

# Model: MHA-V16W/D2RN8-B+HB-A160/C\*\*\*\*GN8-B

Configure model		
Model name   MHA-V16W/D2RN8-B+HB-A160/C****GN8-B		
Application	Heating (medium temp)	
Units	Indoor + Outdoor	
Climate Zone	Colder Climate + Warmer Climate	
Reversibility	Yes	
Cooling mode application (optional)	n/a	

General Data		
Power supply	3x400V 50Hz	

# 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	

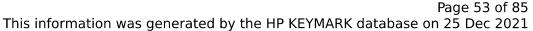
EN 14511-2			
	Low temperature	Medium temperature	
Heat output	16.00 kW	16.00 kW	
El input	3.56 kW	5.52 kW	
СОР	4.50	2.90	

# **Average Climate**



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	43 dB(A)
Sound power level outdoor	68 dB(A)	68 dB(A)

EN 14825		
Low temperature	Medium temperature	
182 %	133 %	
15.21 kW	13.02 kW	
4.62	3.41	
-7 °C	-7 °C	
-10 °C	-10 °C	
13.45 kW	11.52 kW	
2.72	1.99	
0.90	0.90	
8.57 kW	7.18 kW	
4.41	3.34	
0.90	0.90	
5.70 kW	4.68 kW	
6.56	4.61	
0.90	0.90	
	Low temperature  182 %  15.21 kW  4.62  -7 °C  -10 °C  13.45 kW  2.72  0.90  8.57 kW  4.41  0.90  5.70 kW  6.56	





Pdh Tj =  $12^{\circ}$ C 3.78 kW 3.32 kW  $COPTj = 12^{\circ}C$ 8.51 6.07 Cdh Tj = +12 °C 0.90 0.90 Pdh Tj = Tbiv13.45 kW 11.52 kW COP Tj = Tbiv1.99 2.72 Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh 12.52 kW 10.33 kW COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh 2.48 1.80 WTOL 65 °C 65 °C Poff 20 W 20 W PTO 30 W 30 W

20 W

0 W

Electricity

2.68 kW

6805 kWh

20 W

0 W

Electricity

2.67 kW

7896 kWh

## Warmer Climate

Supplementary Heater: PSUP

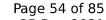
Annual energy consumption Qhe

Supplementary Heater: Type of energy input

**PSB** 

**PCK** 

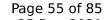
EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	43 dB(A)	43 dB(A)	
Sound power level outdoor	68 dB(A)	68 dB(A)	





#### EN 14825

	Low temperature	Medium temperature
$\eta_{s}$	248 %	176 %
Prated	13.09 kW	14.17 kW
SCOP	6.33	4.47
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	13.09 kW	13.38 kW
$COP Tj = +2^{\circ}C$	3.35	2.29
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = $+7^{\circ}$ C	8.42 kW	9.11 kW
$COP Tj = +7^{\circ}C$	5.36	3.89
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	3.88 kW	4.06 kW
COP Tj = 12°C	8.11	5.86
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	8.42 kW	9.11 kW
COP Tj = Tbiv	5.36	3.89
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL $<$ Tdesignh	13.09 kW	13.38 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.35	2.29
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		



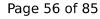


WTOL	65 °C	65 °C
Poff	20 W	20 W
РТО	30 W	30 W
PSB	20 W	20 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.00 kW	0.79 kW
Annual energy consumption Qhe	2786 kWh	4236 kWh

## Colder Climate

EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	43 dB(A)	43 dB(A)	
Sound power level outdoor	68 dB(A)	68 dB(A)	

EN 14825		
	Low temperatu	re Medium temperature
$\eta_{s}$	158 %	122 %
Prated	13.76 kW	11.79 kW
SCOP	4.02	3.12
Tbiv	-15 °C	-15 °C





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TOL	-22 °C	-22 °C
Pdh Tj = -7°C	8.31 kW	7.64 kW
COP Tj = -7°C	3.37	2.65
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	5.27 kW	4.43 kW
COP Tj = +2°C	4.86	3.79
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = $+7$ °C	3.62 kW	2.98 kW
$COP Tj = +7^{\circ}C$	6.49	4.81
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	3.35 kW	3.43 kW
COP Tj = 12°C	7.40	6.29
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	11.22 kW	9.62 kW
COP Tj = Tbiv	2.43	1.86
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	8.89 kW	5.22 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.97	1.23
WTOL	65 °C	65 °C
Poff	20 W	20 W
РТО	30 W	30 W
PSB	20 W	20 W



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#### This information was generated by the HP KEYMARK database on 25 Dec 2021

PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	4.87 kW	6.57 kW
Annual energy consumption Qhe	8431 kWh	9310 kWh
Pdh Tj = -15°C (if TOL<-20°C)	11.22	9.62
COP Tj = -15°C (if TOL $<$ -20°C)	2.43	1.86
Cdh Tj = -15 °C	0.90	0.90