

## Subtype NIMBUS 80 S - FLEX-H

Certificate Holder	Ariston Thermo Group
Address	Viale Aristide Merloni 45
ZIP	I-60044
City	Fabriano (AN)
Country	IT
Certification Body	ICIM S.p.A.
Subtype title	NIMBUS 80 S - FLEX-H
Registration number	ICIM-PDC-000242
Heat Pump Type	Outdoor Air/Water
Refrigerant	R32
Mass of Refrigerant	1.8 kg
Certification Date	12.02.2024
Testing basis	V12

## Model NIMBUS FLEX-H 80 S NET R32

Model name	NIMBUS FLEX-H 80 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	01:15 h:min
Standby power input	36.0 W
Reference hot water temperature	53 °C
Mixed water at 40°C	256 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	8.00 kW	5.80 kW
El input	1.67 kW	1.97 kW
COP	4.80	2.95

## EN 14511-2 | Cooling

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

## 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	56 dB(A)	56 dB(A)

#### EN 14825 | Average Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	8.37 kW	7.62 kW
η <sub>s</sub>	195 %	140 %
P <sub>rated</sub>	8.37 kW	7.62 kW
SCOP	4.95	3.57
T <sub>biv</sub>	-7 °C	-7 °C
TOL	-20 °C	-20 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	7.40 kW	6.74 kW
COP T <sub>j</sub> = -7°C	3.10	2.29
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.994	0.995
P <sub>dh</sub> T <sub>j</sub> = +2°C	4.54 kW	4.22 kW
COP T <sub>j</sub> = +2°C	4.80	3.51
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.985	0.988
P <sub>dh</sub> T <sub>j</sub> = +7°C	2.94 kW	2.74 kW
COP T <sub>j</sub> = +7°C	6.61	4.36
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.969	0.978
P <sub>dh</sub> T <sub>j</sub> = 12°C	3.16 kW	3.28 kW
COP T <sub>j</sub> = 12°C	8.15	6.50
C <sub>dh</sub> T <sub>j</sub> = +12 °C	0.964	0.972
P <sub>dh</sub> T <sub>j</sub> = T <sub>biv</sub>	7.40 kW	6.74 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.10	2.29
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>	5.51 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>	2.22	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>	0.994	0.995
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	2.86 kW	2.72 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Q <sub>he</sub>	3491 kWh	4409 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

#### EN 14825 | Colder Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	11.78 kW	11.53 kW
η <sub>s</sub>	154 %	121 %
P <sub>rated</sub>	11.78 kW	11.53 kW
SCOP	3.92	3.11
T <sub>biv</sub>	-7 °C	-7 °C
TOL	-20 °C	-20 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	7.13 kW	6.98 kW
COP T <sub>j</sub> = -7°C	3.47	2.73
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.993	0.995
P <sub>dh</sub> T <sub>j</sub> = +2°C	4.51 kW	4.20 kW
COP T <sub>j</sub> = +2°C	5.32	4.07
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.983	0.986
P <sub>dh</sub> T <sub>j</sub> = +7°C	3.06 kW	2.84 kW
COP T <sub>j</sub> = +7°C	7.24	5.15
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.967	0.975
P <sub>dh</sub> T <sub>j</sub> = 12°C	3.18 kW	3.24 kW
COP T <sub>j</sub> = 12°C	8.02	6.47
C <sub>dh</sub> T <sub>j</sub> = +12 °C	0.965	0.972
P <sub>dh</sub> T <sub>j</sub> = T <sub>biv</sub>	7.13 kW	6.98 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.47	2.73
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>	5.51 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>	2.22	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>	0.993	0.995
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	11.16 kW	10.93 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Q <sub>he</sub>	7400 kWh	9141 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	4.93 kW	4.48 kW
η <sub>s</sub>	247 %	152 %

Prated	4.91 kW	4.30 kW
SCOP	6.25	3.87
Tbiv	2 °C	2 °C
TOL	-20 °C	-20 °C
Pdh Tj = +2°C	4.91 kW	4.30 kW
COP Tj = +2°C	4.05	2.50
Cdh Tj = +2 °C	0.988	0.992
Pdh Tj = +7°C	3.10 kW	2.81 kW
COP Tj = +7°C	5.70	3.08
Cdh Tj = +7 °C	0.974	0.985
Pdh Tj = 12°C	3.28 kW	3.16 kW
COP Tj = 12°C	7.86	5.45
Cdh Tj = +12 °C	0.966	0.976
Pdh Tj = Tbiv	4.91 kW	4.30 kW
COP Tj = Tbiv	4.05	2.50
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
Annual energy consumption Qhe	1049 kWh	1483 kWh

#### EN 14825 | Cooling

	+7°C/+12°C	+18°C/+23°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

## Model NIMBUS FLEX-H 80 S-T NET R32

Model name	NIMBUS FLEX-H 80 S-T 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	3x400V 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	01:15 h:min
Standby power input	36.0 W
Reference hot water temperature	53 °C
Mixed water at 40°C	256 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	8.00 kW	5.80 kW
El input	1.67 kW	1.97 kW
COP	4.80	2.95

### EN 14511-2 | Cooling

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

### 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	56 dB(A)	56 dB(A)

#### EN 14825 | Average Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	8.37 kW	7.62 kW
η <sub>s</sub>	195 %	140 %
P <sub>rated</sub>	8.37 kW	7.62 kW
SCOP	4.95	3.57
T <sub>biv</sub>	-7 °C	-7 °C
TOL	-20 °C	-20 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	7.40 kW	6.74 kW
COP T <sub>j</sub> = -7°C	3.10	2.29
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.994	0.995
P <sub>dh</sub> T <sub>j</sub> = +2°C	4.54 kW	4.22 kW
COP T <sub>j</sub> = +2°C	4.80	3.51
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.985	0.988
P <sub>dh</sub> T <sub>j</sub> = +7°C	2.94 kW	2.74 kW
COP T <sub>j</sub> = +7°C	6.61	4.36
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.969	0.978
P <sub>dh</sub> T <sub>j</sub> = 12°C	3.16 kW	3.28 kW
COP T <sub>j</sub> = 12°C	8.15	6.50
C <sub>dh</sub> T <sub>j</sub> = +12 °C	0.964	0.972
P <sub>dh</sub> T <sub>j</sub> = T <sub>biv</sub>	7.40 kW	6.74 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.10	2.29
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>	5.51 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>	2.22	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>	0.994	0.995
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	2.86 kW	2.72 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Q <sub>he</sub>	3491 kWh	4409 kWh

#### EN 12102-1 | Colder Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

#### EN 14825 | Colder Climate



	Low temperature	Medium temperature
P <sub>designh</sub>	11.78 kW	11.53 kW
η <sub>s</sub>	154 %	121 %
Prated	11.78 kW	11.53 kW
SCOP	3.92	3.11
T <sub>biv</sub>	-7 °C	-7 °C
TOL	-20 °C	-20 °C
P <sub>dh</sub> T <sub>j</sub> = -7°C	7.13 kW	6.98 kW
COP T <sub>j</sub> = -7°C	3.47	2.73
C <sub>dh</sub> T <sub>j</sub> = -7 °C	0.993	0.995
P <sub>dh</sub> T <sub>j</sub> = +2°C	4.51 kW	4.20 kW
COP T <sub>j</sub> = +2°C	5.32	4.07
C <sub>dh</sub> T <sub>j</sub> = +2 °C	0.983	0.986
P <sub>dh</sub> T <sub>j</sub> = +7°C	3.06 kW	2.84 kW
COP T <sub>j</sub> = +7°C	7.24	5.15
C <sub>dh</sub> T <sub>j</sub> = +7 °C	0.967	0.975
P <sub>dh</sub> T <sub>j</sub> = 12°C	3.18 kW	3.24 kW
COP T <sub>j</sub> = 12°C	8.02	6.47
C <sub>dh</sub> T <sub>j</sub> = +12 °C	0.965	0.972
P <sub>dh</sub> T <sub>j</sub> = T <sub>biv</sub>	7.13 kW	6.98 kW
COP T <sub>j</sub> = T <sub>biv</sub>	3.47	2.73
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>	5.51 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>	2.22	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>	0.993	0.995
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	11.16 kW	10.93 kW
Backup Heater	4.00 kW	4.00 kW
Annual energy consumption Q <sub>he</sub>	7400 kWh	9141 kWh

#### EN 12102-1 | Warmer Climate

	Low temperature	Medium temperature
Sound power level indoor	37 dB(A)	37 dB(A)
Sound power level outdoor	56 dB(A)	56 dB(A)

#### EN 14825 | Warmer Climate

	Low temperature	Medium temperature
P <sub>designh</sub>	4.93 kW	4.48 kW
η <sub>s</sub>	247 %	152 %

Prated	4.91 kW	4.30 kW
SCOP	6.25	3.87
Tbiv	2 °C	2 °C
TOL	-20 °C	-20 °C
Pdh Tj = +2°C	4.91 kW	4.30 kW
COP Tj = +2°C	4.05	2.50
Cdh Tj = +2 °C	0.988	0.992
Pdh Tj = +7°C	3.10 kW	2.81 kW
COP Tj = +7°C	5.70	3.08
Cdh Tj = +7 °C	0.974	0.985
Pdh Tj = 12°C	3.28 kW	3.16 kW
COP Tj = 12°C	7.86	5.45
Cdh Tj = +12 °C	0.966	0.976
Pdh Tj = Tbiv	4.91 kW	4.30 kW
COP Tj = Tbiv	4.05	2.50
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
Annual energy consumption Qhe	1049 kWh	1483 kWh

#### EN 14825 | Cooling

	+7°C/+12°C	+18°C/+23°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