

# Model: MHA-V14W/D2RN8-B+HBT-A160/240C\*\*\*\*GN8-B

Configure model		
Model name MHA-V14W/D2RN8-B+HBT-A160/240C****GN8-B		
Application	Heating + DHW + low 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		
	Medium temperature	
Heat output	14.50 kW	13.80 kW
El input	3.09 kW	4.60 kW
СОР	4.70	3.00

# Average Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	43 dB(A)
Sound power level outdoor	65 dB(A)	65.00 dB(A)

EN 14825		
	Low temperature	Medium temperature
$\eta_{s}$	186.00 %	136 %
Prated	13.73 kW	12.08 kW
SCOP	4.72	3.47
Tbiv	-7 °C	-7 °C
TOL	-10.00 °C	-10.00 °C
Pdh Tj = -7°C	12.14 kW	10.69 kW
COP Tj = -7°C	2.79	2.01
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	7.95 kW	6.86 kW
COP Tj = +2°C	4.52	3.43
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	5.20 kW	4.64 kW
COP Tj = +7°C	6.68	4.66
Cdh Tj = +7 °C	0.90	0.90

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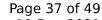




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# Warmer Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	43 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

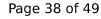




#### EN 14825

	Low temperature	Medium temperature
$\eta_{s}$	260 %	176 %
Prated	12.11 kW	13.74 kW
SCOP	6.63	4.48
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	12.04 kW	13.05 kW
$COP Tj = +2^{\circ}C$	3.44	2.20
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = $+7^{\circ}$ C	7.78 kW	8.83 kW
$COP Tj = +7^{\circ}C$	5.84	3.91
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	3.75 kW	4.09 kW
COP Tj = 12°C	8.25	5.90
Cdh Tj = +12 °C	0.900	0.900
Pdh Tj = Tbiv	7.78 kW	8.83 kW
COP Tj = Tbiv	5.84	3.91
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL $<$ Tdesignh	12.04 kW	13.05 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL $<$ Tdesignh	3.44	2.20
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL $<$ Tdesignh		

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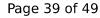


WTOL	65 °C	65 °C
Poff	20 W	20 W
PTO	30 W	30 W
PSB	20 W	20 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.07 kW	0.69 kW
Annual energy consumption Qhe	2462 kWh	4092 kWh

### Colder Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	43 dB(A)	43 dB(A)
Sound power level outdoor	65 dB(A)	65 dB(A)

EN 14825		
	Low ten	nperature Medium temperature
$\eta_{s}$	160 %	119 %
Prated	12.64 kW	V 10.97 kW
SCOP	4.06	3.05
Tbiv	-15 °C	-15 °C
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TOL	-22 °C	-22.00 °C
Pdh Tj = -7°C	7.97 kW	6.89 kW
COP Tj = -7°C	3.44	2.66
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = $+2$ °C	5.05 kW	4.32 kW
$COP Tj = +2^{\circ}C$	4.92	3.66
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = $+7$ °C	3.16 kW	3.06 kW
$COP Tj = +7^{\circ}C$	6.11	4.72
Cdh Tj = $+7$ °C	0.90	0.90
Pdh Tj = 12°C	3.58 kW	3.33 kW
COP Tj = 12°C	7.82	6.25
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	10.31 kW	8.95 kW
COP Tj = Tbiv	2.53	1.79
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL $<$ Tdesignh	7.57 kW	4.20 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.92	1.13
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	5.07 kW	6.77 kW
Annual energy consumption Qhe	7667.00 kWh	8867.00 kWh
Pdh Tj = -15°C (if TOL<-20°C)	10.31	8.95
COP Tj = -15°C (if TOL<-20°C)	2.53	1.79
Cdh Tj = -15 °C	0.90	0.90

# Domestic Hot Water (DHW)

## **Average Climate**

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	123 %	
СОР	3.00	
Heating up time	1:38 h:min	
Standby power input	34.0 W	
Reference hot water temperature	48.5 °C	
Mixed water at 40°C	280 I	

## Warmer Climate



EN 16147		
Declared load profile	XL	
Efficiency ηDHW	153 %	
СОР	3.73	
Heating up time	1:33 h:min	
Standby power input	30.0 W	
Reference hot water temperature	48.5 °C	
Mixed water at 40°C	280 I	

## Colder Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	92 %	
СОР	2.24	
Heating up time	2:06 h:min	
Standby power input	36.0 W	
Reference hot water temperature	48.5 °C	
Mixed water at 40°C	280 I	