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#### **Login**

Summary of	R32 Hydrosplit 12 14 16 kW 1 phase & 3 phases	Reg. No.	011-1W0382		
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	R32 Hydrosplit 12 14 16 kW 1 phase & 3 phases				
Heat Pump Type	Outdoor Air/Water				
Refrigerant	R32				
Mass of Refrigerant	2.1 kg				
Certification Date	06.07.2020				
Testing basis	European KEYMARK Scheme for Heat Pumps Rev. 8 (as of 2020-09)				



### Model: HU121MRB U30 / HN1600MB NK0

Configure model		
Model name	HU121MRB U30 / HN1600MB NK0	
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	2.38 kW	3.79 kW
СОР	5.04	2.90

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	61 dB(A)	61 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	181 %	137 %
Prated	12.00 kW	12.00 kW
SCOP	4.60	3.50
Tbiv	-10 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.20 kW	10.20 kW
COP Tj = -7°C	3.01	2.20
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	6.20 kW	6.30 kW
COP Tj = +2°C	4.42	3.38
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	4.50 kW	4.60 kW
COP Tj = +7°C	6.04	4.67
Cdh Tj = +7 °C	0.90	0.90



Pdh Tj = 12°C	5.00 kW	4.60 kW
COP Tj = 12°C	8.44	6.66
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	11.50 kW	10.20 kW
COP Tj = Tbiv	2.65	2.20
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.50 kW	10.80 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.65	1.92
WTOL	65 °C	65 °C
Poff	60 W	60 W
РТО	60 W	60 W
PSB	60 W	60 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.50 kW	1.20 kW
Annual energy consumption Qhe	5165 kWh	6788 kWh



### Model: HU123MRB U30 / HN1600MB NK0

Configure model		
Model name	HU123MRB U30 / HN1600MB NK0	
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	2.38 kW	3.79 kW
СОР	5.04	2.90

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	61 dB(A)	61 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	181 %	137 %
Prated	12.00 kW	12.00 kW
SCOP	4.60	3.50
Tbiv	-10 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.20 kW	10.20 kW
COP Tj = -7°C	3.01	2.20
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	6.20 kW	6.30 kW
COP Tj = +2°C	4.42	3.38
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	4.50 kW	4.60 kW
COP Tj = +7°C	6.04	4.67
Cdh Tj = +7 °C	0.90	0.90



Pdh Tj = 12°C	5.00 kW	4.60 kW
COP Tj = 12°C	8.44	6.66
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	11.50 kW	10.20 kW
COP Tj = Tbiv	2.65	2.20
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.50 kW	10.80 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.65	1.92
WTOL	65 °C	65 °C
Poff	60 W	60 W
РТО	60 W	60 W
PSB	60 W	60 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.50 kW	1.20 kW
Annual energy consumption Qhe	5165 kWh	6788 kWh



#### Model: HU141MRB U30 / HN1600MB NK0

Configure model		
Model name	HU141MRB U30 / HN1600MB NK0	
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	2.86 kW	4.04 kW
СОР	4.89	2.85

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	62 dB(A)	62 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	180 %	136 %
Prated	12.00 kW	12.00 kW
SCOP	4.57	3.47
Tbiv	-10 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.60 kW	10.40 kW
COP Tj = -7°C	2.94	2.16
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	6.50 kW	6.30 kW
COP Tj = +2°C	4.45	3.35
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	4.70 kW	4.70 kW
COP Tj = +7°C	5.95	4.66
Cdh Tj = +7 °C	0.90	0.90



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		<u> </u>
Pdh Tj = 12°C	5.00 kW	4.60 kW
COP Tj = 12°C	8.12	6.62
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	12.00 kW	10.40 kW
COP Tj = Tbiv	2.60	2.16
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.00 kW	10.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.60	1.86
WTOL	65 °C	65 °C
Poff	60 W	60 W
РТО	60 W	60 W
PSB	60 W	60 W
РСК	o w	0 W
Supplementary Heater: Type of energy input	n/a	Electricity
Supplementary Heater: PSUP	0.00 kW	1.10 kW
Annual energy consumption Qhe	5425 kWh	6992 kWh



#### Model: HU143MRB U30 / HN1600MB NK0

Configure model		
Model name	HU143MRB U30 / HN1600MB NK0	
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	2.86 kW	4.04 kW	
СОР	4.89	2.85	

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



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EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	44 dB(A)	44 dB(A)	
Sound power level outdoor	62 dB(A)	62 dB(A)	

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	180 %	136 %
Prated	12.00 kW	12.00 kW
SCOP	4.57	3.47
Tbiv	-10 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.60 kW	10.40 kW
COP Tj = -7°C	2.94	2.16
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	6.50 kW	6.30 kW
COP Tj = +2°C	4.45	3.35
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	4.70 kW	4.70 kW
COP Tj = +7°C	5.95	4.66
Cdh Tj = +7 °C	0.90	0.90



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Pdh Tj = 12°C	5.00 kW	4.60 kW
COP Tj = 12°C	8.12	6.62
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	12.00 kW	10.40 kW
COP Tj = Tbiv	2.60	2.16
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.00 kW	10.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.60	1.86
WTOL	65 °C	65 °C
Poff	60 W	60 W
РТО	60 W	60 W
PSB	60 W	60 W
PCK	o w	o w
Supplementary Heater: Type of energy input	n/a	Electricity
Supplementary Heater: PSUP	0.00 kW	1.10 kW
Annual energy consumption Qhe	5425 kWh	6992 kWh



#### Model: HU161MRB U30 / HN1600MB NK0

Configure model		
Model name HU161MRB U30 / HN1600MB NK0		
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	3.33 kW	4.29 kW	
СОР	4.80	2.80	

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



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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
$\eta_{s}$	179 %	135 %
Prated	12.00 kW	12.00 kW
SCOP	4.55	3.45
Tbiv	-10 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.90 kW	10.60 kW
COP Tj = -7°C	2.88	2.15
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	6.70 kW	6.50 kW
COP Tj = +2°C	4.45	3.34
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	5.00 kW	5.20 kW
COP Tj = +7°C	5.97	4.65
Cdh Tj = +7 °C	0.90	0.90



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Pdh Tj = 12°C	5.30 kW	4.60 kW
COP Tj = 12°C	8.11	6.58
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	12.30 kW	10.60 kW
COP Tj = Tbiv	2.56	2.15
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.30 kW	11.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.56	1.85
WTOL	65 °C	65 °C
Poff	60 W	60 W
РТО	60 W	60 W
PSB	60 W	60 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	n/a	Electricity
Supplementary Heater: PSUP	0.00 kW	0.90 kW
Annual energy consumption Qhe	5586 kWh	7187 kWh



### Model: HU163MRB U30 / HN1600MB NK0

Configure model		
Model name HU163MRB U30 / HN1600MB NK0		
Application	plication 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	3.33 kW	4.29 kW	
СОР	4.80	2.80	

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	63 dB(A)	63 dB(A)	

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	179 %	135 %
Prated	12.00 kW	12.00 kW
SCOP	4.55	3.45
Tbiv	-10 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.90 kW	10.60 kW
COP Tj = -7°C	2.88	2.15
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	6.70 kW	6.50 kW
COP Tj = +2°C	4.45	3.34
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	5.00 kW	5.20 kW
COP Tj = +7°C	5.97	4.65
Cdh Tj = +7 °C	0.90	0.90



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Pdh Tj = 12°C	5.30 kW	4.60 kW
COP Tj = 12°C	8.11	6.58
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	12.30 kW	10.60 kW
COP Tj = Tbiv	2.56	2.15
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.30 kW	11.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.56	1.85
WTOL	65 °C	65 °C
Poff	60 W	60 W
РТО	60 W	60 W
PSB	60 W	60 W
PCK	0 W	o w
Supplementary Heater: Type of energy input	n/a	Electricity
Supplementary Heater: PSUP	0.00 kW	0.90 kW
Annual energy consumption Qhe	5586 kWh	7187 kWh



### Model: HU121MRB U30 / HN1600MC NK1

Configure model		
Model name HU121MRB U30 / HN1600MC NK1		
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	2.38 kW	3.79 kW	
СОР	5.04	2.90	

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



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EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)
Sound power level outdoor	61 dB(A)	61 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	181 %	137 %
Prated	12.00 kW	12.00 kW
SCOP	4.60	3.50
Tbiv	-10 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.20 kW	10.20 kW
COP Tj = $-7^{\circ}$ C	3.01	2.20
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = $+2$ °C	6.20 kW	6.30 kW
COP Tj = +2°C	4.42	3.38
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	4.50 kW	4.60 kW
COP Tj = +7°C	6.04	4.67
Cdh Tj = +7 °C	0.90	0.90



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		<u>'</u>
Pdh Tj = 12°C	5.00 kW	4.60 kW
COP Tj = 12°C	8.44	6.66
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	11.50 kW	10.20 kW
COP Tj = Tbiv	2.65	2.20
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.50 kW	10.80 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.65	1.92
WTOL	65 °C	65 °C
Poff	60 W	60 W
РТО	60 W	60 W
PSB	60 W	60 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.50 kW	1.20 kW
Annual energy consumption Qhe	5165 kWh	6788 kWh



#### Model: HU123MRB U30 / HN1600MC NK1

Configure model		
Model name	HU123MRB U30 / HN1600MC NK1	
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	2.38 kW	3.79 kW
СОР	5.04	2.90

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



# CEN heat pump KEYMARK

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)
Sound power level outdoor	61 dB(A)	61 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	181 %	137 %
Prated	12.00 kW	12.00 kW
SCOP	4.60	3.50
Tbiv	-10 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.20 kW	10.20 kW
COP Tj = -7°C	3.01	2.20
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	6.20 kW	6.30 kW
COP Tj = +2°C	4.42	3.38
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	4.50 kW	4.60 kW
COP Tj = +7°C	6.04	4.67
Cdh Tj = +7 °C	0.90	0.90



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Pdh Tj = 12°C	5.00 kW	4.60 kW
COP Tj = 12°C	8.44	6.66
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	11.50 kW	10.20 kW
COP Tj = Tbiv	2.65	2.20
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	11.50 kW	10.80 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.65	1.92
WTOL	65 °C	65 °C
Poff	60 W	60 W
РТО	60 W	60 W
PSB	60 W	60 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.50 kW	1.20 kW
Annual energy consumption Qhe	5165 kWh	6788 kWh



### Model: HU141MRB U30 / HN1600MC NK1

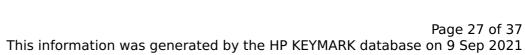
Configure model		
Model name	HU141MRB U30 / HN1600MC NK1	
Application	Heating (medium temp)	
Units	Indoor + Outdoor	
Climate Zone	n/a	
Reversibility	No	
Cooling mode application (optional)	n/a	

General Data		
Power supply 1x230V 50Hz		

#### Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	14.00 kW	11.50 kW
El input	2.86 kW	4.04 kW
СОР	4.89	2.85

EN 14511-4	
Shutting off the heat transfer medium flow	naccod
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	62 dB(A)	62 dB(A)

CEN heat pump KEYMARK

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	180 %	136 %
Prated	12.00 kW	12.00 kW
SCOP	4.57	3.47
Tbiv	-10 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.60 kW	10.40 kW
COP Tj = -7°C	2.94	2.16
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	6.50 kW	6.30 kW
COP Tj = +2°C	4.45	3.35
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	4.70 kW	4.70 kW
COP Tj = +7°C	5.95	4.66
Cdh Tj = +7 °C	0.90	0.90



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Pdh Tj = 12°C	5.00 kW	4.60 kW
COP Tj = 12°C	8.12	6.62
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	12.00 kW	10.40 kW
COP Tj = Tbiv	2.60	2.16
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.00 kW	10.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.60	1.86
WTOL	65 °C	65 °C
Poff	60 W	60 W
РТО	60 W	60 W
PSB	60 W	60 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	n/a	Electricity
Supplementary Heater: PSUP	0.00 kW	1.10 kW
Annual energy consumption Qhe	5425 kWh	6992 kWh



### Model: HU143MRB U30 / HN1600MC NK1

Configure model	
Model name	HU143MRB U30 / HN1600MC NK1
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	2.86 kW	4.04 kW
СОР	4.89	2.85

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



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EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	44 dB(A)	44 dB(A)
Sound power level outdoor	62 dB(A)	62 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	180 %	136 %
Prated	12.00 kW	12.00 kW
SCOP	4.57	3.47
Tbiv	-10 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.60 kW	10.40 kW
COP Tj = -7°C	2.94	2.16
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	6.50 kW	6.30 kW
COP Tj = +2°C	4.45	3.35
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	4.70 kW	4.70 kW
COP Tj = +7°C	5.95	4.66
Cdh Tj = +7 °C	0.90	0.90



Pdh Tj = 12°C	5.00 kW	4.60 kW
COP Tj = 12°C	8.12	6.62
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	12.00 kW	10.40 kW
COP Tj = Tbiv	2.60	2.16
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.00 kW	10.90 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.60	1.86
WTOL	65 °C	65 °C
Poff	60 W	60 W
РТО	60 W	60 W
PSB	60 W	60 W
РСК	o w	0 W
Supplementary Heater: Type of energy input	n/a	Electricity
Supplementary Heater: PSUP	0.00 kW	1.10 kW
Annual energy consumption Qhe	5425 kWh	6992 kWh



### Model: HU161MRB U30 / HN1600MC NK1

Configure model	
Model name	HU161MRB U30 / HN1600MC NK1
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	3.33 kW	4.29 kW	
СОР	4.80	2.80	

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



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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
$\eta_{s}$	179 %	135 %
Prated	12.00 kW	12.00 kW
SCOP	4.55	3.45
Tbiv	-10 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	10.90 kW	10.60 kW
COP Tj = -7°C	2.88	2.15
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	6.70 kW	6.50 kW
COP Tj = +2°C	4.45	3.34
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	5.00 kW	5.20 kW
COP Tj = +7°C	5.97	4.65
Cdh Tj = +7 °C	0.90	0.90



# $$\operatorname{\textit{Page}}\ 34\ \text{of}\ 37$$ This information was generated by the HP KEYMARK database on 9 Sep 2021

Pdh Tj = 12°C	5.30 kW	4.60 kW
COP Tj = 12°C	8.11	6.58
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	12.30 kW	10.60 kW
COP Tj = Tbiv	2.56	2.15
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.30 kW	11.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.56	1.85
WTOL	65 °C	65 °C
Poff	60 W	60 W
РТО	60 W	60 W
PSB	60 W	60 W
PCK	o w	o w
Supplementary Heater: Type of energy input	n/a	Electricity
Supplementary Heater: PSUP	0.00 kW	0.90 kW
Annual energy consumption Qhe	5586 kWh	7187 kWh



#### Model: HU163MRB U30 / HN1600MC NK1

Configure model		
Model name HU163MRB U30 / HN1600MC NK1		
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	3.33 kW	4.29 kW
СОР	4.80	2.80

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



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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
$\eta_{s}$	179 %	135 %
Prated	12.00 kW	12.00 kW
SCOP	4.55	3.45
Tbiv	-10 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = $-7$ °C	10.90 kW	10.60 kW
COP Tj = $-7$ °C	2.88	2.15
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = $+2$ °C	6.70 kW	6.50 kW
COP Tj = +2°C	4.45	3.34
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = $+7^{\circ}$ C	5.00 kW	5.20 kW
$COPTj = +7^{\circ}C$	5.97	4.65
Cdh Tj = +7 °C	0.90	0.90



# $$\operatorname{\textit{Page}}\xspace$ 37 of 37 This information was generated by the HP KEYMARK database on 9 Sep 2021

Pdh Tj = 12°C	5.30 kW	4.60 kW
COP Tj = 12°C	8.11	6.58
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	12.30 kW	10.60 kW
COP Tj = Tbiv	2.56	2.15
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	12.30 kW	11.10 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.56	1.85
WTOL	65 °C	65 °C
Poff	60 W	60 W
РТО	60 W	60 W
PSB	60 W	60 W
PCK	o w	0 W
Supplementary Heater: Type of energy input	n/a	Electricity
Supplementary Heater: PSUP	0.00 kW	0.90 kW
Annual energy consumption Qhe	5586 kWh	7187 kWh