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Summary of	M thermal A Series 8 10kW with 240L tank	Reg. No.	041-K007-08	
Certificate Holder				
Name	GD Midea Heating & Ventilating Equipment Co., Ltd.			
Address	Penglai Industry Road	Zip	528311	
City	Beijiao, Shunde, Foshan	Country	China	
Certification Body	BRE Global Limited			
Subtype title	M thermal A Series 8 10kW with 240L tank			
Heat Pump Type	Outdoor Air/Water			
Refrigerant	R32			
Mass of Refrigerant	1.65 kg			
Certification Date	12.06.2020			
Testing basis	g basis Heat Pump Keymark Scheme Rules Rev 08			



Model: MHA-V8W/D2N8-B+HBT-A100/240C****GN8-B

Configure model		
Model name MHA-V8W/D2N8-B+HBT-A100/240C****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	1x230V 50Hz	

Heating

EN 14511-2			
	Low temperature	Medium temperature	
Heat output	8.30 kW	7.50 kW	
El input	1.60 kW	2.36 kW	
СОР	5.20	3.18	

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

Warmer Climate



EN 12102-1			
	Low temperature	Medium temperature	
Sound power level indoor	42 dB(A)	42 dB(A)	
Sound power level outdoor	59 dB(A)	59 dB(A)	

EN 14825		
	Low temperature	Medium temperature
η_{s}	273 %	176 %
Prated	8.12 kW	7.56 kW
SCOP	6.99	4.47
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	7.57 kW	7.55 kW
COP Tj = +2°C	3.98	2.59
Cdh Tj = +2 °C	0.900	0.900
Pdh Tj = +7°C	5.22 kW	4.86 kW
COP Tj = +7°C	6.26	3.92
Cdh Tj = +7 °C	0.900	0.900
Pdh Tj = 12°C	2.45 kW	2.32 kW
COP Tj = 12°C	9.02	5.55
Cdh Tj = +12 °C	0.900	0.900



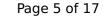


Pdh Tj = Tbiv	5.22 kW	4.86 kW
COP Tj = Tbiv	6.26	3.92
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.57 kW	7.55 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.98	2.59
Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh		
WTOL	65 °C	65 °C
Poff	14 W	14 W
РТО	24 W	24 W
PSB	14 W	14 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	0.55 kW	0.01 kW
Annual energy consumption Qhe	1569 kWh	2259 kWh

Colder Climate

EN 12102-1				
	Low temperature	Medium temperature		
Sound power level indoor	42 dB(A)	42 dB(A)		
Sound power level outdoor	59 dB(A)	59 dB(A)		

EN 14825





	Low temperature	Medium temperature
η_{s}	170 %	112 %
Prated	6.98 kW	5.78 kW
SCOP	4.32	2.88
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	4.46 kW	3.86 kW
$COP Tj = -7^{\circ}C$	3.66	2.48
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	2.70 kW	2.21 kW
$COPTj = +2^{\circ}C$	5.20	3.35
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = $+7^{\circ}$ C	1.66 kW	1.44 kW
$COPTj = +7^{\circ}C$	6.53	4.11
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	1.66 kW	1.47 kW
COP Tj = 12°C	7.96	5.92
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	5.69 kW	4.71 kW
COP Tj = Tbiv	2.83	1.90
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.06 kW	2.80 kW





COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.95	1.22
WTOL	65 °C	65 °C
Poff	14 W	14 W
РТО	24 W	24 W
PSB	14 W	14 W
PCK	0 W	0 W
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	2.91 kW	2.99 kW
Annual energy consumption Qhe	3978 kWh	4950 kWh
Pdh Tj = -15°C (if TOL<-20°C)	5.69	4.71
COP Tj = -15 °C (if TOL< -20 °C)	2.83	1.90
Cdh Tj = -15 °C	0.90	0.90

Average Climate

Sound power level outdoor

EN 12102-1 Low temperature Medium temperature Sound power level indoor 42 dB(A) 42 dB(A)

59 dB(A)

59 dB(A)

EN 14825		
	Low temperature	Medium temperature





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η_{s}	205 %	132 %
Prated	8.12 kW	6.60 kW
SCOP	5.21	3.36
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7 °C	7.19 kW	5.84 kW
$COP Tj = -7^{\circ}C$	3.35	2.16
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	4.65 kW	3.76 kW
COP Tj = +2°C	5.09	3.30
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = $+7$ °C	2.90 kW	2.43 kW
$COPTj = +7^{\circ}C$	6.82	4.34
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	1.63 kW	1.40 kW
COP Tj = 12°C	8.35	5.33
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	7.19 kW	5.84 kW
COP Tj = Tbiv	3.35	2.16
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	6.45 kW	4.91 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	3.04	1.84
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WTOL	65 °C	65 °C
Poff	14 W	14 W
РТО	24 W	24 W
PSB	14 W	14 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	1.68 kW	1.69 kW
Annual energy consumption Ohe	3223 kWh	4056 kWh

Domestic Hot Water (DHW)

Warmer Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	171 %	
СОР	4.18	
Heating up time	1:51 h:min	
Standby power input	22.0 W	
Reference hot water temperature	48.0 °C	
Mixed water at 40°C	275 I	

Colder Climate



EN 16147		
Declared load profile	XL	
Efficiency ηDHW	111 %	
СОР	2.72	
Heating up time	2:18 h:min	
Standby power input	24.0 W	
Reference hot water temperature	48.0 °C	
Mixed water at 40°C	275 I	

Average Climate

EN 16147		
Declared load profile	XL	
Efficiency ηDHW	137 %	
СОР	3.36	
Heating up time	2:02 h:min	
Standby power input	24.0 W	
Reference hot water temperature	48.0 °C	
Mixed water at 40°C	275 I	



Model: MHA-V10W/D2N8-B+HBT-A100/240C****GN8-B

Configure model		
Model name	MHA-V10W/D2N8-B+HBT-A100/240C****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	1x230V 50Hz	

Heating

EN 14511-2		
	Low temperature	Medium temperature
Heat output	10.00 kW	9.50 kW
El input	2.00 kW	3.06 kW
СОР	5.00	3.10

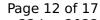
EN 14511-4		
Shutting off the heat transfer medium flow	passed	
Complete power supply failure	passed	
Defrost test	passed	
Starting and operating test	passed	

Warmer Climate



EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	60 dB(A)	60 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{s}	279 %	180 %
Prated	8.58 kW	8.63 kW
SCOP	7.12	4.58
Tbiv	7 °C	7 °C
TOL	2 °C	2 °C
Pdh Tj = +2°C	8.44 kW	8.06 kW
COP Tj = +2°C	3.84	2.59
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = $+7^{\circ}$ C	5.52 kW	5.55 kW
COP Tj = +7°C	6.18	4.10
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	2.62 kW	2.53 kW
COP Tj = 12°C	9.04	5.82
Cdh Tj = +12 °C	0.90	0.90



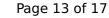


5.52 kW	5.55 kW
6.18	4.10
8.44 kW	8.16 kW
3.84	2.61
65 °C	65 °C
14 W	14 W
24 W	24 W
14 W	14 W
o w	0 W
Electricity	Electricity
0.14 kW	0.48 kW
1628 kWh	2516 kWh
	6.18 8.44 kW 3.84 65 °C 14 W 24 W 14 W 0 W Electricity 0.14 kW

Colder Climate

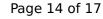
Low temperature Medium temperature Sound power level indoor 42 dB(A) 42 dB(A) Sound power level outdoor 60 dB(A) 60 dB(A)

EN 14825		
	Low temperature	Medium temperature





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η_{s}	170 %	116 %
Prated	7.75 kW	6.71 kW
SCOP	4.32	2.99
Tbiv	-15 °C	-15 °C
TOL	-22 °C	-22 °C
Pdh Tj = -7°C	4.83 kW	4.27 kW
COP Tj = -7°C	3.60	2.54
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	2.94 kW	2.57 kW
COP Tj = +2°C	5.26	3.51
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = +7°C	1.92 kW	1.66 kW
$COP Tj = +7^{\circ}C$	7.08	4.37
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	1.66 kW	1.48 kW
COP Tj = 12°C	7.96	5.96
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	6.32 kW	5.48 kW
COP Tj = Tbiv	2.64	2.00
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	4.63 kW	2.80 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	1.97	1.22



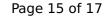


WTOL	65 °C	65 °C
Poff	14 W	14 W
РТО	24 W	24 W
PSB	14 W	14 W
PCK	o w	o w
Supplementary Heater: Type of energy input	Electricity	Electricity
Supplementary Heater: PSUP	3.13 kW	3.91 kW
Annual energy consumption Qhe	4424 kWh	5540 kWh
Pdh Tj = -15°C (if TOL<-20°C)	6.32	5.48
COP Tj = -15°C (if TOL $<$ -20°C)	2.64	2.00
Cdh Tj = -15 °C	0.90	0.90

Average Climate

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	42 dB(A)	42 dB(A)
Sound power level outdoor	60 dB(A)	60 dB(A)

EN 14825		
	Low temperature	Medium temperature
η_{S}	205 %	137 %





<u> </u>	<u>, </u>	NK database on 22 juli 202
Prated	9.17 kW	7.67 kW
SCOP	5.19	3.49
Tbiv	-7 °C	-7 °C
TOL	-10 °C	-10 °C
Pdh Tj = -7°C	8.11 kW	6.78 kW
$COP Tj = -7^{\circ}C$	3.23	2.24
Cdh Tj = -7 °C	0.90	0.90
Pdh Tj = +2°C	5.18 kW	4.29 kW
COP Tj = +2°C	5.01	3.42
Cdh Tj = +2 °C	0.90	0.90
Pdh Tj = $+7^{\circ}$ C	3.32 kW	2.77 kW
$COPTj = +7^{\circ}C$	7.08	4.52
Cdh Tj = +7 °C	0.90	0.90
Pdh Tj = 12°C	1.65 kW	1.58 kW
COP Tj = 12°C	8.58	5.68
Cdh Tj = +12 °C	0.90	0.90
Pdh Tj = Tbiv	8.11 kW	6.78 kW
COP Tj = Tbiv	3.23	2.24
Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh	7.40 kW	5.39 kW
COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh	2.96	1.83
WTOL	65 °C	65 °C





Poff 14 W 14 W PTO 24 W 24 W **PSB** 14 W 14 W **PCK** 0 W 0 W Supplementary Heater: Type of energy input Electricity Electricity Supplementary Heater: PSUP 1.76 kW 2.28 kW

3647 kWh

4539 kWh

Domestic Hot Water (DHW)

Annual energy consumption Qhe

Warmer Climate

EN 16147	
Declared load profile	XL
Efficiency ηDHW	171 %
СОР	4.18
Heating up time	1:51 h:min
Standby power input	22.0 W
Reference hot water temperature	48.0 °C
Mixed water at 40°C	275 I

Colder Climate



EN 16147	
Declared load profile	XL
Efficiency ηDHW	111 %
СОР	2.72
Heating up time	2:18 h:min
Standby power input	24.0 W
Reference hot water temperature	48.0 °C
Mixed water at 40°C	275 l

Average Climate

EN 16147	
Declared load profile	XL
Efficiency ηDHW	137 %
СОР	3.36
Heating up time	2:02 h:min
Standby power input	24.0 W
Reference hot water temperature	48.0 °C
Mixed water at 40°C	275 I