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 | Warmer Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	3.44 kW	2.97 kW
η <sub>s</sub>	244 %	150 %

Prated	3.40 kW	2.90 kW
SCOP	6.17	3.83
Tbiv	2 °C	2 °C
TOL	-20 °C	-20 °C
Pdh Tj = +2°C	3.40 kW	2.90 kW
COP Tj = +2°C	3.75	2.30
Cdh Tj = +2 °C	0.985	0.989
Pdh Tj = +7°C	2.22 kW	2.02 kW
COP Tj = +7°C	5.66	3.16
Cdh Tj = +7 °C	0.964	0.978
Pdh Tj = 12°C	1.86 kW	1.76 kW
COP Tj = 12°C	8.01	5.40
Cdh Tj = +12 °C	0.940	0.957
Pdh Tj = Tbiv	3.40 kW	2.90 kW
COP Tj = Tbiv	3.75	2.30
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	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	734 kWh	1012 kWh

#### EN 14825 | Cooling

	+7°C/+12°C	+18°C/+23°C
Pdesignc	5 kW	
SEER	4.85	
Pdc Tj = 35°C	5 kW	
EER Tj = 35°C	2.85	
Pdc Tj = 30°C	3.77 kW	
EER Tj = 30°C	4.25	
Cdc Tj = 30 °C	0.98	
Pdc Tj = 25°C	2.32 kW	
EER Tj = 25°C	5.38	
Cdc Tj = 25 °C	0.97	
Pdc Tj = 20°C	1.87 kW	
EER Tj = 20°C	7.85	
Cdc Tj = 20 °C	0.94	

Poff	14 W
PTO	14 W
PSB	14 W
PCK	0 W
Annual energy consumption Qce	925 kWh