Login

Summary of	Scroll Split mid temperature 12 14 16 kW _1&3ph	Reg. No.	011-1W0190
Certificate Holder			
Name	LG Electronics Inc.		
Address	84, Wanam-ro, seongsan-gu	Zip	51554
City	Changwon-si	Country	South Korea
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH		
Subtype title	Scroll Split mid temperature 12 14 16 kW _1&3ph		
Heat Pump Type	Outdoor Air/Water		
Refrigerant	R410A		
Mass of Refrigerant	2.5 kg		
Certification Date	07.01.2020		
Testing basis	HP KEYMARK certification scheme rules V8		

Model: HU161MA U33 / HN1616 NK3

Configure model	
Model name	HU161MA U33 / HN1616 NK3
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	16.00 kW	12.00 kW
El input	3.76 kW	4.71 kW
COP	4.26	2.55

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

Average Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	179 %	130 %
Prated	10.00 kW	10.00 kW
SCOP	4.56	3.32
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.90 kW	8.80 kW
COP Tj = -7°C	3.00	1.93
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	5.40 kW	5.30 kW
COP Tj = +2°C	4.55	3.32
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.60 kW	3.40 kW
COP Tj = +7°C	5.50	4.30
Cdh Tj = +7 °C	0.900	0.900

Pdh Tj = 12°C	4.20 kW	4.30 kW
COP Tj = 12°C	8.00	6.40
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	10.00 kW	9.90 kW
COP Tj = Tbiv	2.60	1.70
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.00 kW	9.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.60	1.70
WTOL	57 °C	57 °C
Poff	60 W	60 W
PTO	60 W	60 W
PSB	60 W	60 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	n/a	Electricity
Supplementary Heater: PSUP	0.00 kW	0.10 kW
Annual energy consumption Qhe	4531 kWh	6157 kWh

Model: HU141MA U33 / HN1616 NK3

Configure model	
Model name	HU141MA U33 / HN1616 NK3
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	14.00 kW	11.50 kW
El input	3.15 kW	4.51 kW
COP	4.45	2.55

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

Average Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)
Sound power level outdoor	64 dB(A)	64 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	182 %	132 %
Prated	10.00 kW	9.00 kW
SCOP	4.61	3.37
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.40 kW	8.00 kW
COP Tj = -7°C	3.00	1.98
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	5.10 kW	4.90 kW
COP Tj = +2°C	4.60	3.35
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.60 kW	3.20 kW
COP Tj = +7°C	5.60	4.36
Cdh Tj = +7 °C	0.900	0.900

Pdh Tj = 12°C	4.40 kW	4.10 kW
COP Tj = 12°C	8.40	6.60
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	9.50 kW	9.00 kW
COP Tj = Tbiv	2.65	1.72
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.50 kW	9.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.65	1.72
WTOL	57 °C	57 °C
Poff	60 W	60 W
PTO	60 W	60 W
PSB	60 W	60 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	
Supplementary Heater: PSUP	0.50 kW	0.00 kW
Annual energy consumption Qhe	4254 kWh	5524 kWh

Model: HU121MA U33 / HN1616 NK3

Configure model	
Model name	HU121MA U33 / HN1616 NK3
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	12.00 kW	11.00 kW
El input	2.64 kW	4.31 kW
COP	4.55	2.55

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

Average Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	44 dB(A)	44 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	183 %	131 %
Prated	9.00 kW	9.00 kW
SCOP	4.65	3.36
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.00 kW	7.60 kW
COP Tj = -7°C	3.00	1.98
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	4.80 kW	4.70 kW
COP Tj = +2°C	4.65	3.35
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.70 kW	3.20 kW
COP Tj = +7°C	5.70	4.37
Cdh Tj = +7 °C	0.900	0.900

Pdh Tj = 12°C	4.50 kW	4.10 kW
COP Tj = 12°C	8.80	6.70
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	9.00 kW	8.50 kW
COP Tj = Tbiv	2.70	1.74
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.00 kW	8.50 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.70	1.74
WTOL	57 °C	57 °C
Poff	60 W	60 W
PTO	60 W	60 W
PSB	60 W	60 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	n/a	Electricity
Supplementary Heater: PSUP	0.00 kW	0.50 kW
Annual energy consumption Qhe	4000 kWh	5229 kWh

Model: HU163MA U33 / HN1639 NK3

Configure model	
Model name	HU163MA U33 / HN1639 NK3
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	16.00 kW	12.00 kW
El input	3.76 kW	4.71 kW
COP	4.26	2.55

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

Average Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	179 %	130 %
Prated	10.00 kW	10.00 kW
SCOP	4.56	3.32
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.90 kW	8.80 kW
COP Tj = -7°C	3.00	1.93
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	5.40 kW	5.30 kW
COP Tj = +2°C	4.55	3.32
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.60 kW	3.40 kW
COP Tj = +7°C	5.50	4.30
Cdh Tj = +7 °C	0.900	0.900

Pdh Tj = 12°C	4.20 kW	4.30 kW
COP Tj = 12°C	8.00	6.40
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	10.00 kW	9.90 kW
COP Tj = Tbiv	2.60	1.70
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.00 kW	9.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.60	1.70
WTOL	57 °C	57 °C
Poff	60 W	60 W
PTO	60 W	60 W
PSB	60 W	60 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	n/a	Electricity
Supplementary Heater: PSUP	0.00 kW	0.10 kW
Annual energy consumption Qhe	4531 kWh	6157 kWh

Model: HU143MA U33 / HN1639 NK3

Configure model	
Model name	HU143MA U33 / HN1639 NK3
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	14.00 kW	11.50 kW
El input	3.15 kW	4.51 kW
COP	4.45	2.55

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

Average Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)
Sound power level outdoor	64 dB(A)	64 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	182 %	132 %
Prated	10.00 kW	9.00 kW
SCOP	4.61	3.37
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.40 kW	8.00 kW
COP Tj = -7°C	3.00	1.98
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	5.10 kW	4.90 kW
COP Tj = +2°C	4.60	3.35
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.60 kW	3.20 kW
COP Tj = +7°C	5.60	4.36
Cdh Tj = +7 °C	0.900	0.900

Pdh Tj = 12°C	4.40 kW	4.10 kW
COP Tj = 12°C	8.40	6.60
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	9.50 kW	9.00 kW
COP Tj = Tbiv	2.65	1.72
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.50 kW	9.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.65	1.72
WTOL	57 °C	57 °C
Poff	60 W	60 W
PTO	60 W	60 W
PSB	60 W	60 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	
Supplementary Heater: PSUP	0.50 kW	0.00 kW
Annual energy consumption Qhe	4254 kWh	5524 kWh

Model: HU123MA U33 / HN1639 NK3

Configure model	
Model name	HU123MA U33 / HN1639 NK3
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	12.00 kW	11.00 kW
El input	2.64 kW	4.31 kW
COP	4.55	2.55

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

Average Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	44 dB(A)	44 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	183 %	131 %
Prated	9.00 kW	9.00 kW
SCOP	4.65	3.36
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.00 kW	7.60 kW
COP Tj = -7°C	3.00	1.98
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	4.80 kW	4.70 kW
COP Tj = +2°C	4.65	3.35
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.70 kW	3.20 kW
COP Tj = +7°C	5.70	4.37
Cdh Tj = +7 °C	0.900	0.900

Pdh Tj = 12°C	4.50 kW	4.10 kW
COP Tj = 12°C	8.80	6.70
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	9.00 kW	8.50 kW
COP Tj = Tbiv	2.70	1.74
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.00 kW	8.50 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.70	1.74
WTOL	57 °C	57 °C
Poff	60 W	60 W
PTO	60 W	60 W
PSB	60 W	60 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	n/a	Electricity
Supplementary Heater: PSUP	0.00 kW	0.50 kW
Annual energy consumption Qhe	4000 kWh	5229 kWh

Model: HU161MA U33 / HN1616M NK5

Configure model	
Model name	HU161MA U33 / HN1616M NK5
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	16.00 kW	12.00 kW
El input	3.76 kW	4.71 kW
COP	4.26	2.55

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

Average Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	179 %	130 %
Prated	10.00 kW	10.00 kW
SCOP	4.56	3.32
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.90 kW	8.80 kW
COP Tj = -7°C	3.00	1.93
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	5.40 kW	5.30 kW
COP Tj = +2°C	4.55	3.32
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.60 kW	3.40 kW
COP Tj = +7°C	5.50	4.30
Cdh Tj = +7 °C	0.900	0.900

Pdh Tj = 12°C	4.20 kW	4.30 kW
COP Tj = 12°C	8.00	6.40
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	10.00 kW	9.90 kW
COP Tj = Tbiv	2.60	1.70
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.00 kW	9.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.60	1.70
WTOL	57 °C	57 °C
Poff	60 W	60 W
PTO	60 W	60 W
PSB	60 W	60 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	n/a	Electricity
Supplementary Heater: PSUP	0.00 kW	0.10 kW
Annual energy consumption Qhe	4531 kWh	6157 kWh

Model: HU141MA U33 / HN1616M NK5

Configure model	
Model name	HU141MA U33 / HN1616M NK5
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	14.00 kW	11.50 kW
El input	3.15 kW	4.51 kW
COP	4.45	2.55

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

Average Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)
Sound power level outdoor	64 dB(A)	64 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	182 %	132 %
Prated	10.00 kW	9.00 kW
SCOP	4.61	3.37
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.40 kW	8.00 kW
COP Tj = -7°C	3.00	1.98
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	5.10 kW	4.90 kW
COP Tj = +2°C	4.60	3.35
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.60 kW	3.20 kW
COP Tj = +7°C	5.60	4.36
Cdh Tj = +7 °C	0.900	0.900

Pdh Tj = 12°C	4.40 kW	4.10 kW
COP Tj = 12°C	8.40	6.60
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	9.50 kW	9.00 kW
COP Tj = Tbiv	2.65	1.72
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.50 kW	9.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.65	1.72
WTOL	57 °C	57 °C
Poff	60 W	60 W
PTO	60 W	60 W
PSB	60 W	60 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	
Supplementary Heater: PSUP	0.50 kW	0.00 kW
Annual energy consumption Qhe	4254 kWh	5524 kWh

Model: HU121MA U33 / HN1616M NK5

Configure model	
Model name	HU121MA U33 / HN1616M NK5
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	12.00 kW	11.00 kW
El input	2.64 kW	4.31 kW
COP	4.55	2.55

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

Average Climate

EN 12102-1		
	Low temperature	**Medium temperature**
Sound power level indoor	44 dB(A)	44 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825		
	Low temperature	**Medium temperature**
η_s	183 %	131 %
Prated	9.00 kW	9.00 kW
SCOP	4.65	3.36
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.00 kW	7.60 kW
COP Tj = -7°C	3.00	1.98
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	4.80 kW	4.70 kW
COP Tj = +2°C	4.65	3.35
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.70 kW	3.20 kW
COP Tj = +7°C	5.70	4.37
Cdh Tj = +7 °C	0.900	0.900

Pdh Tj = 12°C	4.50 kW	4.10 kW
COP Tj = 12°C	8.80	6.70
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	9.00 kW	8.50 kW
COP Tj = Tbiv	2.70	1.74
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.00 kW	8.50 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.70	1.74
WTOL	57 °C	57 °C
Poff	60 W	60 W
PTO	60 W	60 W
PSB	60 W	60 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	n/a	Electricity
Supplementary Heater: PSUP	0.00 kW	0.50 kW
Annual energy consumption Qhe	4000 kWh	5229 kWh

Model: HU163MA U33 / HN1636M NK5

Configure model	
Model name	HU163MA U33 / HN1636M NK5
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	16.00 kW	12.00 kW
El input	3.76 kW	4.71 kW
COP	4.26	2.55

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

Average Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	179 %	130 %
Prated	10.00 kW	10.00 kW
SCOP	4.56	3.32
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.90 kW	8.80 kW
COP Tj = -7°C	3.00	1.93
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	5.40 kW	5.30 kW
COP Tj = +2°C	4.55	3.32
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.60 kW	3.40 kW
COP Tj = +7°C	5.50	4.30
Cdh Tj = +7 °C	0.900	0.900

Pdh Tj = 12°C	4.20 kW	4.30 kW
COP Tj = 12°C	8.00	6.40
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	10.00 kW	9.90 kW
COP Tj = Tbiv	2.60	1.70
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	10.00 kW	9.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.60	1.70
WTOL	57 °C	57 °C
Poff	60 W	60 W
PTO	60 W	60 W
PSB	60 W	60 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	n/a	Electricity
Supplementary Heater: PSUP	0.00 kW	0.10 kW
Annual energy consumption Qhe	4531 kWh	6157 kWh

Model: HU143MA U33 / HN1636M NK5

Configure model	
Model name	HU143MA U33 / HN1636M NK5
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	3x400V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	14.00 kW	11.50 kW
El input	3.15 kW	4.51 kW
COP	4.45	2.55

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

Average Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)
Sound power level outdoor	64 dB(A)	64 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	182 %	132 %
Prated	10.00 kW	9.00 kW
SCOP	4.61	3.37
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.40 kW	8.00 kW
COP Tj = -7°C	3.00	1.98
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	5.10 kW	4.90 kW
COP Tj = +2°C	4.60	3.35
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.60 kW	3.20 kW
COP Tj = +7°C	5.60	4.36
Cdh Tj = +7 °C	0.900	0.900

Pdh Tj = 12°C	4.40 kW	4.10 kW
COP Tj = 12°C	8.40	6.60
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	9.50 kW	9.00 kW
COP Tj = Tbiv	2.65	1.72
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.50 kW	9.00 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.65	1.72
WTOL	57 °C	57 °C
Poff	60 W	60 W
PTO	60 W	60 W
PSB	60 W	60 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	
Supplementary Heater: PSUP	0.50 kW	0.00 kW
Annual energy consumption Qhe	4254 kWh	5524 kWh

Model: HU123MA U33 / HN1636M NK5

Configure model	
Model name	HU123MA U33 / HN1636M NK5
Application	Heating (medium temp)
Units	Indoor + Outdoor
Climate Zone	n/a
Reversibility	No
Cooling mode application (optional)	n/a

General Data	
Power supply	1x230V 50Hz

Heating

EN 14511-2		
	Low temperature	**Medium temperature**
Heat output	12.00 kW	11.00 kW
El input	2.64 kW	4.31 kW
COP	4.55	2.55

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

Average Climate

EN 12102-1

	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)
Sound power level outdoor	63 dB(A)	63 dB(A)

EN 14825

	Low temperature	Medium temperature
η_s	183 %	131 %
Prated	9.00 kW	9.00 kW
SCOP	4.65	3.36
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.00 kW	7.60 kW
COP Tj = -7°C	3.00	1.98
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	4.80 kW	4.70 kW
COP Tj = +2°C	4.65	3.35
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.70 kW	3.20 kW
COP Tj = +7°C	5.70	4.37
Cdh Tj = +7 °C	0.900	0.900

Pdh Tj = 12°C	4.50 kW	4.10 kW
COP Tj = 12°C	8.80	6.70
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	9.00 kW	8.50 kW
COP Tj = Tbiv	2.70	1.74
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.00 kW	8.50 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.70	1.74
WTOL	57 °C	57 °C
Poff	60 W	60 W
PTO	60 W	60 W
PSB	60 W	60 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	n/a	Electricity
Supplementary Heater: PSUP	0.00 kW	0.50 kW
Annual energy consumption Qhe	4000 kWh	5229 kWh