

## Subtype R290 monobloc 7, 9kW\_1 phase &amp; 3phases\_UB40

Certificate Holder	LG Electronics Inc.
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Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH
Subtype title	R290 monobloc 7, 9kW_1 phase & 3phases_UB40
Registration number	011-1W0831
Heat Pump Type	Outdoor Air/Water
Refrigerant	R290
Mass of Refrigerant	0.9 kg
Certification Date	17.07.2024
Testing basis	HP KEYMARK certification scheme rules V14

## Model HM091HF UB40 / HN1616HC NK0

Model name	HM091HF UB40 / HN1616HC NK0
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	n/a
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

## General data

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

## Outdoor Air/Water

### 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	9.00 kW	5.50 kW
El input	1.91 kW	1.67 kW
COP	4.70	3.30

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	39 dB(A)	39 dB(A)
Sound power level outdoor	50 dB(A)	50 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	205 %	151 %
Prated	6.00 kW	7.00 kW
SCOP	5.20	3.86
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.30 kW	6.40 kW
COP Tj = -7°C	3.30	2.45
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	3.20 kW	3.90 kW
COP Tj = +2°C	5.25	3.92
Cdh Tj = +2 °C	0.900	0.900

Pdh Tj = +7°C	2.40 kW	3.90 kW
COP Tj = +7°C	6.55	5.05
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	2.40 kW	3.90 kW
COP Tj = 12°C	8.30	6.30
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	6.00 kW	7.20 kW
COP Tj = Tbiv	2.90	2.15
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.00 kW	7.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.90	2.15
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	75 °C	75 °C
Poff	10 W	10 W
PTO	30 W	30 W
PSB	10 W	10 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2386 kWh	3856 kWh

## Model HM091HF UB40 / PHCS0 ENCXLEU

Model name	HM091HF UB40 / PHCS0 ENCXLEU
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	n/a
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

## General data

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

## Outdoor Air/Water

## 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	9.00 kW	5.50 kW
El input	1.91 kW	1.67 kW
COP	4.70	3.30

## EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	0 dB(A)	0 dB(A)
Sound power level outdoor	50 dB(A)	50 dB(A)

## EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	205 %	151 %
Prated	6.00 kW	7.00 kW
SCOP	5.20	3.86
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.30 kW	6.40 kW
COP Tj = -7°C	3.30	2.45
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	3.20 kW	3.90 kW
COP Tj = +2°C	5.25	3.92
Cdh Tj = +2 °C	0.900	0.900

Pdh Tj = +7°C	2.40 kW	3.90 kW
COP Tj = +7°C	6.55	5.05
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	2.40 kW	3.90 kW
COP Tj = 12°C	8.30	6.30
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	6.00 kW	7.20 kW
COP Tj = Tbiv	2.90	2.15
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.00 kW	7.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.90	2.15
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	75 °C	75 °C
Poff	10 W	10 W
PTO	30 W	30 W
PSB	10 W	10 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2386 kWh	3856 kWh

## Model HM093HF UB40 / HN1639HC NK0

Model name	HM093HF UB40 / HN1639HC NK0
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	n/a
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

## General data

Power supply	3x400V 50Hz
Off-peak product	n/a

## Outdoor Air/Water

### 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	9.00 kW	5.50 kW
El input	1.91 kW	1.67 kW
COP	4.70	3.30

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	39 dB(A)	39 dB(A)
Sound power level outdoor	50 dB(A)	50 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	205 %	151 %
Prated	6.00 kW	7.00 kW
SCOP	5.20	3.86
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.30 kW	6.40 kW
COP Tj = -7°C	3.30	2.45
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	3.20 kW	3.90 kW
COP Tj = +2°C	5.25	3.92
Cdh Tj = +2 °C	0.900	0.900

Pdh Tj = +7°C	2.40 kW	3.90 kW
COP Tj = +7°C	6.55	5.05
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	2.40 kW	3.90 kW
COP Tj = 12°C	8.30	6.30
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	6.00 kW	7.20 kW
COP Tj = Tbiv	2.90	2.15
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.00 kW	7.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.90	2.15
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	75 °C	75 °C
Poff	10 W	10 W
PTO	30 W	30 W
PSB	30 W	30 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2386 kWh	3856 kWh

## Model HM093HF UB40 / PHCS0 ENCXLEU

Model name	HM093HF UB40 / PHCS0 ENCXLEU
Application	Heating (medium temp)
Units	Outdoor
Climate zone (for heating)	n/a
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

## General data

Power supply	3x400V 50Hz
Off-peak product	n/a

## Outdoor Air/Water

## 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	9.00 kW	5.50 kW
El input	1.91 kW	1.67 kW
COP	4.70	3.30

## EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	39 dB(A)	39 dB(A)
Sound power level outdoor	50 dB(A)	50 dB(A)

## EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	205 %	151 %
Prated	6.00 kW	7.00 kW
SCOP	5.20	3.86
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.30 kW	6.40 kW
COP Tj = -7°C	3.30	2.45
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	3.20 kW	3.90 kW
COP Tj = +2°C	5.25	3.92
Cdh Tj = +2 °C	0.900	0.900



Pdh Tj = +7°C	2.40 kW	3.90 kW
COP Tj = +7°C	6.55	5.05
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	2.40 kW	3.90 kW
COP Tj = 12°C	8.30	6.30
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	6.00 kW	7.20 kW
COP Tj = Tbiv	2.90	2.15
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.00 kW	7.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.90	2.15
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	75 °C	75 °C
Poff	10 W	10 W
PTO	30 W	30 W
PSB	30 W	30 W
PCK	10 W	10 W
Supplementary Heater: Type of energy input	n/a	n/a
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2386 kWh	3856 kWh

## Model HM073HF UB40 / PHCS0 ENCXLEU

Model name	HM073HF UB40 / PHCS0 ENCXLEU
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	n/a
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

## General data

Power supply	3x400V 50Hz
Off-peak product	n/a

## Outdoor Air/Water

### 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	7.00 kW	4.50 kW
El input	1.40 kW	1.34 kW
COP	5.00	3.35

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	dB(A)	dB(A)
Sound power level outdoor	49 dB(A)	49 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	207 %	151 %
Prated	6.00 kW	7.00 kW
SCOP	5.24	3.86
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.00 kW	6.40 kW
COP Tj = -7°C	3.40	2.45
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	3.10 kW	3.90 kW
COP Tj = +2°C	5.30	3.92
Cdh Tj = +2 °C	0.900	0.900

Pdh Tj = +7°C	2.40 kW	5.05 kW
COP Tj = +7°C	6.55	3.90
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	2.40 kW	3.90 kW
COP Tj = 12°C	8.30	6.30
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	5.70 kW	7.20 kW
COP Tj = Tbiv	3.00	2.15
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.70 kW	7.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.00	2.15
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	75 °C	75 °C
Poff	10 W	10 W
PTO	30 W	30 W
PSB	10 W	10 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	n/a
Supplementary Heater: PSUP	0.00 kW	kW
Annual energy consumption Qhe	2248 kWh	3856 kWh

## Model HM073HF UB40 / HN1639HC NK0

Model name	HM073HF UB40 / HN1639HC NK0
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	n/a
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

## General data

Power supply	3x400V 50Hz
Off-peak product	n/a

## Outdoor Air/Water

## 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	7.00 kW	4.50 kW
El input	1.40 kW	1.34 kW
COP	5.00	3.35

## EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	39 dB(A)	39 dB(A)
Sound power level outdoor	49 dB(A)	49 dB(A)

## EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	207 %	151 %
Prated	6.00 kW	7.00 kW
SCOP	5.24	3.86
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.00 kW	6.40 kW
COP Tj = -7°C	3.40	2.45
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	3.10 kW	3.90 kW
COP Tj = +2°C	5.30	3.92
Cdh Tj = +2 °C	0.900	0.900

Pdh Tj = +7°C	2.40 kW	3.90 kW
COP Tj = +7°C	6.55	5.05
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	2.40 kW	3.90 kW
COP Tj = 12°C	8.30	6.30
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	5.70 kW	7.20 kW
COP Tj = Tbiv	3.00	2.15
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.70 kW	7.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.00	2.15
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	75 °C	75 °C
Poff	10 W	10 W
PTO	30 W	30 W
PSB	10 W	10 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	n/a
Supplementary Heater: PSUP	0.00 kW	kW
Annual energy consumption Qhe	2248 kWh	3856 kWh

## Model HM071HF UB40 / HN1616HC NK0

Model name	HM071HF UB40 / HN1616HC NK0
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	n/a
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

## General data

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

## Outdoor Air/Water

### 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	7.00 kW	4.50 kW
El input	1.40 kW	1.34 kW
COP	5.00	3.35

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	39 dB(A)	39 dB(A)
Sound power level outdoor	49 dB(A)	49 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	207 %	151 %
Prated	6.00 kW	7.00 kW
SCOP	5.24	3.86
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.00 kW	6.40 kW
COP Tj = -7°C	3.40	2.45
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	3.10 kW	3.90 kW
COP Tj = +2°C	5.30	3.92
Cdh Tj = +2 °C	0.900	0.900

Pdh Tj = +7°C	2.40 kW	3.90 kW
COP Tj = +7°C	6.55	5.05
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	2.40 kW	3.90 kW
COP Tj = 12°C	8.30	6.30
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	5.70 kW	7.20 kW
COP Tj = Tbiv	3.00	2.15
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.70 kW	7.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.00	2.15
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	75 °C	75 °C
Poff	10 W	10 W
PTO	30 W	30 W
PSB	10 W	10 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	n/a
Supplementary Heater: PSUP	0.00 kW	kW
Annual energy consumption Qhe	2248 kWh	3856 kWh

## Model HM071HF UB40 / PHCS0 ENCXLEU

Model name	HM071HF UB40 / PHCS0 ENCXLEU
Application	Heating (medium temp)
Units	Indoor, Outdoor
Climate zone (for heating)	n/a
Reversibility	Yes
Cooling mode application (optional)	n/a
Any additional heat sources	n/a

## General data

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

## Outdoor Air/Water

## 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	7.00 kW	4.50 kW
El input	1.40 kW	1.34 kW
COP	5.00	3.35

## EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	dB(A)	dB(A)
Sound power level outdoor	49 dB(A)	49 dB(A)

## EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	207 %	151 %
Prated	6.00 kW	7.00 kW
SCOP	5.24	3.86
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.00 kW	6.40 kW
COP Tj = -7°C	3.40	2.45
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	3.10 kW	3.90 kW
COP Tj = +2°C	5.30	3.92
Cdh Tj = +2 °C	0.900	0.900



Pdh Tj = +7°C	2.40 kW	5.05 kW
COP Tj = +7°C	6.55	3.90
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	2.40 kW	3.90 kW
COP Tj = 12°C	8.30	6.30
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	5.70 kW	7.20 kW
COP Tj = Tbiv	3.00	2.15
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.70 kW	7.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.00	2.15
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	75 °C	75 °C
Poff	10 W	10 W
PTO	30 W	30 W
PSB	10 W	10 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	n/a
Supplementary Heater: PSUP	0.00 kW	kW
Annual energy consumption Qhe	2248 kWh	3856 kWh

## Model HM073HF UB40 / HN1639HY NK0

Model name	HM073HF UB40 / HN1639HY NK0
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	n/a
Reversibility	Yes
Cooling mode application (optional)	n/a
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 $\eta_{DHW}$	130 %
COP	3.10
Heating up time	1:25 h:min
Standby power input	31.0 W
Reference hot water temperature	51.0 °C
Mixed water at 40°C	240 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	7.00 kW	4.50 kW
El input	1.40 kW	1.34 kW
COP	5.00	3.35

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	39 dB(A)	39 dB(A)
Sound power level outdoor	49 dB(A)	49 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	207 %	151 %

Prated	5.70 kW	7.00 kW
SCOP	5.24	3.86
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.00 kW	6.40 kW
COP Tj = -7°C	3.40	2.45
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	3.10 kW	3.90 kW
COP Tj = +2°C	5.30	3.92
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	2.40 kW	3.90 kW
COP Tj = +7°C	6.55	5.05
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	2.40 kW	3.90 kW
COP Tj = 12°C	8.30	6.30
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	5.70 kW	7.20 kW
COP Tj = Tbiv	3.00	2.15
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.70 kW	7.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.00	2.15
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	75 °C	75 °C
Poff	10 W	10 W
PTO	30 W	30 W
PSB	10 W	10 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2248 kWh	3856 kWh

## Model HM071HF UB40 / HN1616HY NK0

Model name	HM071HF UB40 / HN1616HY NK0
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	n/a
Reversibility	Yes
Cooling mode application (optional)	n/a
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 $\eta_{DHW}$	130 %
COP	3.10
Heating up time	1:25 h:min
Standby power input	31.0 W
Reference hot water temperature	51.0 °C
Mixed water at 40°C	240 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	7.00 kW	4.50 kW
El input	1.40 kW	1.34 kW
COP	5.00	3.35

## EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	39 dB(A)	39 dB(A)
Sound power level outdoor	49 dB(A)	49 dB(A)

## EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	207 %	151 %

Prated	5.70 kW	7.00 kW
SCOP	5.24	3.86
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.00 kW	6.40 kW
COP Tj = -7°C	3.40	2.45
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	3.10 kW	3.90 kW
COP Tj = +2°C	5.30	3.92
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	2.40 kW	3.90 kW
COP Tj = +7°C	6.55	5.05
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	2.40 kW	3.90 kW
COP Tj = 12°C	8.30	6.30
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	5.70 kW	7.20 kW
COP Tj = Tbiv	3.00	2.15
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	5.70 kW	7.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.00	2.15
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	75 °C	75 °C
Poff	10 W	10 W
PTO	30 W	30 W
PSB	10 W	10 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2248 kWh	3856 kWh

## Model HM091HF UB40 / HN1616HY NK0

Model name	HM091HF UB40 / HN1616HY NK0
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	n/a
Reversibility	Yes
Cooling mode application (optional)	n/a
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 $\eta_{DHW}$	130 %
COP	3.10
Heating up time	1:25 h:min
Standby power input	31.0 W
Reference hot water temperature	51.0 °C
Mixed water at 40°C	240 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	9.00 kW	5.50 kW
El input	1.91 kW	1.67 kW
COP	4.70	3.30

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	39 dB(A)	39 dB(A)
Sound power level outdoor	50 dB(A)	50 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	205 %	151 %

Prated	6.00 kW	7.00 kW
SCOP	5.20	3.86
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.30 kW	6.40 kW
COP Tj = -7°C	3.30	2.45
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	3.20 kW	3.90 kW
COP Tj = +2°C	5.25	3.92
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	2.40 kW	3.90 kW
COP Tj = +7°C	6.55	5.05
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	2.40 kW	3.90 kW
COP Tj = 12°C	8.30	6.30
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	6.00 kW	7.20 kW
COP Tj = Tbiv	2.90	2.15
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.00 kW	7.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.90	2.15
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	75 °C	75 °C
Poff	10 W	10 W
PTO	30 W	30 W
PSB	10 W	10 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2386 kWh	3856 kWh

## Model HM093HF UB40 / HN1639HY NK0

Model name	HM093HF UB40 / HN1639HY NK0
Application	Heating + DHW + low temp
Units	Indoor, Outdoor
Climate zone (for heating)	n/a
Reversibility	Yes
Cooling mode application (optional)	n/a
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 $\eta_{DHW}$	130 %
COP	3.10
Heating up time	1:25 h:min
Standby power input	31.0 W
Reference hot water temperature	51.0 °C
Mixed water at 40°C	240 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	9.00 kW	5.50 kW
El input	1.91 kW	1.67 kW
COP	4.70	3.30

### EN 12102-1 | Average Climate

	Low temperature	Medium temperature
Sound power level indoor	39 dB(A)	39 dB(A)
Sound power level outdoor	50 dB(A)	50 dB(A)

### EN 14825 | Average Climate

	Low temperature	Medium temperature
$\eta_s$	205 %	151 %



Prated	6.00 kW	7.00 kW
SCOP	5.20	3.86
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	5.30 kW	6.40 kW
COP Tj = -7°C	3.30	2.45
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	3.20 kW	3.90 kW
COP Tj = +2°C	5.25	3.92
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	2.40 kW	3.90 kW
COP Tj = +7°C	6.55	5.05
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	2.40 kW	3.90 kW
COP Tj = 12°C	8.30	6.30
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	6.00 kW	7.20 kW
COP Tj = Tbiv	2.90	2.15
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.00 kW	7.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.90	2.15
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.900	0.900
WTOL	75 °C	75 °C
Poff	10 W	10 W
PTO	30 W	30 W
PSB	10 W	10 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.00 kW
Annual energy consumption Qhe	2386 kWh	3856 kWh