

Login

Summary of	split mid temperature 12 14 16 kW 1 phase and 3 phases	Reg. No.	011-1W0253		
Certificate Holder	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	split mid temperature 12 14 16 kW 1 phase and 3 phases				
Heat Pump Type	Outdoor Air/Water				
Refrigerant	R410A				
Mass of Refrigerant	ss of Refrigerant 2.3 kg				
Certification Date	31.07.2019				
Testing basis	HP KEYMARK certification scheme rules V8				



Model: HU161 U33/ HN1616 NK3

Configure model			
Model name	HU161 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	
Phase-out Date	03.02.2024	

Average Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	44 dB(A)	44 dB(A)	
Sound power level outdoor	66 dB(A)	66 dB(A)	

EN 14825			
		Low temperature	Medium temperature
η_{S}		169 %	130 %
Prated		10.00 kW	10.00 kW
SCOP		4.30	3.32
Tbiv		-10 °C	-10 °C
TOL		-10 °C	-10 °C





This information was general	acea by the fit RETHIN	TR database on 10 Mar 2022
Pdh Tj = -7°C	8.80 kW	8.80 kW
COP Tj = -7°C	2.55	1.93
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	5.40 kW	5.30 kW
COP Tj = +2°C	4.15	3.15
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = $+7^{\circ}$ C	4.10 kW	3.60 kW
$COPTj = +7^{\circ}C$	6.10	4.79
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.60 kW	4.10 kW
COP Tj = 12°C	8.30	7.00
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	10.00 kW	9.90 kW
COP Tj = Tbiv	2.30	1.65
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	2.30	1.65
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.90	0.90
WTOL	57 °C	57 °C
Poff	5 W	5 W
РТО	60 W	60 W
PSB	5 W	5 W
PCK	39 W	39 W





Supplementary Heater: Type of energy input	n/a	Electricity
Supplementary Heater: PSUP	0.00 kW	0.10 kW
Annual energy consumption Qhe	4802 kWh	6154 kWh

Heating

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

EN 14511-2		
	Low temperature	Medium temperature
Heat output	16.00 kW	12.50 kW
El input	3.76 kW	4.94 kW
СОР	4.26	2.53



Model: HU141 U33/ HN1616 NK3

Configure model			
Model name	HU141 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	
Phase-out Date	03.02.2024	

Heating

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

EN 14511-2		
	Low temperature	Medium temperature
Heat output	14.00 kW	12.50 kW
El input	3.17 kW	4.94 kW
СОР	4.41	2.53



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)
Sound power level outdoor	66 dB(A)	66 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	175 %	130 %
Prated	10.00 kW	10.00 kW
SCOP	4.45	3.32
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.40 kW	8.80 kW
COP Tj = -7°C	2.67	1.93
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	5.10 kW	5.30 kW
COP Tj = +2°C	4.25	3.15
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.80 kW	3.60 kW
COP Tj = +7°C	6.30	4.79
Cdh Tj = +7 °C	0.900	0.900



Page 7 of 37

This information was generated by the HP KEYMARK database on 18 Mar 2022

Pdh Tj = 12°C	4.40 kW	4.10 kW
COP Tj = 12°C	9.20	7.00
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	9.50 kW	9.90 kW
COP Tj = Tbiv	2.25	1.65
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.50 kW	9.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.25	1.65
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.90	0.90
WTOL	57 °C	57 °C
Poff	5 W	5 W
РТО	60 W	60 W
PSB	5 W	5 W
PCK	39 W	39 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.50 kW	0.10 kW
Annual energy consumption Qhe	4408 kWh	6154 kWh



Model: HU121 U33/ HN1616 NK3

Configure model		
Model name	HU121 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	
Phase-out Date	03.02.2024	

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	12.00 kW	12.50 kW
El input	2.64 kW	4.94 kW
СОР	4.55	2.53

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



	EN 12102-1	
	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)
Sound power level outdoor	66 dB(A)	66 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	175 %	130 %
Prated	9.00 kW	10.00 kW
SCOP	4.45	3.32
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.00 kW	8.80 kW
COP Tj = -7°C	2.67	1.93
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	4.90 kW	5.30 kW
COP Tj = +2°C	4.27	3.15
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.70 kW	3.60 kW
COP Tj = +7°C	6.30	4.79
Cdh Tj = +7 °C	0.900	0.900



Page 10 of 37

This information was generated by the HP KEYMARK database on 18 Mar 2022

Pdh Tj = 12°C	4.50 kW	4.10 kW
COP Tj = 12°C	9.20	7.00
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	9.00 kW	9.90 kW
COP Tj = Tbiv	2.25	1.65
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.00 kW	9.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.25	1.65
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.90	0.90
WTOL	57 °C	57 °C
Poff	5 W	5 W
РТО	60 W	60 W
PSB	5 W	5 W
PCK	39 W	39 W
Supplementary Heater: Type of energy input	n/a	Electricity
Supplementary Heater: PSUP	0.00 kW	0.10 kW
Annual energy consumption Qhe	4177 kWh	6154 kWh



Model: HU163 U33 / HN1639 NK3

Configure model		
Model name	HU163 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	
Phase-out Date	03.02.2024	

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	16.00 kW	12.50 kW
El input	3.76 kW	4.94 kW
СОР	4.26	2.53

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





EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)
Sound power level outdoor	66 dB(A)	66 dB(A)

EN 14825		
Low temperature	Medium temperature	
169 %	130 %	
10.00 kW	10.00 kW	
4.30	3.32	
-10 °C	-10 °C	
-10 °C	-10 °C	
8.80 kW	8.80 kW	
2.55	1.93	
0.900	0.900	
5.40 kW	5.30 kW	
4.15	3.15	
0.900	0.900	
4.10 kW	3.60 kW	
6.10	4.79	
0.900	0.900	
	Low temperature 169 % 10.00 kW 4.30 -10 °C -10 °C 8.80 kW 2.55 0.900 5.40 kW 4.15 0.900 4.10 kW 6.10	



	1	
Pdh Tj = 12°C	4.60 kW	4.10 kW
COP Tj = 12°C	8.30	7.00
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	10.00 kW	9.90 kW
COP Tj = Tbiv	2.30	1.65
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	2.30	1.65
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.90	0.90
WTOL	57 °C	57 °C
Poff	60 W	60 W
РТО	60 W	60 W
PSB	60 W	60 W
PCK	50 W	50 W
Supplementary Heater: Type of energy input	n/a	Electricity
Supplementary Heater: PSUP	0.00 kW	0.10 kW
Annual energy consumption Qhe	4804 kWh	6156 kWh



Model: HU143 U33 / HN1639 NK3

Configure model		
Model name	HU143 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	
Phase-out Date	03.02.2024	

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	14.00 kW	12.50 kW
El input	3.17 kW	4.94 kW
СОР	4.41	2.53

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



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)
Sound power level outdoor	66 dB(A)	66 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	175 %	130 %
Prated	10.00 kW	10.00 kW
SCOP	4.45	3.32
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.40 kW	8.80 kW
COP Tj = -7 °C	2.67	1.93
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = $+2$ °C	5.10 kW	5.30 kW
COP Tj = +2°C	4.25	3.15
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = $+7^{\circ}$ C	3.80 kW	3.60 kW
COP Tj = +7°C	6.30	4.79
Cdh Tj = +7 °C	0.900	0.900



	1	
Pdh Tj = 12°C	4.40 kW	4.10 kW
COP Tj = 12°C	9.20	7.00
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	9.50 kW	9.90 kW
COP Tj = Tbiv	2.25	1.65
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.50 kW	9.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.25	1.65
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.90	0.90
WTOL	57 °C	57 °C
Poff	60 W	60 W
РТО	60 W	60 W
PSB	60 W	60 W
PCK	50 W	50 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.50 kW	0.10 kW
Annual energy consumption Qhe	4410 kWh	6156 kWh



Model: HU123 U33 / HN1639 NK3

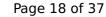
Configure model		
Model name	HU123 U33 / HN1639 NK3	
Application	Heating (medium temp)	
Units	Indoor + Outdoor	
Climate Zone	n/a	
Reversibility	No	
Cooling mode application (optional)	n/a	

General Data			
Power supply 3x400V 50Hz			
Phase-out Date 03.02.2024			

Average Climate

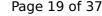
EN 12102-1			
Low temperature Medium temperature			
Sound power level indoor	44 dB(A)	44 dB(A)	
Sound power level outdoor	66 dB(A)	66 dB(A)	

EN 14825		
	Low temperature	Medium temperature
η_{S}	175 %	130 %
Prated	9.00 kW	10.00 kW
SCOP	4.45	3.32
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C





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Pdh Tj = -7°C	8.00 kW	8.80 kW
COP Tj = -7°C	2.67	1.93
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	4.90 kW	5.30 kW
COP Tj = +2°C	4.27	3.15
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = $+7^{\circ}$ C	3.70 kW	3.60 kW
$COPTj = +7^{\circ}C$	6.30	4.79
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.50 kW	4.10 kW
COP Tj = 12°C	9.20	7.00
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	9.00 kW	9.90 kW
COP Tj = Tbiv	2.25	1.65
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.00 kW	9.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.25	1.65
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.90	0.90
WTOL	57 °C	57 °C
Poff	60 W	60 W
РТО	60 W	60 W
PSB	60 W	60 W
PCK	50 W	50 W
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$$\operatorname{\textit{Page}}\ 19$ of 37$$ This information was generated by the HP KEYMARK database on 18 Mar 2022

Supplementary Heater: Type of energy input	n/a	Electricity
Supplementary Heater: PSUP	0.00 kW	0.10 kW
Annual energy consumption Qhe	4179 kWh	6156 kWh

Heating

EN 14511-2			
Low temperature Medium temperature			
Heat output	12.00 kW	12.50 kW	
El input	2.64 kW	4.94 kW	
СОР	4.55	2.53	

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



Model: HU161 U33 / HN1616M NK5

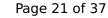
Configure model		
Model name	HU161 U33 / HN1616M NK5	
Application	Heating (medium temp)	
Units	Indoor + Outdoor	
Climate Zone	n/a	
Reversibility	No	
Cooling mode application (optional)	n/a	

General Data			
Power supply 1x230V 50Hz			
Phase-out Date 03.02.2024			

Average Climate

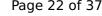
EN 12102-1			
Low temperature Medium temperature			
Sound power level indoor	44 dB(A)	44 dB(A)	
Sound power level outdoor	66 dB(A)	66 dB(A)	

EN 14825		
	Low temperature	Medium temperature
η_{s}	169 %	130 %
Prated	10.00 kW	10.00 kW
SCOP	4.30	3.32
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
		'





Pdh Tj = -7°C	8.80 kW	8.80 kW
COP Tj = -7°C	2.55	1.93
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	5.40 kW	5.30 kW
COP Tj = +2°C	4.15	3.15
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = $+7^{\circ}$ C	4.10 kW	3.60 kW
$COPTj = +7^{\circ}C$	6.10	4.79
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.60 kW	4.10 kW
COP Tj = 12°C	8.30	7.00
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	10.00 kW	9.90 kW
COP Tj = Tbiv	2.30	1.65
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	2.30	1.65
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.90	0.90
WTOL	57 °C	57 °C
Poff	5 W	5 W
РТО	60 W	60 W
PSB	5 W	5 W
РСК	39 W	39 W





$$\operatorname{\textit{Page}}\xspace$ 22 of 37 This information was generated by the HP KEYMARK database on 18 Mar 2022

Supplementary Heater: Type of energy input	n/a	Electricity
Supplementary Heater: PSUP	0.00 kW	0.10 kW
Annual energy consumption Qhe	4802 kWh	6154 kWh

Heating

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

EN 14511-2		
	Low temperature	Medium temperature
Heat output	16.00 kW	12.50 kW
El input	3.76 kW	4.94 kW
СОР	4.26	2.53



Model: HU141 U33 / HN1616M NK5

Configure model		
Model name	HU141 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	
Phase-out Date	03.02.2024	

Heating

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

EN 14511-2		
	Low temperature	Medium temperature
Heat output	14.00 kW	12.50 kW
El input	3.17 kW	4.94 kW
СОР	4.41	2.53



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)
Sound power level outdoor	66 dB(A)	66 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	175 %	130 %
Prated	10.00 kW	10.00 kW
SCOP	4.45	3.32
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.40 kW	8.80 kW
COP Tj = -7°C	2.67	1.93
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	5.10 kW	5.30 kW
COP Tj = +2°C	4.25	3.15
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.80 kW	3.60 kW
COP Tj = +7°C	6.30	4.79
Cdh Tj = +7 °C	0.900	0.900



Page 25 of 37

This information was generated by the HP KEYMARK database on 18 Mar 2022

Pdh Tj = 12°C	4.40 kW	4.10 kW
COP Tj = 12°C	9.20	7.00
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	9.50 kW	9.90 kW
COP Tj = Tbiv	2.25	1.65
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.50 kW	9.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.25	1.65
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.90	0.90
WTOL	57 °C	57 °C
Poff	5 W	5 W
PTO	60 W	60 W
PSB	5 W	5 W
PCK	39 W	39 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.50 kW	0.10 kW
Annual energy consumption Qhe	4408 kWh	6154 kWh

Model: HU121 U33 / HN1616M NK5

Configure model		
Model name HU121 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	
Phase-out Date	03.02.2024	

Heating

EN 14511-2			
Low temperature Medium temperature			
Heat output	12.00 kW	12.50 kW	
El input	2.64 kW	4.94 kW	
СОР	4.55	2.53	

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



 $$\operatorname{\textit{Page}}\xspace$ 27 of 37 This information was generated by the HP KEYMARK database on 18 Mar 2022

EN 12102-1			
Low temperature Medium temperature			
Sound power level indoor	44 dB(A)	44 dB(A)	
Sound power level outdoor	66 dB(A)	66 dB(A)	

EN 14825		
	Low temperature	Medium temperature
η_{s}	175 %	130 %
Prated	9.00 kW	10.00 kW
SCOP	4.45	3.32
Tbiv	-10 °C	-10 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.00 kW	8.80 kW
COP Tj = -7°C	2.67	1.93
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	4.90 kW	5.30 kW
COP Tj = +2°C	4.27	3.15
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	3.70 kW	3.60 kW
COP Tj = +7°C	6.30	4.79
Cdh Tj = +7 °C	0.900	0.900



Page 28 of 37

This information was generated by the HP KEYMARK database on 18 Mar 2022

Pdh Tj = 12°C	4.50 kW	4.10 kW
COP Tj = 12°C	9.20	7.00
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	9.00 kW	9.90 kW
COP Tj = Tbiv	2.25	1.65
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.00 kW	9.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.25	1.65
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.90	0.90
WTOL	57 °C	57 °C
Poff	5 W	5 W
РТО	60 W	60 W
PSB	5 W	5 W
PCK	39 W	39 W
Supplementary Heater: Type of energy input	n/a	Electricity
Supplementary Heater: PSUP	0.00 kW	0.10 kW
Annual energy consumption Qhe	4177 kWh	6154 kWh



Model: HU163 U33 / HN1636M NK5

Configure model		
Model name HU163 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			
Phase-out Date	03.02.2024		

Heating

EN 14511-2			
Low temperature Medium temperature			
Heat output	16.00 kW	12.50 kW	
El input	3.76 kW	4.94 kW	
СОР	4.26	2.53	

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



EN 12102-1			
Low temperature Medium temperature			
Sound power level indoor	44 dB(A)	44 dB(A)	
Sound power level outdoor	66 dB(A)	66 dB(A)	

EN 14825			
Low temperature Medium temperatu			
η_{s}	169 %	130 %	
Prated	10.00 kW	10.00 kW	
SCOP	4.30	3.32	
Tbiv	-10 °C	-10 °C	
TOL	-10 °C	-10 °C	
Pdh Tj = -7°C	8.80 kW	8.80 kW	
COP Tj = -7°C	2.55	1.93	
Cdh Tj = -7 °C	0.900	0.900	
Pdh Tj = +2°C	5.40 kW	5.30 kW	
COP Tj = +2°C	4.15	3.15	
Cdh Tj = +2 °C	0.900	0.900	
Pdh Tj = +7°C	4.10 kW	3.60 kW	
COP Tj = +7°C	6.10	4.79	
Cdh Tj = +7 °C	0.900	0.900	



 $$\operatorname{\textit{Page}}\ 31$$ of 37 This information was generated by the HP KEYMARK database on 18 Mar 2022

	1	
Pdh Tj = 12°C	4.60 kW	4.10 kW
COP Tj = 12°C	8.30	7.00
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	10.00 kW	9.90 kW
COP Tj = Tbiv	2.30	1.65
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	2.30	1.65
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.90	0.90
WTOL	57 °C	57 °C
Poff	60 W	60 W
РТО	60 W	60 W
PSB	60 W	60 W
PCK	50 W	50 W
Supplementary Heater: Type of energy input	n/a	Electricity
Supplementary Heater: PSUP	0.00 kW	0.10 kW
Annual energy consumption Qhe	4804 kWh	6156 kWh



Model: HU143 U33 / HN1636M NK5

Configure model		
Model name	HU143 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				
Phase-out Date	03.02.2024			

Heating

EN 14511-2			
Low temperature Medium temperature			
Heat output	14.00 kW	12.50 kW	
El input	3.17 kW	4.94 kW	
СОР	4.41	2.53	

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



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)
Sound power level outdoor	66 dB(A)	66 dB(A)

EN 14825			
Low temperature Medium temperatu			
η_{s}	175 %	130 %	
Prated	10.00 kW	10.00 kW	
SCOP	4.45	3.32	
Tbiv	-10 °C	-10 °C	
TOL	-10 °C	-10 °C	
Pdh Tj = -7°C	8.40 kW	8.80 kW	
COP Tj = -7°C	2.67	1.93	
Cdh Tj = -7 °C	0.900	0.900	
Pdh Tj = +2°C	5.10 kW	5.30 kW	
COP Tj = +2°C	4.25	3.15	
Cdh Tj = +2 °C	0.900	0.900	
Pdh Tj = +7°C	3.80 kW	3.60 kW	
COP Tj = +7°C	6.30	4.79	
Cdh Tj = +7 °C	0.900	0.900	



	1	
Pdh Tj = 12°C	4.40 kW	4.10 kW
COP Tj = 12°C	9.20	7.00
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	9.50 kW	9.90 kW
COP Tj = Tbiv	2.25	1.65
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.50 kW	9.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.25	1.65
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.90	0.90
WTOL	57 °C	57 °C
Poff	60 W	60 W
РТО	60 W	60 W
PSB	60 W	60 W
PCK	50 W	50 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.50 kW	0.10 kW
Annual energy consumption Qhe	4410 kWh	6156 kWh



Model: HU123 U33 / HN1636M NK5

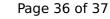
Configure model		
Model name	HU123 U33 / HN1636M NK5	
Application	Heating (medium temp)	
Units	Indoor + Outdoor	
Climate Zone	n/a	
Reversibility	No	
Cooling mode application (optional)	n/a	

General Data				
Power supply 3x400V 50Hz				
Phase-out Date	03.02.2024			

Average Climate

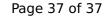
EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)
Sound power level outdoor	66 dB(A)	66 dB(A)

EN 14825			
		Low temperature	Medium temperature
η_{S}		175 %	130 %
Prated		9.00 kW	10.00 kW
SCOP		4.45	3.32
Tbiv		-10 °C	-10 °C
TOL		-10 °C	-10 °C





	aced by the fill RETINA	TR database on 10 Mar 2022
Pdh Tj = -7°C	8.00 kW	8.80 kW
COP Tj = -7°C	2.67	1.93
Cdh Tj = -7 °C	0.900	0.900
Pdh Tj = +2°C	4.90 kW	5.30 kW
$COP Tj = +2^{\circ}C$	4.27	3.15
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = $+7$ °C	3.70 kW	3.60 kW
$COP Tj = +7^{\circ}C$	6.30	4.79
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	4.50 kW	4.10 kW
COP Tj = 12°C	9.20	7.00
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	9.00 kW	9.90 kW
COP Tj = Tbiv	2.25	1.65
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	9.00 kW	9.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.25	1.65
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	0.90	0.90
WTOL	57 °C	57 °C
Poff	60 W	60 W
РТО	60 W	60 W
PSB	60 W	60 W
PCK	50 W	50 W





Supplementary Heater: Type of energy input	n/a	Electricity
Supplementary Heater: PSUP	0.00 kW	0.10 kW
Annual energy consumption Qhe	4179 kWh	6156 kWh

Heating

EN 14511-2				
	Low temperature	Medium temperature		
Heat output	12.00 kW	12.50 kW		
El input	2.64 kW	4.94 kW		
СОР	4.55	2.53		

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