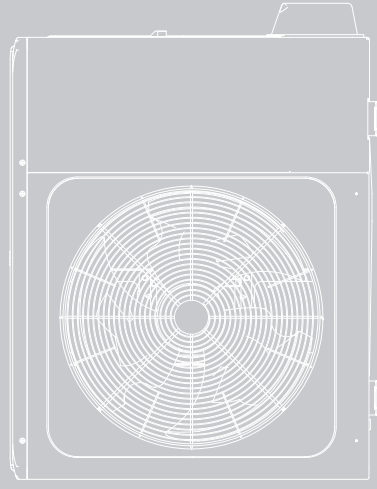


# TECHNICAL DATA MANUAL AND ENERGY EFFICIENCY

## M-thermal Split Outdoor Unit



### IMPORTANT NOTE:

Thank you very much for purchasing our product,  
Before using your unit , please read this manual carefully and keep it for future reference.



# Product fiche

Energy labelling regulation: (EU)811/2013  
Ecodesign regulation: (EU)813/2013

Heat pump combination heater									
		Outdoor	MHA-V4W/D2N8-B2	MHA-V4W/D2N8-B2	MHA-V6W/D2N8-B2	MHA-V6W/D2N8-B2	MHA-V8W/D2N8-B2	MHA-V8W/D2N8-B2	MHA-V10W/D2N8-B2
		Indoor	HBT-A100/190CD***GN8-B	HBT-A100/240CD***GN8-B	HBT-A100/190CD***GN8-B	HBT-A100/240CD***GN8-B	HBT-A100/190CD***GN8-B	HBT-A100/240CD***GN8-B	HBT-A100/190CD***GN8-B
Indoor unit sound power(*)		dB	38	38	38	38	40	40	40
Outdoor unit sound power(*)		dB	56	56	58	58	59	59	60
Water heating	Declared load profile	-	L	XL	L	XL	L	XL	L
	Energy efficiency class	-	A+	A+	A+	A+	A+	A+	A+
Space heating	Energy efficiency class at 55 °C (High temp. app.)	-	A++	A++	A++	A++	A++	A++	A++
Average climate									
Water heating	Water heating energy efficiency (η <sub>wh</sub> )	[%]	127	136	127	136	125	137	125
	Annual electricity consumption (AEC)	[kWh]	801	1229	801	1229	820	1218	820
Space heating	P <sub>rated</sub> (declared heating capacity)@-10 °C	[kW]	4.4	4.4	5.7	5.7	6.6	6.6	7.7
	Seasonal space heating efficiency(η <sub>sp</sub> )	[%]	129.5	129.5	137.9	137.9	131.5	131.5	136.6
	Annual energy consumption	[kWh]	2744	2744	3345	3345	4056	4056	4539
	Off-peak operation function integrated in heat pump	Y/N	Y	Y	Y	Y	Y	Y	Y
Colder climate									
Water heating	Water heating energy efficiency (η <sub>wh</sub> )	[%]	102	107	102	107	107	111	107
	Annual energy consumption	[kWh]	998	1561	998	1561	950	1508	950
Space heating	P <sub>rated</sub> (declared heating capacity)@-22 °C	[kW]	3.36	3.36	4.26	4.26	5.77	5.77	6.71
	Seasonal space heating efficiency(η <sub>sp</sub> )	[%]	102.1	102.1	111.1	111.1	112.0	112.0	116.4
	Annual energy consumption	[kWh]	3159	3159	3681	3681	4950	4950	5540
	Warmer climate								
Water heating	Water heating energy efficiency (η <sub>wh</sub> )	[%]	157	174	157	174	151	171	151
	Annual energy consumption	[kWh]	649	963	649	963	675	977	675
Space heating	P <sub>rated</sub> (declared heating capacity)@2 °C	[kW]	5.01	5.01	5.14	5.14	8.37	8.37	8.63
	Seasonal space heating efficiency(η <sub>sp</sub> )	[%]	162.4	162.4	164.7	164.7	176.9	176.9	180.3
	Annual energy consumption	[kWh]	1621	1621	1640	1640	2485	2485	2516
	Ecodesign technical data								
Product description	Air-to-water heat pump	Y/N	Y	Y	Y	Y	Y	Y	Y
	Water-to-water heat pump	Y/N	N	N	N	N	N	N	N
	Brine-to-water heat pump	Y/N	N	N	N	N	N	N	N
	Low-temperature heat pump	Y/N	N	N	N	N	N	N	N
	Equipped with a supplementary heater	Y/N	Y	Y	Y	Y	Y	Y	Y
	Heat pump combination heater	Y/N	Y	Y	Y	Y	Y	Y	Y
Air-to-water unit	Rated airflow (outdoor)	[m³/h]	2770	2770	2770	2770	4030	4030	4030
Brine/water-to-water heat pump	Rated brine/water flow (outdoor H/E)	[m³/h]	-	-	-	-	-	-	-

Heat pump combination heater									
	Outdoor	MHA-V10W/D2N8-B2		MHA-V12W/D2N8-B2		MHA-V14W/D2N8-B2		MHA-V16W/D2N8-B2	
		HBT-A100/240CD***GN8-B	B	HBT-A160/240CD***GN8-B	B	HBT-A160/240CD***GN8-B	B	HBT-A160/240CD***GN8-B	B
Indoor unit sound power(*)	Indoor								
	dB	40	42	42	44	44	44	44	44
Outdoor unit sound power(*)	dB	60	64	64	65	65	68	68	68
Water heating	-	XL	XL	XL	XL	XL	XL	XL	XL
	-	A+	A+	A+	A+	A+	A+	A+	A+
Space heating	-	A++	A++	A++	A++	A++	A++	A++	A++
Average climate									
Water heating	Water heating energy efficiency (η <sub>wh</sub> )	137	123	123	123	123	123	123	123
	Annual electricity consumption (AEC)	1218	1360	1360	1360	1360	1360	1360	1360
	P <sub>rated</sub> (declared heating capacity)@-10℃	7.7	11.6	11.6	12.1	12.1	13.0	13.0	13.0
Space heating	Seasonal space heating efficiency(η <sub>ts</sub> )	136.6	135.1	135.1	135.6	135.6	133.3	133.2	133.2
	Annual energy consumption	4539	6927	6928	7202	7203	7895	7896	7896
Off-peak operation function integrated in heat pump		Y	Y	Y	Y	Y	Y	Y	Y
Colder climate									
Water heating	Water heating energy efficiency (η <sub>wh</sub> )	111	92	92	92	92	92	92	92
	Annual energy consumption	1508	1822	1822	1822	1822	1822	1822	1822
	P <sub>rated</sub> (declared heating capacity)@-22℃	6.71	10.31	10.3	10.96	11	11.8	11.8	11.8
Space heating	Seasonal space heating efficiency(η <sub>ts</sub> )	116.4	117.8	117.7	118.9	118.9	121.8	121.8	121.8
	Annual energy consumption	5540	8419	8420	8866	8867	9309	9310	9310
Warmer climate									
Water heating	Water heating energy efficiency (η <sub>wh</sub> )	171	153	153	153	153	153	153	153
	Annual energy consumption	977	1088	1088	1088	1088	1088	1088	1088
	P <sub>rated</sub> (declared heating capacity)@2℃	8.63	12.5	12.5	14.17	14.17	14.17	14.17	14.17
Space heating	Seasonal space heating efficiency(η <sub>ts</sub> )	180.3	174.0	173.8	174.9	174.7	176.0	175.8	175.8
	Annual energy consumption	2516	3776	3780	4258	4262	4231	4236	4236
Ecodesign technical data									
Product description	Air-to-water heat pump	Y	Y	Y	Y	Y	Y	Y	Y
	Water-to-water heat pump	N	N	N	N	N	N	N	N
	Brine-to-water heat pump	N	N	N	N	N	N	N	N
	Low-temperature heat pump	N	N	N	N	N	N	N	N
	Equipped with a supplementary heater	Y	Y	Y	Y	Y	Y	Y	Y
Air-to-water unit	Heat pump combination heater	Y	Y	Y	Y	Y	Y	Y	Y
	Rated airflow (outdoor)	4030	4060	4060	4060	4060	4650	4650	4650
Brine/water-to-water heat pump	Rated brine/water flow (outdoor H/E)	-	-	-	-	-	-	-	-



Heat pump combination heater		Outdoor	MHA-V4W/D2N8-B2 HBT-A100/190CD***GN8-B	MHA-V4W/D2N8-B2 HBT-A100/240CD***GN8-B	MHA-V6W/D2N8-B2 HBT-A100/190CD***GN8-B	MHA-V6W/D2N8-B2 HBT-A100/240CD***GN8-B	MHA-V8W/D2N8-B2 HBT-A100/190CD***GN8-B	MHA-V8W/D2N8-B2 HBT-A100/240CD***GN8-B	MHA-V10W/D2N8-B2 HBT-A100/190CD***GN8-B
Other	Capacity control	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	P <sub>eff</sub> (Power consumption Off mode)	[kW]	0.014	0.014	0.014	0.014	0.014	0.014	0.014
	P <sub>b</sub> (Power consumption Thermostat off mode)	[kW]	0.024	0.024	0.024	0.024	0.024	0.024	0.024
	P <sub>sb</sub> (Power consumption standby mode)	[kW]	0.014	0.014	0.014	0.014	0.014	0.014	0.014
	P <sub>CK</sub> (Power crankcase heater model)	[kW]	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	O <sub>elec</sub> (Daily electricity consumption)	[kWh]	3.66	5.71	3.66	5.71	3.78	5.67	3.78
Part load conditions space heating average climate	O <sub>fuel</sub> (Daily fuel consumption)	-	-	-	-	-	-	-	-
(A) condition (-7°C)	P <sub>dh</sub> (declared heating capacity)	[kW]	3.89	3.89	5.04	5.04	5.84	5.84	6.78
	COP <sub>d</sub> (declared COP)	-	2.17	2.17	2.17	2.17	2.16	2.16	2.24
	Cdh (degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90
	P <sub>dh</sub> (declared heating capacity)	[kW]	2.38	2.38	3.12	3.12	3.76	3.76	4.28
(B) condition (2°C)	COP <sub>d</sub> (declared COP)	-	3.30	3.30	3.51	3.51	3.30	3.30	3.42
	Cdh (degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90
	P <sub>dh</sub> (declared heating capacity)	[kW]	2.94	2.94	2.08	2.08	2.43	2.43	2.77
	COP <sub>d</sub> (declared COP)	-	4.41	4.41	4.54	4.54	4.34	4.34	4.52
(C) condition (7°C)	Cdh (degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90
	P <sub>dh</sub> (declared heating capacity)	[kW]	1.32	1.32	1.28	1.28	1.39	1.39	1.58
	COP <sub>d</sub> (declared COP)	-	5.66	5.66	5.59	5.59	5.33	5.33	5.68
	Cdh (degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90
(E) Tol (Temperature Operating Limit)	Tol (Temperature Operating Limit)	[°C]	-10	-10	-10	-10	-10	-10	-10
	P <sub>dh</sub> (declared heating capacity)	[kW]	3.42	3.42	4.52	4.52	4.91	4.91	5.38
	COP <sub>d</sub> (declared COP)	-	1.91	1.91	1.91	1.91	1.84	1.84	1.83
	WTOL (Heating water Operation Limit)	[°C]	65	65	65	65	65	65	65
(F) Trivalent Temperature	T <sub>bw</sub>	[°C]	-7	-7	-7	-7	-7	-7	-7
	P <sub>dh</sub> (declared heating capacity)	[kW]	3.89	3.89	5.04	5.04	5.84	5.84	6.78
	COP <sub>d</sub> (declared COP)	-	2.17	2.17	2.17	2.17	2.16	2.16	2.24
	P <sub>sub</sub> back-up heater (at Tdesign: -10°C)	[kW]	3/6/9	3/6/9	3/6/9	3/6/9	3/6/9	3/6/9	3/6/9
Supplementary capacity at P <sub>design</sub>	P <sub>sub</sub> (at Tdesign: -10°C)	[kW]	0.98	0.98	1.18	1.18	1.69	1.69	2.28

Heat pump combination heater		Outdoor	MHA-V10W/D2N8-B2 HBT-A100/240CD***GN8-B	MHA-V12W/D2N8-B2 HBT-A160/240CD***GN8-B	MHA-V12W/D2N8-B2 HBT-A160/240CD***GN8-B	MHA-V14W/D2N8-B2 HBT-A160/240CD***GN8-B	MHA-V14W/D2N8-B2 HBT-A160/240CD***GN8-B	MHA-V16W/D2N8-B2 HBT-A160/240CD***GN8-B	MHA-V16W/D2N8-B2 HBT-A160/240CD***GN8-B
Other	Capacity control	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	P <sub>off</sub> (Power consumption Off mode)	[kW]	0.014	0.014	0.020	0.014	0.020	0.014	0.020
	P <sub>b</sub> (Power consumption Thermostat off mode)	[kW]	0.024	0.024	0.030	0.024	0.030	0.024	0.030
	P <sub>sb</sub> (Power consumption standby mode)	[kW]	0.014	0.014	0.020	0.014	0.020	0.014	0.020
	P <sub>CK</sub> (Power crankcase heater model)	[kW]	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Q <sub>elec</sub> (Daily electricity consumption)	[kWh]	5.67	6.35	6.35	6.35	6.35	6.35	6.35
	Q <sub>fuel</sub> (Daily fuel consumption)	[kWh]	-	-	-	-	-	-	-
	Part load conditions space heating average climate								
(A) condition (-7℃)	P <sub>th</sub> (declared heating capacity)	[kW]	6.78	10.24	10.24	10.68	10.68	11.52	11.52
	COP <sub>d</sub> (declared COP)	-	2.24	2.01	2.01	2.01	2.01	1.99	1.99
	C <sub>dh</sub> (declared coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90
	P <sub>th</sub> (declared heating capacity)	[kW]	4.28	6.52	6.52	6.86	6.86	7.18	7.18
(B) condition (2℃)	COP <sub>d</sub> (declared COP)	-	3.42	3.44	3.44	3.43	3.43	3.34	3.34
	C <sub>dh</sub> (declared coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90
	P <sub>th</sub> (declared heating capacity)	[kW]	2.77	4.36	4.36	4.63	4.63	4.67	4.67
	COP <sub>d</sub> (declared COP)	-	4.52	4.59	4.59	4.66	4.66	4.61	4.61
(C) condition (7℃)	C <sub>dh</sub> (declared coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90
	P <sub>th</sub> (declared heating capacity)	[kW]	1.58	3.29	3.29	3.31	3.31	3.32	3.32
	COP <sub>d</sub> (declared COP)	-	5.68	6.05	6.05	6.13	6.13	6.07	6.07
	C <sub>dh</sub> (declared coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90
(D) condition (12℃)	T <sub>ol</sub> (Temperature Operating Limit)	[℃]	-10	-10	-10	-10	-10	-10	-10
	P <sub>th</sub> (declared heating capacity)	[kW]	5.38	9.1	9.1	9.19	9.19	10.33	10.33
	COP <sub>d</sub> (declared COP)	-	1.83	1.79	1.79	1.76	1.76	1.80	1.80
	WTOL(Heating water Operation Limit)	[℃]	65	65	65	65	65	65	65
(E) T <sub>ol</sub> (Temperature Operating Limit)	T <sub>bw</sub>	[℃]	-7	-7	-7	-7	-7	-7	-7
	P <sub>th</sub> (declared heating capacity)	[kW]	6.78	10.27	10.27	10.68	10.68	11.52	11.52
	COP <sub>d</sub> (declared COP)	-	2.24	2.01	2.01	2.01	2.01	1.99	1.99
	P <sub>sup</sub> back-up heater (@ T <sub>designh</sub> : -10℃)	[kW]	3/6/9	3/6/9	3/6/9	3/6/9	3/6/9	3/6/9	3/6/9
(F) T <sub>bivalent</sub> Temperature	P <sub>sup</sub> (@ T <sub>designh</sub> : -10℃)	[kW]	2.28	2.5	2.5	2.91	2.91	2.67	2.67
	Supplementary capacity at P <sub>design</sub>								

Indoor unit type explanation:

- 1.HBT-A100/190CD\*\*\*GN8-B includes the following type:  
HBT-A100/190CD30GN8-B: 190L tank with 3kW back-up heater and 1-Phase Source.  
HBT-A100/190CD60GN8-B: 190L tank with 6kW back-up heater and 1-Phase Source.  
HBT-A100/190CDS90GN8-B: 190L tank with 9kW back-up heater and 3-Phase Source.
- 2.HBT-A100/240CD\*\*\*GN8-B includes the following type:  
HBT-A100/190CD30GN8-B: 240L tank with 3kW back-up heater and 1-Phase Source.  
HBT-A100/190CD60GN8-B: 240L tank with 6kW back-up heater and 1-Phase Source.  
HBT-A100/190CDS90GN8-B: 240L tank with 9kW back-up heater and 3-Phase Source.
- 3.HBT-A160/240CD\*\*\*GN8-B includes the following type:  
HBT-A160/240CD30GN8-B: 240L tank with 3kW back-up heater and 1-Phase Source.  
HBT-A160/240CD60GN8-B: 240L tank with 6kW back-up heater and 1-Phase Source.  
HBT-A160/240CDS90GN8-B: 240L tank with 9kW back-up heater and 3-Phase Source.

Note :

Details and precautions on installation, maintenance and assembly can be found in the installation and or operation manuals.

(\*)Sound power in heating mode, measured according to the EN 12102 under conditions of the EN 14825.

This data is for comparison of Energy efficiencies according to Energy label directive 2010/30/EU, for correct selection of products for your application, contact your dealer.  
Depending on your application and the product selected an additional supplementary heater may have to be installed.



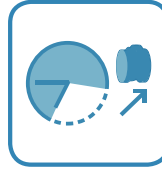
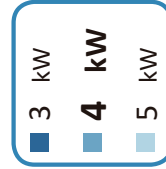
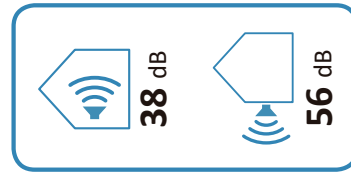
MHA-V4W/D2N8-B2  
HBT-A100/190CD30GN8-B



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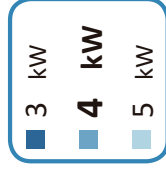
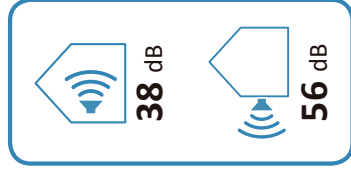
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HBT-A100/190CD60GN8-B



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MHA-V4W/D2N8-B2  
HBT-A100/190CDS90GN8-B



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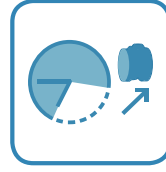
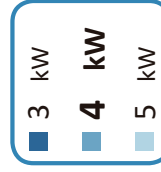
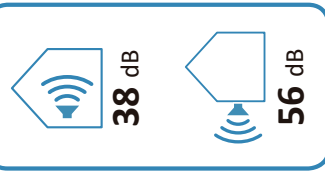
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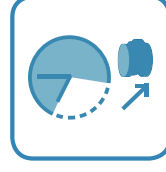
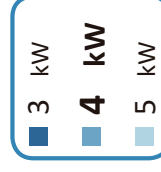
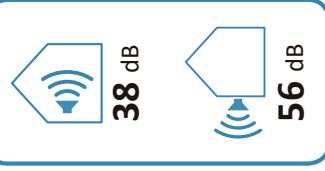
MHA-V4W/D2N8-B2  
HBT-A100/240CD30GN8-B



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Y IJA

IE IA

Midea

MHA-V4W/D2N8-B2  
HBT-A100/240CD60GN8-B



A+++

A++

A+

A

B

C

D



A+

A

B

C

D

E

F

A++

A+

A+



38 dB



56 dB



3 kW

4 kW

5 kW



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Y IJA

IE IA

Midea

MHA-V4W/D2N8-B2  
HBT-A100/240CDS90GN8-B



A+++

A++

A+

A

B

C

D



A+

A

B

C

D

E

F

A++

A+

A+



38 dB



56 dB



3 kW

4 kW

5 kW



2019

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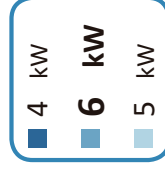
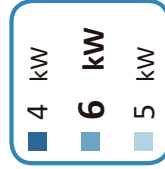
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HBT-A100/190CD30GN8-B



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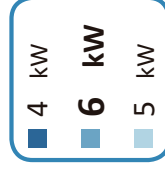
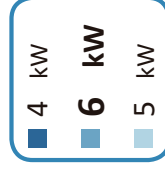
MHA-V6W/D2N8-B2  
HBT-A100/190CD60GN8-B



A<sup>++</sup>



A<sup>+</sup>



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MHA-V6W/D2N8-B2  
HBT-A100/190CDS90GN8-B



A+++

A++

A+

A

B

C

D

A++

A+

A

B

C

D

E

F

A+



L

A+



4 kW

6 kW

5 kW

38 dB

58 dB

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MHA-V6W/D2N8-B2  
HBT-A100/240CD30GN8-B



A+++

A++

A+

A

B

C

D

A++

A+

A

B

C

D

E

F

A+



XL

A+



4 kW

6 kW

5 kW

38 dB

58 dB

811/2013

2019





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MHA-V6W/D2N8-B2  
HBT-A100/240CD60GN8-B



A+++

A++

A+

A

B

C

D

A+

A

B

C

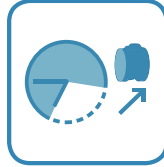
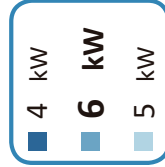
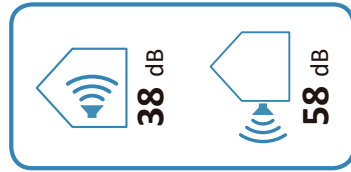
D

E

F

A<sup>+</sup>

A<sup>++</sup>



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MHA-V6W/D2N8-B2  
HBT-A100/240CDS90GN8-B



A+++

A++

A+

A

B

C

D

A<sup>+</sup>

A

B

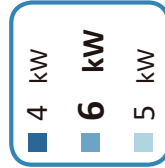
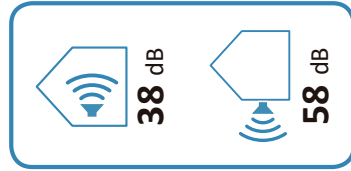
C

D

E

F

A<sup>+</sup>



2019

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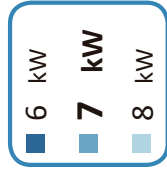
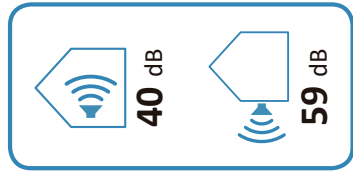
MHA-V8W/D2N8-B2  
HBT-A100/190CD30GN8-B



A<sup>++</sup>



A<sup>+</sup>



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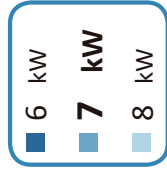
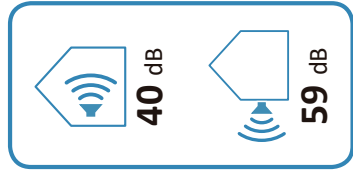
MHA-V8W/D2N8-B2  
HBT-A100/190CD60GN8-B



A<sup>++</sup>



A<sup>+</sup>



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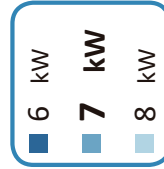
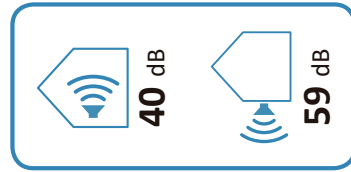


MHA-V8W/D2N8-B2  
HBT-A100/190CDS90GN8-B



A++

A+



2019

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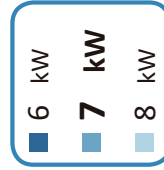
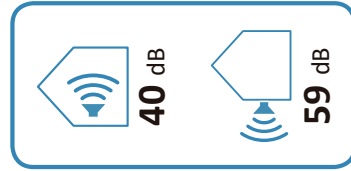


MHA-V8W/D2N8-B2  
HBT-A100/240CD30GN8-B



A++

A+



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Midea

MHA-V8W/D2N8-B2  
HBT-A100/240CD60GN8-B



A+++

A++

A+

A

B

C

D



XL

A++

A+

A

B

C

D

E

F



40 dB

59 dB

6 kW

7 kW

8 kW



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ENERG

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IE IA

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Midea

MHA-V8W/D2N8-B2  
HBT-A100/240CDS90GN8-B



A+++

A++

A+

A

B

C

D



XL

A++

A+

A

B

C

D

E

F




40 dB

59 dB

6 kW

7 kW

8 kW



2019

811/2013



ENERG

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IE IA

енергия · ενεργεια

Midea

MHA-V10W/D2N8-B2  
HBT-A100/190CD30GN8-B



A+++

A++

A+

A

B

C

D



A++

A+

B

C

D

E

F

A+



40 dB



60 dB



7 kW  
8 kW  
9 kW



7 kW  
8 kW  
9 kW



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IE IA

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Midea

MHA-V10W/D2N8-B2  
HBT-A100/190CD60GN8-B



A+++

A++

A+

A

B

C

D



A++

A+

B

C

D

E

F

A+



40 dB



60 dB



7 kW  
8 kW  
9 kW



7 kW  
8 kW  
9 kW



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Y IJA  
IE IA

енергия · ενεργεια

Midea

MHA-V10W/D2N8-B2  
HBT-A100/190CDS90GN8-B



A+++

A++

A+

A

B

C

D

A++

A+

A

B

C

D

E

F



L

A+

A

B

C

D

E

F

A+



40 dB



60 dB



7 kW  
8 kW  
9 kW



2019

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ENERG

Y IJA  
IE IA

енергия · ενεργεια

Midea

MHA-V10W/D2N8-B2  
HBT-A100/240CD30GN8-B



A+++

A++

A+

A

B

C

D

A++

A+

A

B

C

D

E

F



XL

A+

A

B

C

D

E

F

A+



40 dB



60 dB



7 kW  
8 kW  
9 kW



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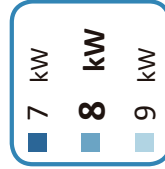
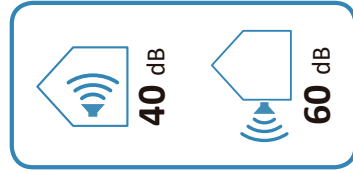
MHA-V10W/D2N8-B2  
HBT-A100/240CD60GN8-B



A<sup>++</sup>



A<sup>+</sup>



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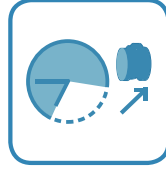
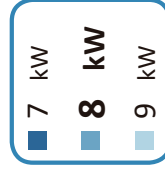
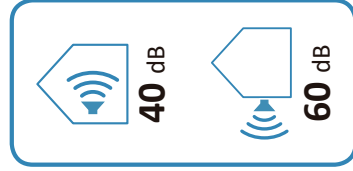
MHA-V10W/D2N8-B2  
HBT-A100/240CDS90GN8-B



A<sup>++</sup>



A<sup>+</sup>



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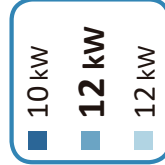
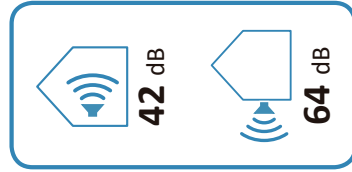
MHA-V12W/D2N8-B2  
HBT-A160/240CD30GN8-B



**A++**



**A+**



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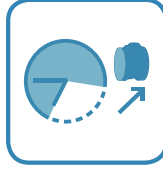
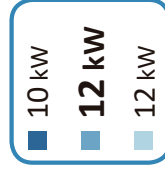
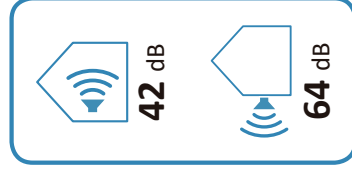
MHA-V12W/D2N8-B2  
HBT-A160/240CD60GN8-B



**A++**



**A+**



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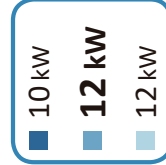
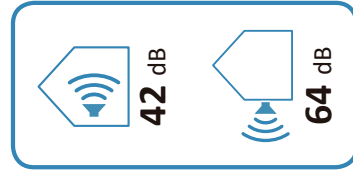
MHA-V12W/D2N8-B2  
HBT-A160/240CDS90GN8-B



**A++**



**A+**



2019

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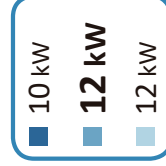
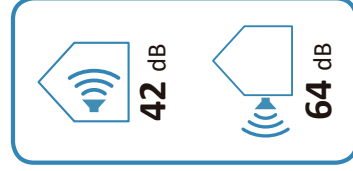
MHA-V12W/D2RN8-B2  
HBT-A160/240CD30GN8-B



**A++**



**A+**



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MHA-V12W/D2RN8-B2

HBT-A160/240CD60GN8-B

A+++

A++

A+

A

B

C

D

A+++

A+

A

B

C

D

E

F

A+

42 dB

64 dB

10 kW

12 kW

12 kW

2019

811/2013



ENERG

Y IJA

IE IA

енергия · ενεργεια



MHA-V12W/D2RN8-B2

HBT-A160/240CDS90GN8-B



A+++

A++

A+

A

B

C

D



A+

A

B

C

D

E

F

A+++

A++

A+

A

B

C

D

A+

A

B

C

D

E

F



42 dB



64 dB



10 kW

12 kW

12 kW



811/2013

2019



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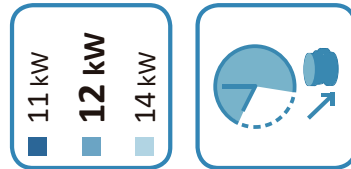
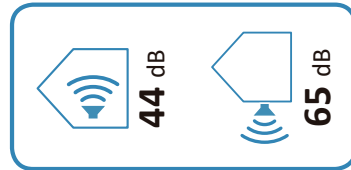
MHA-V14W/D2N8-B2  
HBT-A160/240CD30GN8-B2



A<sup>++</sup>



A<sup>+</sup>



2019

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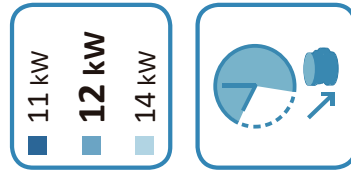
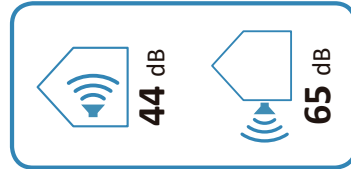
MHA-V14W/D2N8-B2  
HBT-A160/240CD60GN8-B



A<sup>++</sup>



A<sup>+</sup>



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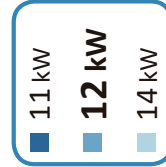
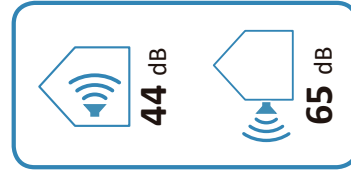
MHA-V14W/D2N8-B2  
HBT-A160/240CDS90GN8-B



A<sup>++</sup>



A<sup>+</sup>



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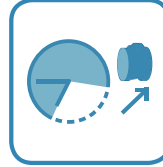
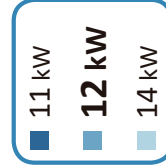
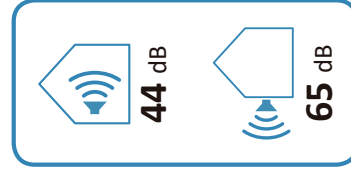
MHA-V14W/D2RN8-B2  
HBT-A160/240CD30GN8-B



A<sup>++</sup>



A<sup>+</sup>



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MHA-V14W/D2RN8-B2  
HBT-A160/240CD60GN8-B



A<sup>++</sup>



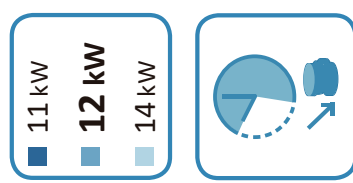
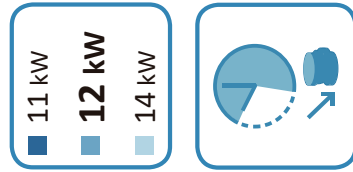
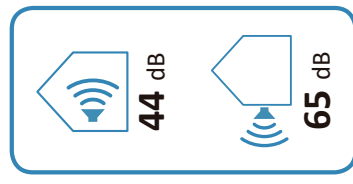
A<sup>+</sup>



A<sup>++</sup>



A<sup>+</sup>



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Y IJA  
IE IA



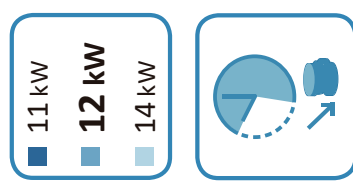
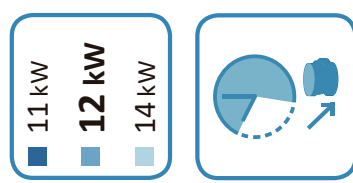
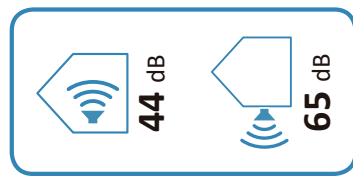
MHA-V14W/D2RN8-B2  
HBT-A160/240CDS90GN8-B



A<sup>++</sup>



A<sup>+</sup>



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IE IA

Midea

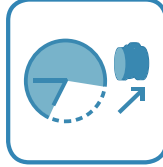
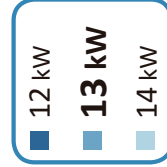
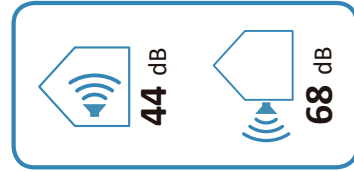
MHA-V16W/D2N8-B2  
HBT-A160/240CD30GN8-B



A<sup>++</sup>



A<sup>+</sup>



2019

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IE IA

Midea

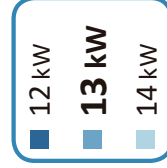
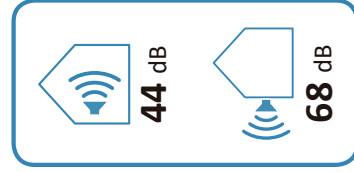
MHA-V16W/D2N8-B2  
HBT-A160/240CD60GN8-B



A<sup>++</sup>



A<sup>+</sup>



2019

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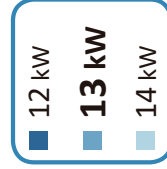
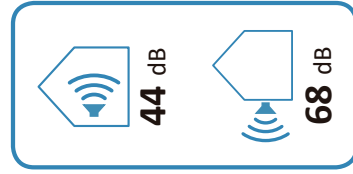
MHA-V16W/D2N8-B2  
HBT-A160/240CDS90GN8-B



**A<sup>++</sup>**



**A<sup>+</sup>**



2019

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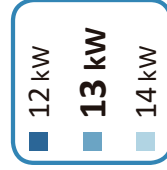
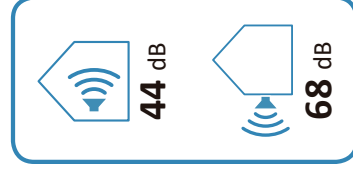
MHA-V16W/D2RN8-B2  
HBT-A160/240CD30GN8-B



**A<sup>++</sup>**



**A<sup>+</sup>**



2019

811/2013

ENERG

Y IJA

IE IA

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MHA-V16W/D2RN8-B2

HBT-A160/240CD60GN8-B

A+++

A++

A+

A

B

C

D

A+++

A+

A

B

C

D

E

F

A+

44 dB

68 dB

12 kW

13 kW

14 kW

2019

811/2013

ENERG

Y IJA

IE IA

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MHA-V16W/D2RN8-B2

HBT-A160/240CDS90GN8-B

A+++

A++

A+

A

B

C

D

A++

A+

A

B

C

D

E

F

A+

A

B

C

D

E

F

44 dB

68 dB

12 kW

13 kW

14 kW

2019

811/2013



Heat pump space heating			For medium - temperature application											
Outdoor unit	Indoor unit	Energy efficiency class	Indoor unit sound power	Outdoor unit sound power	average climate				colder climate			warmer climate		
					Rated heat output	Seasonal space heating energy efficiency	For space heating,annual energy consumption	Rated heat output	Seasonal space heating energy efficiency	For space heating,annual energy consumption	Rated heat output	Seasonal space heating energy efficiency	For space heating,annual energy consumption	
														kW
		-	dB	dB	kW	%	kWh	kW	%	kWh	kW	%	kWh	
	HB-A60/C***GN8-B	A++	38	56	4.4	129.5	2744	3.4	102.1	3158	5.0	163.1	1614	
MHA-V4W/D2N8-B2	HBT-A100/190CD***GN8-B	A++	38	56	4.4	129.5	2744	3.4	102.1	3158	5.0	163.1	1614	
	HBT-A100/240CD***GN8-B	A++	38	56	4.4	129.5	2744	3.4	102.1	3158	5.0	163.1	1614	
	HB-A60/C***GN8-B	A++	38	58	5.7	137.9	3345	4.3	111.1	3680	5.1	165.4	1634	
MHA-V6W/D2N8-B2	HBT-A100/190CD***GN8-B	A++	38	58	5.7	137.9	3345	4.3	111.1	3680	5.1	165.4	1634	
	HBT-A100/240CD***GN8-B	A++	38	58	5.7	137.9	3345	4.3	111.1	3680	5.1	165.4	1634	
	HB-A100/C***GN8-B	A++	42	59	6.6	131.5	4056	5.8	112.1	4948	8.37	176.9	2485	
MHA-V8W/D2N8-B2	HBT-A100/190CD***GN8-B	A++	40	59	6.6	131.5	4056	5.8	112.1	4948	8.37	176.9	2485	
	HBT-A100/240CD***GN8-B	A++	40	59	6.6	131.5	4056	5.8	112.1	4948	8.37	176.9	2485	
	HB-A100/C***GN8-B	A++	42	60	7.7	136.6	4539	6.7	116.5	5539	8.6	180.3	2496	
MHA-V10W/D2N8-B2	HBT-A100/190CD***GN8-B	A++	40	60	7.7	136.6	4539	6.7	116.5	5539	8.6	180.3	2496	
	HBT-A100/240CD***GN8-B	A++	40	60	7.7	136.6	4539	6.7	116.5	5539	8.6	180.3	2496	
	HB-A160/C***GN8-B	A++	43	64	11.6	135.1	6927	10.3	117.8	8419	12.5	174.0	3776	
MHA-V12W/D2N8-B2	HBT-A160/240CD***GN8-B	A++	42	64	11.6	135.1	6927	10.3	117.8	8419	12.5	174.0	3776	
	HB-A160/C***GN8-B	A++	43	64	11.6	135.1	6928	10.3	117.7	8420	12.5	173.8	3780	
	HBT-A160/240CD***GN8-B	A++	42	64	11.6	135.1	6928	10.3	117.7	8420	12.5	173.8	3780	
MHA-V14W/D2N8-B2	HB-A160/C***GN8-B	A++	43	65	12.1	135.6	7202	11.0	118.9	8866	14.17	174.9	4258	
	HBT-A160/240CD***GN8-B	A++	44	65	12.1	135.6	7202	11.0	118.9	8866	14.17	174.9	4258	
	HB-A160/C***GN8-B	A++	43	65	12.1	135.6	7203	11.0	118.9	8867	14.17	174.7	4262	
MHA-V16W/D2N8-B2	HBT-A160/240CD***GN8-B	A++	44	65	12.1	135.6	7203	11.0	118.9	8867	14.17	174.7	4262	
	HB-A160/C***GN8-B	A++	43	68	13.0	133.3	7895	11.8	121.8	9309	14.17	176.0	4231	
	HBT-A160/240CD***GN8-B	A++	44	68	13.0	133.3	7895	11.8	121.8	9309	14.17	176.0	4231	
MHA-V16W/D2RN8-B2	HB-A160/C***GN8-B	A++	43	68	13.0	133.2	7896	11.8	121.8	9310	14.17	175.8	4236	
	HBT-A160/240CD***GN8-B	A++	44	68	13.0	133.2	7896	11.8	121.8	9310	14.17	175.8	4236	

Heat pump space heating		For low - temperature application											
Outdoor unit	Indoor unit	Energy efficiency class	Indoor unit sound power	Outdoor unit sound power	average climate			colder climate			warmer climate		
					Rated heat output	Seasonal space heating energy efficiency	For space heating, annual energy consumption	Rated heat output	Seasonal space heating energy efficiency	For space heating, annual energy consumption	Rated heat output	Seasonal space heating energy efficiency	For space heating, annual energy consumption
					kW	%	kWh	kW	%	kWh	kW	%	kWh
MHA-V4W/D2N8-B2	HB-A60/C***GN8-B	A+++	38	56	5.5	191.0	2351	4.6	159.5	2769	5.5	255.4	1146
	HBT-A100/190CD***GN8-B	A+++	38	56	5.5	191.0	2351	4.6	159.5	2769	5.5	255.4	1146
	HBT-A100/240CD***GN8-B	A+++	38	56	5.5	191.0	2351	4.6	159.5	2769	5.5	255.4	1146
MHA-V6W/D2N8-B2	HB-A60/C***GN8-B	A+++	38	58	6.8	195.0	2845	5.6	165.3	3300	6.1	259.8	1244
	HBT-A100/190CD***GN8-B	A+++	38	58	6.8	195.0	2845	5.6	165.3	3300	6.1	259.8	1244
	HBT-A100/240CD***GN8-B	A+++	38	58	6.8	195.0	2845	5.6	165.3	3300	6.1	259.8	1244
MHA-V8W/D2N8-B2	HB-A100/C***GN8-B	A+++	42	59	8.1	205.6	3218	7.0	170.0	3976	8.1	276.6	1551
	HBT-A100/190CD***GN8-B	A+++	40	59	8.1	205.6	3218	7.0	170.0	3976	8.1	276.6	1551
	HBT-A100/240CD***GN8-B	A+++	40	59	8.1	205.6	3218	7.0	170.0	3976	8.1	276.6	1551
MHA-V10W/D2N8-B2	HB-A100/C***GN8-B	A+++	42	60	9.2	204.8	3644	7.7	169.8	4423	8.6	280.5	1617
	HBT-A100/190CD***GN8-B	A+++	40	60	9.2	204.8	3644	7.7	169.8	4423	8.6	280.5	1617
	HBT-A100/240CD***GN8-B	A+++	40	60	9.2	204.8	3644	7.7	169.8	4423	8.6	280.5	1617
MHA-V12W/D2N8-B2	HB-A160/C***GN8-B	A+++	43	64	12.0	189.4	5152	11.4	160.2	6870	11.1	256.1	2292
	HBT-A160/240CD***GN8-B	A+++	42	64	12.0	189.4	5152	11.4	160.2	6870	11.1	256.1	2292
MHA-V12W/D2RN8-B2	HB-A160/C***GN8-B	A+++	43	64	12.0	189.3	5153	11.4	160.2	6871	11.1	255.6	2296
	HBT-A160/240CD***GN8-B	A+++	42	64	12.0	189.3	5153	11.4	160.2	6871	11.1	255.6	2296
MHA-V14W/D2N8-B2	HB-A160/C***GN8-B	A+++	43	65	13.7	185.7	6012	12.6	159.6	7667	12.1	260.3	2457
	HBT-A160/240CD***GN8-B	A+++	44	65	13.7	185.7	6012	12.6	159.6	7667	12.1	260.3	2457
MHA-V14W/D2RN8-B2	HB-A160/C***GN8-B	A+++	43	65	13.7	185.6	6013	12.6	159.6	7667	12.1	259.8	2462
	HBT-A160/240CD***GN8-B	A+++	44	65	13.7	185.6	6013	12.6	159.6	7667	12.1	259.8	2462
MHA-V16W/D2N8-B2	HB-A160/C***GN8-B	A+++	43	68	15.2	181.7	6804	13.7	157.8	8431	13.1	248.5	2781
	HBT-A160/240CD***GN8-B	A+++	44	68	15.2	181.7	6804	13.7	157.8	8431	13.1	248.5	2781
MHA-V16W/D2RN8-B2	HB-A160/C***GN8-B	A+++	43	68	15.2	181.6	6805	13.7	157.8	8431	13.1	248.1	2786
	HBT-A160/240CD***GN8-B	A+++	44	68	15.2	181.6	6805	13.7	157.8	8431	13.1	248.1	2786

# Product fiche 1

Heat pump space heating												
Indoor unit sound power (*)		Outdoor	MHA-V4W/D2N8-B2	MHA-V6W/D2N8-B2	MHA-V8W/D2N8-B2	MHA-V10W/D2N8-B2	MHA-V12W/D2N8-B2					
Average climate low temperature application		Indoor	HB-A60/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A60/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A100/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A100/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B					
Average climate medium temperature application		dB	38 <sup>a)</sup> /38 <sup>b)</sup>	38 <sup>a)</sup> /38 <sup>b)</sup>	42 <sup>a)</sup> /40 <sup>b)</sup>	42 <sup>a)</sup> /40 <sup>b)</sup>	43 <sup>a)</sup> /42 <sup>b)</sup>					
Capacity of the back-up heater integrated in the unit		dB	56	58	59	60	64					
Space heating		dB	56	58	59	60	64					
Space heating		[kW]	3/6/9	3/6/9	3/6/9	3/6/9	3/6/9					
Energy efficiency class 35°C (Low temp. app.)		-	A+++	A+++	A+++	A+++	A+++					
Energy efficiency class 55°C (Medium temp. app.)		-	A++	A++	A++	A++	A++					
Average climate (Design temperature = -10°C)												
Space heating 35°C	Prated (declared heating capacity) @ -10°C	[kW]	5.5	6.8	8.1	9.2	12.0					
	Seasonal space heating efficiency (ηs)	[%]	191.0	195.0	205.6	204.8	189.4					
	Annual energy consumption	[kWh]	2,351	2,845	3,218	3,644	5,152					
Space heating 55°C	Prated (declared heating capacity) @ -10°C	[kW]	4.4	5.7	6.6	7.7	11.6					
	Seasonal space heating efficiency (ηs)	[%]	129.5	137.9	131.5	136.6	135.1					
	Annual energy consumption	[kWh]	2,744	3,345	4,056	4,539	6,927					
Part load conditions space heating average climate low temperature application												
(A) condition (-7°C)	Pdh (declared heating capacity)	[kW]	4.88	6.03	7.18	8.10	10.61					
	COPd (declared COP)	-	3.19	3.09	3.35	3.23	2.88					
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90					
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	3.05	3.88	4.65	5.18	6.69					
	COPd (declared COP)	-	4.78	4.85	5.09	5.01	4.65					
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90					
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	1.93	2.39	2.90	3.32	4.44					
	COPd (declared COP)	-	6.13	6.63	6.82	7.08	6.62					
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90					
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	1.48	1.39	1.63	1.65	3.74					
	COPd (declared COP)	-	8.05	7.93	8.35	8.58	8.47					
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90					
(E) Tol (temperature operating limit)	Tol (temperature operating limit)	[°C]	-10.00	-10.00	-10.00	-10.00	-10.00					
	Pdh (declared heating capacity)	[kW]	4.41	5.36	6.44	7.40	10.74					
	COPd (declared COP)	-	2.86	2.76	3.04	2.96	2.77					
	WTOL (Heating water Operation Limit)	[°C]	65	65	65	65	65					

Note :

a) represents the hydraulic module series ;

b) represents the m-thermal tank series ;

# Product fiche 1

Heat pump space heating							Outdoor	MHA-V14W/D2N8-B2	MHA-V16W/D2N8-B2	MHA-V12W/D2RN8-B2	MHA-V14W/D2RN8-B2	MHA-V16W/D2RN8-B2
Indoor unit sound power (*)	Average climate low temperature application	Indoor	dB	65	65	3/6/9	A+++	43 <sup>a)</sup> /44 <sup>b)</sup>	43 <sup>a)</sup> /44 <sup>b)</sup>	43 <sup>a)</sup> /42 <sup>b)</sup>	43 <sup>a)</sup> /44 <sup>b)</sup>	43 <sup>a)</sup> /44 <sup>b)</sup>
Outdoor unit sound power (*)	Average climate medium temperature application	dB	68	68	3/6/9	A+++	A+++	A+++	A+++	A+++	A+++	A+++
Capacity of the back-up heater integrated in the unit	Psup back-up heater (optional)	[kW]										
Space heating	Energy efficiency class 35°C (Low temp. app.)	-										
Space heating	Energy efficiency class 55°C (Medium temp. app.)	-										
Average climate (Design temperature = -10°C)												
Space heating 35°C	Prated (declared heating capacity) @ -10°C	[kW]		13.7		15.2		12.0		13.7		15.2
	Seasonal space heating efficiency (ηs)	[%]		185.7		181.7		189.3		185.6		181.6
	Annual energy consumption	[kWh]		6,012		6,804		5,153		6,013		6,805
Space heating 55°C	Prated (declared heating capacity) @ -10°C	[kW]		12.1		13.0		11.6		12.1		13.0
	Seasonal space heating efficiency (ηs)	[%]		135.6		133.3		135.1		135.6		133.2
	Annual energy consumption	[kWh]		7,202		7,895		6,928		7,203		7,896
Part load conditions space heating average climate low temperature application												
(A) condition (-7°C)	Pdh (declared heating capacity)	[kW]		12.14		13.45		10.61		12.14		13.45
	COPd (declared COP)	-		2.79		2.72		2.88		2.79		2.72
	Cdh(degradation coefficient)	-		0.90		0.90		0.90		0.90		0.90
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]		7.94		8.56		6.69		7.94		8.56
	COPd (declared COP)	-		4.52		4.41		4.65		4.52		4.41
	Cdh(degradation coefficient)	-		0.90		0.90		0.90		0.90		0.90
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]		5.20		5.70		4.44		5.20		5.70
	COPd (declared COP)	-		6.68		6.56		6.62		6.68		6.56
	Cdh(degradation coefficient)	-		0.90		0.90		0.90		0.90		0.90
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]		3.75		3.78		3.74		3.75		3.78
	COPd (declared COP)	-		8.52		8.51		8.47		8.52		8.51
	Cdh(degradation coefficient)	-		0.90		0.90		0.90		0.90		0.90
(E) Tol (temperature operating limit)	Tol (temperature operating limit)	[°C]		-10.00		-10.00		-10.00		-10.00		-10.00
	Pdh (declared heating capacity)	[kW]		11.47		12.52		10.74		11.47		12.52
	COPd (declared COP)	-		2.59		2.48		2.77		2.59		2.48
	WTOL (Heating water Operation Limit)	[°C]		65		65		65		65		65

Note :  
a) represents the hydraulic module series ;  
b) represents the m-thermal tank series ;

Product fiche 2

Heat pump space heating												
							Outdoor	MHA-V4W/D2N8-B2	MHA-V6W/D2N8-B2	MHA-V8W/D2N8-B2	MHA-V10W/D2N8-B2	MHA-V12W/D2N8-B2
							Indoor	HB-A60/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A60/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A100/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A100/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B
(F) Tivalent temperature	Tbiv						[°C]	-7.00	-7.00	-7.00	-7.00	-7.00
	Pdh (declared heating capacity)						[kW]	4.88	6.03	7.18	8.10	10.61
	COPd (declared COP)						-	3.19	3.09	3.35	3.23	2.88
	Psup (@Tdesignh: -10°C)						[kW]	1.11	1.45	1.68	1.76	1.26
Supplementary capacity at P_design												
Part load conditions space heating average climate medium temperature application												
(A) condition (-7°C)	Pdh (declared heating capacity)						[kW]	3.89	5.04	5.84	6.78	10.24
	COPd (declared COP)						-	2.17	2.17	2.16	2.24	2.01
	Cdh(degradation coefficient)						-	0.90	0.90	0.90	0.90	0.90
	Pdh (declared heating capacity)						[kW]	2.38	3.12	3.75	4.28	6.52
(B) condition (2°C)	COPd (declared COP)						-	3.30	3.51	3.30	3.42	3.44
	Cdh(degradation coefficient)						-	0.90	0.90	0.90	0.90	0.90
	Pdh (declared heating capacity)						[kW]	2.94	2.08	2.42	2.77	4.36
	COPd (declared COP)						-	4.41	4.54	4.34	4.52	4.59
(C) condition (7°C)	Cdh(degradation coefficient)						-	0.90	0.90	0.90	0.90	0.90
	Pdh (declared heating capacity)						[kW]	1.32	1.28	1.39	1.58	3.29
	COPd (declared COP)						-	5.66	5.59	5.33	5.68	6.05
	Cdh(degradation coefficient)						-	0.90	0.90	0.90	0.90	0.90
(E) Tol (temperature operating limit)	Tol (temperature operating limit)						[°C]	-10.00	-10.00	-10.00	-10.00	-10.00
	Pdh (declared heating capacity)						[kW]	3.42	4.52	4.90	5.38	9.10
	COPd (declared COP)						-	1.91	1.91	1.84	1.83	1.79
	WTOL (Heating water Operation Limit)						[°C]	65	65	65	65	65
(F) Tivalent temperature	Tbiv						[°C]	-7.00	-7.00	-7.00	-7.00	-7.00
	Pdh (declared heating capacity)						[kW]	3.89	5.04	5.84	6.78	10.24
	COPd (declared COP)						-	2.17	2.17	2.16	2.24	2.01
	Psup (@Tdesignh: -10°C)						[kW]	0.98	1.18	1.69	2.28	2.50
Supplementary capacity at P_design												
Colder climate (Design temperature = -22°C)												
Space heating 35°C	Prated (declared heating capacity) @ -22°C						[kW]	4.6	5.6	7.0	7.7	11.4
	Seasonal space heating efficiency (ηs)						[%]	159.5	165.3	170.0	169.8	160.2
	Annual energy consumption						[kWh]	2,769	3,300	3,976	4,423	6,870

Product fiche 2

Heat pump space heating		Outdoor	MHA-V14W/D2N8-B2	MHA-V16W/D2N8-B2	MHA-V12W/D2RN8-B2	MHA-V14W/D2RN8-B2	MHA-V16W/D2RN8-B2
		Indoor	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B
(F) Tbivalent temperature	Tbiv	[°C]	-7.00	-7.00	-7.00	-7.00	-7.00
	Pdh (declared heating capacity)	[kW]	12.14	13.45	10.61	12.14	13.45
	COPd (declared COP)	-	2.79	2.72	2.88	2.79	2.72
	Psup (@Tdesignh: -10°C)	[kW]	2.23	2.68	1.26	2.23	2.68
Part load conditions space heating average climate medium temperature application							
(A) condition (-7°C)	Pdh (declared heating capacity)	[kW]	10.68	11.52	10.24	10.68	11.52
	COPd (declared COP)	-	2.01	1.99	2.01	2.01	1.99
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
	Pdh (declared heating capacity)	[kW]	6.86	7.18	6.52	6.86	7.18
(B) condition (2°C)	COPd (declared COP)	-	3.43	3.34	3.44	3.43	3.34
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
	Pdh (declared heating capacity)	[kW]	4.63	4.67	4.36	4.63	4.67
	COPd (declared COP)	-	4.66	4.61	4.59	4.66	4.61
(C) condition (7°C)	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
	Pdh (declared heating capacity)	[kW]	3.31	3.31	3.29	3.31	3.31
	COPd (declared COP)	-	6.13	6.07	6.05	6.13	6.07
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(E) Tol (temperature operating limit)	Tol (temperature operating limit)	[°C]	-10.00	-10.00	-10.00	-10.00	-10.00
	Pdh (declared heating capacity)	[kW]	9.19	10.33	9.10	9.19	10.33
	COPd (declared COP)	-	1.76	1.80	1.79	1.76	1.80
	WTOL (Heating water Operation Limit)	[°C]	65	65	65	65	65
(F) Tbivalent temperature	Tbiv	[°C]	-7.00	-7.00	-7.00	-7.00	-7.00
	Pdh (declared heating capacity)	[kW]	10.68	11.52	10.24	10.68	11.52
	COPd (declared COP)	-	2.01	1.99	2.01	2.01	1.99
	Psup (@Tdesignh: -10°C)	[kW]	2.91	2.67	2.50	2.91	2.67
Colder climate (Design temperature = -22°C)							
Space heating 35°C	Prated (declared heating capacity) @ -22°C	[kW]	12.6	13.7	11.4	12.6	13.7
	Seasonal space heating efficiency (ηs)	[%]	159.6	157.8	160.2	159.6	157.8
	Annual energy consumption	[kWh]	7,667	8,431	6,871	7,667	8,431

Product fiche 3

Heat pump space heating							Outdoor	MHA-V4W/D2N8-B2	MHA-V6W/D2N8-B2	MHA-V8W/D2N8-B2	MHA-V10W/D2N8-B2	MHA-V12W/D2N8-B2
Space heating 55°C	Plated (declared heating capacity) @ -22°C						Indoor	HB-A60/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A60/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A100/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A100/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B
	Seasonal space heating efficiency (ηs)						[kW]	3.4	4.3	5.8	6.7	10.3
	Annual energy consumption						[%]	102.1	111.1	112.0	116.4	117.8
Part load conditions space heating colder climate low temperature application							[kW/h]	3,159	3,681	4,950	5,540	8,419
(A) condition (-7°C)	Pd <sub>h</sub> (declared heating capacity)						[kW]	2.75	3.42	4.46	4.83	7.05
	COP <sub>d</sub> (declared COP)						-	3.49	3.59	3.66	3.60	3.48
	C <sub>d</sub> <sub>h</sub> (degradation coefficient)						-	0.90	0.90	0.90	0.90	0.90
(B) condition (2°C)	Pd <sub>h</sub> (declared heating capacity)						[kW]	1.77	2.06	2.69	2.94	4.67
	COP <sub>d</sub> (declared COP)						-	4.95	5.21	5.20	5.26	4.96
	C <sub>d</sub> <sub>h</sub> (degradation coefficient)						-	0.90	0.90	0.90	0.90	0.90
(C) condition (7°C)	Pd <sub>h</sub> (declared heating capacity)						[kW]	1.17	1.46	1.65	1.92	3.14
	COP <sub>d</sub> (declared COP)						-	5.53	6.24	6.53	7.08	6.10
	C <sub>d</sub> <sub>h</sub> (degradation coefficient)						-	0.90	0.90	0.90	0.90	0.90
(D) condition (12°C)	Pd <sub>h</sub> (declared heating capacity)						[kW]	1.43	1.44	1.65	1.65	3.57
	COP <sub>d</sub> (declared COP)						-	7.67	7.66	7.96	7.96	7.87
	C <sub>d</sub> <sub>h</sub> (degradation coefficient)						-	0.90	0.90	0.90	0.90	0.90
(E) Tol (temperature operating limit)	Tol (temperature operating limit)						[°C]	-22.00	-22.00	-22.00	-22.00	-22.00
	Pd <sub>h</sub> (declared heating capacity)						[kW]	2.80	3.48	4.06	4.62	7.01
	COP <sub>d</sub> (declared COP)						-	1.97	1.96	1.95	1.97	1.98
(F) T <sub>bivalent</sub> temperature	WTOL (Heating water Operation Limit)						[°C]	65	65	65	65	65
	T <sub>biv</sub>						[°C]	-15.00	-15.00	-15.00	-15.00	-15.00
	Pd <sub>h</sub> (declared heating capacity)						[kW]	3.72	4.59	5.69	6.32	9.28
Supplementary capacity at P_design	COP <sub>d</sub> (declared COP)						-	2.57	2.53	2.83	2.64	2.59
	P <sub>sup</sub> (@T <sub>designh</sub> : -22°C)						[kW]	1.76	2.15	2.91	3.08	4.40
	Part load conditions space heating colder climate medium temperature application											
(A) condition (-7°C)	Pd <sub>h</sub> (declared heating capacity)						[kW]	2.13	2.70	3.86	4.27	6.63
	COP <sub>d</sub> (declared COP)						-	2.32	2.46	2.48	2.54	2.63
	C <sub>d</sub> <sub>h</sub> (degradation coefficient)						-	0.90	0.90	0.90	0.90	0.90

# Product fiche 3

Heat pump space heating		Outdoor	MHA-V14W/D2N8-B2	MHA-V16W/D2N8-B2	MHA-V12W/D2RN8-B2	MHA-V14W/D2RN8-B2	MHA-V16W/D2RN8-B2	MHA-V14W/D2RN8-B2	MHA-V16W/D2RN8-B2
		Indoor	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B
Space heating 55°C	Prated (declared heating capacity) @ -22°C	[kW]	11.0	11.8	10.3	11.0	11.8	11.0	11.8
	Seasonal space heating efficiency (ηs)	[%]	118.9	121.8	117.7	118.9	121.8	118.9	121.8
	Annual energy consumption	[kWh]	8,866	9,309	8,420	8,867	9,310	8,867	9,310
Part load conditions space heating colder climate low temperature application									
(A) condition (-7°C)	Pdh (declared heating capacity)	[kW]	7.96	8.31	7.05	7.96	8.31	7.96	8.31
	COPd (declared COP)	-	3.44	3.37	3.48	3.44	3.37	3.44	3.37
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	5.05	5.26	4.67	5.05	5.26	5.05	5.26
	COPd (declared COP)	-	4.92	4.86	4.96	4.92	4.86	4.92	4.86
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	3.15	3.62	3.14	3.15	3.62	3.15	3.62
	COPd (declared COP)	-	6.11	6.49	6.10	6.11	6.49	6.11	6.49
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	3.57	3.34	3.57	3.57	3.34	3.57	3.34
	COPd (declared COP)	-	7.82	7.40	7.87	7.82	7.40	7.82	7.40
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90
(E) Tol (temperature operating limit)	Tol (temperature operating limit)	[°C]	-22.00	-22.00	-22.00	-22.00	-22.00	-22.00	-22.00
	Pdh (declared heating capacity)	[kW]	7.57	8.88	7.01	7.57	8.88	7.57	8.88
	COPd (declared COP)	-	1.92	1.97	1.98	1.92	1.97	1.92	1.97
	WTOL (Heating water Operation Limit)	[°C]	65	65	65	65	65	65	65
	Tbiv	[°C]	-15.00	-15.00	-15.00	-15.00	-15.00	-15.00	-15.00
(F) Tbiivalent temperature	Pdh (declared heating capacity)	[kW]	10.31	11.22	9.28	10.31	11.22	10.31	11.22
	COPd (declared COP)	-	2.53	2.43	2.59	2.53	2.43	2.53	2.43
	Psup (@Tdesign: -22°C)	[kW]	5.03	4.82	4.40	5.03	4.82	5.03	4.82
Part load conditions space heating colder climate medium temperature application									
(A) condition (-7°C)	Pdh (declared heating capacity)	[kW]	6.89	7.64	6.63	6.89	7.64	6.89	7.64
	COPd (declared COP)	-	2.66	2.65	2.63	2.66	2.65	2.66	2.65
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90



## Product fiche 4

Heat pump space heating							Outdoor	MHA-V4W/D2N8-B2	MHA-V6W/D2N8-B2	MHA-V8W/D2N8-B2	MHA-V10W/D2N8-B2	MHA-V12W/D2N8-B2
(B) condition (2°C)	Pd <sub>h</sub> (declared heating capacity)	COP <sub>d</sub> (declared COP)	Cdh (degradation coefficient)	Pd <sub>h</sub> (declared heating capacity)	COP <sub>d</sub> (declared COP)	Cdh (degradation coefficient)	Indoor	HB-A60/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A60/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A100/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A100/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B
							[kW]	1.28	1.60	2.21	2.57	4.06
							-	2.99	3.36	3.35	3.51	3.60
							-	0.90	0.90	0.90	0.90	0.90
(C) condition (7°C)	Pd <sub>h</sub> (declared heating capacity)	COP <sub>d</sub> (declared COP)	Cdh (degradation coefficient)	Pd <sub>h</sub> (declared heating capacity)	COP <sub>d</sub> (declared COP)	Cdh (degradation coefficient)	[kW]	1.01	1.02	1.44	1.65	2.78
							-	3.86	3.94	4.11	4.37	4.54
							-	0.90	0.90	0.90	0.90	0.90
							[kW]	1.36	1.37	1.46	1.47	3.33
(D) condition (12°C)	Pd <sub>h</sub> (declared heating capacity)	COP <sub>d</sub> (declared COP)	Cdh (degradation coefficient)	Pd <sub>h</sub> (declared heating capacity)	COP <sub>d</sub> (declared COP)	Cdh (degradation coefficient)	-	6.28	6.35	5.92	5.96	6.25
							-	0.90	0.90	0.90	0.90	0.90
							[°C]	-22.00	-22.00	-22.00	-22.00	-22.00
							[kW]	1.64	2.09	2.80	2.80	4.19
(E) Tol (temperature operating limit)	Pd <sub>h</sub> (declared heating capacity)	COP <sub>d</sub> (declared COP)	WTOL (Heating water Operation Limit)	Tb <sub>w</sub>	Pd <sub>h</sub> (declared heating capacity)	COP <sub>d</sub> (declared COP)	-	1.02	1.13	1.22	1.22	1.13
							[°C]	65	65	65	65	65
							[°C]	-15.00	-15.00	-15.00	-15.00	-15.00
							[kW]	2.74	3.47	4.71	5.47	8.41
(F) Tbiivalent temperature	Pd <sub>h</sub> (declared heating capacity)	COP <sub>d</sub> (declared COP)	Psup (@ Tdesign: -22°C)	Psup (@ Tdesign: -22°C)	Pd <sub>h</sub> (declared heating capacity)	COP <sub>d</sub> (declared COP)	-	1.74	1.86	1.90	2.00	1.84
							[kW]	1.72	2.17	2.97	3.91	6.12
							Warmer climate (Design temperature = 2°C)					
							[kW]	5.5	6.1	8.1	8.6	11.1
Space heating 35°C	Prated (declared heating capacity) @ 2°C	Seasonal space heating efficiency (η <sub>s</sub> )	Annual energy consumption	Prated (declared heating capacity) @ 2°C	Seasonal space heating efficiency (η <sub>s</sub> )	Annual energy consumption	[kW]	255.4	259.8	276.6	280.5	256.1
							[kWh]	1,146	1,244	1,551	1,617	2,292
							[kW]	5.0	5.1	8.37	8.6	12.5
							[°C]	162.4	164.7	176.9	180.3	174.0
Space heating 55°C	Prated (declared heating capacity) @ 2°C	Seasonal space heating efficiency (η <sub>s</sub> )	Annual energy consumption	Prated (declared heating capacity) @ 2°C	Seasonal space heating efficiency (η <sub>s</sub> )	Annual energy consumption	[kWh]	1,621	1,640	2,485	2,516	3,776
							Part load conditions space heating warmer climate low temperature application					
							[kW]	5.34	5.93	7.56	8.44	11.10
							-	3.94	3.91	3.98	3.84	3.59
(B) condition (2°C)	Pd <sub>h</sub> (declared heating capacity)	COP <sub>d</sub> (declared COP)	Cdh (degradation coefficient)	Pd <sub>h</sub> (declared heating capacity)	COP <sub>d</sub> (declared COP)	Cdh (degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
							[kW]	3.56	3.93	5.22	5.52	7.14
							-	5.92	5.89	6.26	6.18	5.87
							-	0.90	0.90	0.90	0.90	0.90
(C) condition (7°C)	Pd <sub>h</sub> (declared heating capacity)	COP <sub>d</sub> (declared COP)	Cdh (degradation coefficient)	Pd <sub>h</sub> (declared heating capacity)	COP <sub>d</sub> (declared COP)	Cdh (degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
							-	0.90	0.90	0.90	0.90	0.90
							-	0.90	0.90	0.90	0.90	0.90
							-	0.90	0.90	0.90	0.90	0.90

Product fiche 4

Heat pump space heating						
	Outdoor	MHA-V14W/D2N8-B2	MHA-V16W/D2N8-B2	MHA-V12W/D2RN8-B2	MHA-V14W/D2RN8-B2	MHA-V16W/D2RN8-B2
	Indoor	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B
(B) condition (2°C)	Pdh (declared heating capacity)	4.32	4.42	4.06	4.32	4.42
	COPd (declared COP)	3.66	3.79	3.60	3.66	3.79
	Cdh(degradation coefficient)	0.90	0.90	0.90	0.90	0.90
(C) condition (7°C)	Pdh (declared heating capacity)	3.06	2.97	2.78	3.06	2.97
	COPd (declared COP)	4.72	4.81	4.54	4.72	4.81
	Cdh(degradation coefficient)	0.90	0.90	0.90	0.90	0.90
(D) condition (12°C)	Pdh (declared heating capacity)	3.33	3.43	3.33	3.33	3.43
	COPd (declared COP)	6.25	6.29	6.25	6.25	6.29
	Cdh(degradation coefficient)	0.90	0.90	0.90	0.90	0.90
(E) Tol (temperature operating limit)	Tol (temperature operating limit)	-22.00	-22.00	-22.00	-22.00	-22.00
	Pdh (declared heating capacity)	4.20	5.21	4.19	4.20	5.21
	COPd (declared COP)	1.13	1.23	1.13	1.13	1.23
(F) TbiValent temperature	WTOL (Heating water Operation Limit)	65	65	65	65	65
	TbiV	-15.00	-15.00	-15.00	-15.00	-15.00
	Pdh (declared heating capacity)	8.94	9.61	8.41	8.94	9.61
Supplementary capacity at P_design	COPd (declared COP)	1.79	1.86	1.84	1.79	1.86
	Psup (@TdesignH: -22°C)	6.76	6.59	6.12	6.76	6.59
Warmer climate (Design temperature = 2°C)						
Space heating 35°C	Prated (declared heating capacity) @ 2°C	12.1	13.1	11.1	12.1	13.1
	Seasonal space heating efficiency (ns)	260.3	248.5	255.6	259.8	248.1
	Annual energy consumption	2,457	2,781	2,296	2,462	2,786
Space heating 55°C	Prated (declared heating capacity) @ 2°C	14.17	14.17	12.5	14.17	14.17
	Seasonal space heating efficiency (ns)	174.9	176.0	173.8	174.7	175.8
	Annual energy consumption	4,258	4,231	3,780	4,231	4,236
Part load conditions space heating warmer climate low temperature application						
(B) condition (2°C)	Pdh (declared heating capacity)	12.04	13.10	11.10	12.04	13.10
	COPd (declared COP)	3.44	3.35	3.59	3.44	3.35
	Cdh(degradation coefficient)	0.90	0.90	0.90	0.90	0.90
(C) condition (7°C)	Pdh (declared heating capacity)	7.78	8.41	7.14	7.78	8.41
	COPd (declared COP)	5.84	5.36	5.87	5.84	5.36
	Cdh(degradation coefficient)	0.90	0.90	0.90	0.90	0.90

## Product fiche 5

Heat pump space heating									
	Outdoor	MHA-V4W/D2N8-B2	MHA-V6W/D2N8-B2	MHA-V8W/D2N8-B2	MHA-V10W/D2N8-B2	MHA-V12W/D2N8-B2			
		HB-A60/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A60/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A100/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A100/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B				
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	1.63	1.79	2.62	2.62	3.55		
	COPd (declared COP)	-	7.91	8.20	9.23	9.04	7.94		
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90		
(E) Tol (temperature operating limit)	Tol (temperature operating limit)	[°C]	2.00	2.00	2.00	2.00	2.00		
	Pdh (declared heating capacity)	[kW]	5.34	5.93	7.56	8.44	11.10		
	COPd (declared COP)	-	3.94	3.91	3.98	3.84	3.59		
(F) Tbivalent temperature	WTOL (Heating water Operation Limit)	[°C]	65	65	65	65	65		
	Tbiv	[°C]	7.00	7.00	7.00	7.00	7.00		
	Pdh (declared heating capacity)	[kW]	3.56	3.93	5.22	5.52	7.14		
Supplementary capacity at P_design	COPd (declared COP)	-	5.92	5.89	6.26	6.18	5.87		
	Psup (@Tdesignh: 2°C)	[kW]	0.18	0.18	0.55	0.14	0.00		
	Part load conditions space heating warmer climate medium temperature application								
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	4.83	5.02	7.55	8.06	12.07		
	COPd (declared COP)	-	2.51	2.48	2.59	2.59	2.31		
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90		
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	3.22	3.31	5.38	5.54	8.04		
	COPd (declared COP)	-	3.68	3.67	4.01	4.10	3.86		
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90		
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	1.47	1.59	2.31	2.53	3.75		
	COPd (declared COP)	-	5.15	5.29	5.55	5.82	5.70		
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90		
(E) Tol (temperature operating limit)	Tol (temperature operating limit)	[°C]	2.00	2.00	2.00	2.00	2.00		
	Pdh (declared heating capacity)	[kW]	4.83	5.02	7.55	8.06	12.07		
	COPd (declared COP)	-	2.51	2.48	2.59	2.59	2.31		
(F) Tbivalent temperature	WTOL (Heating water Operation Limit)	[°C]	65	65	65	65	65		
	Tbiv	[°C]	7.00	7.00	7.00	7.00	7.00		
	Pdh (declared heating capacity)	[kW]	3.22	3.31	5.38	5.54	8.04		
Supplementary capacity at P_design	COPd (declared COP)	-	3.68	3.67	4.01	4.10	3.86		
	Psup (@Tdesignh: 2°C)	[kW]	0.18	0.12	0.82	0.48	0.43		

# Product fiche 5

Heat pump space heating		Outdoor	MHA-V14W/D2N8-B2	MHA-V16W/D2N8-B2	MHA-V12W/D2RN8-B2	MHA-V14W/D2RN8-B2	MHA-V16W/D2RN8-B2
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]					
	COPd (declared COP)	-					
	Cdh(degradation coefficient)	-					
	Tol (temperature operating limit)	[°C]					
(E) Tol (temperature operating limit)	Pdh (declared heating capacity)	[kW]					
	COPd (declared COP)	-					
	WTOL (Heating water Operation Limit)	[°C]					
	Tbiv	[°C]					
(F) Trivalent temperature	Pdh (declared heating capacity)	[kW]					
	COPd (declared COP)	-					
	Psup (@Tdesignh: 2°C)	[kW]					
	Part load conditions space heating warmer climate medium temperature application						
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]					
	COPd (declared COP)	-					
	Cdh(degradation coefficient)	-					
	Pdh (declared heating capacity)	[kW]					
(C) condition (7°C)	COPd (declared COP)	-					
	Cdh(degradation coefficient)	-					
	Pdh (declared heating capacity)	[kW]					
	COPd (declared COP)	-					
(D) condition (12°C)	Cdh(degradation coefficient)	-					
	Tol (temperature operating limit)	[°C]					
	Pdh (declared heating capacity)	[kW]					
	COPd (declared COP)	-					
(E) Tol (temperature operating limit)	WTOL (Heating water Operation Limit)	[°C]					
	Tbiv	[°C]					
	Pdh (declared heating capacity)	[kW]					
	COPd (declared COP)	-					
(F) Trivalent temperature	Psup (@Tdesignh: 2°C)	[kW]					
	Part load conditions space heating warmer climate medium temperature application						
	Pdh (declared heating capacity)	[kW]					
	COPd (declared COP)	-					
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]					
	COPd (declared COP)	-					
	Cdh(degradation coefficient)	-					
	Pdh (declared heating capacity)	[kW]					
(C) condition (7°C)	COPd (declared COP)	-					
	Cdh(degradation coefficient)	-					
	Pdh (declared heating capacity)	[kW]					
	COPd (declared COP)	-					
(D) condition (12°C)	Cdh(degradation coefficient)	-					
	Tol (temperature operating limit)	[°C]					
	Pdh (declared heating capacity)	[kW]					
	COPd (declared COP)	-					
(E) Tol (temperature operating limit)	WTOL (Heating water Operation Limit)	[°C]					
	Tbiv	[°C]					
	Pdh (declared heating capacity)	[kW]					
	COPd (declared COP)	-					
(F) Trivalent temperature	Psup (@Tdesignh: 2°C)	[kW]					
	Part load conditions space heating warmer climate medium temperature application						
	Pdh (declared heating capacity)	[kW]					
	COPd (declared COP)	-					

# Product fiche 6

## Heat pump space heating

Product description	Outdoor						MHA-V4W/D2N8-B2						MHA-V6W/D2N8-B2						MHA-V8W/D2N8-B2						MHA-V10W/D2N8-B2						MHA-V12W/D2N8-B2					
	Indoor						HB-A60/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B						HB-A60/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B						HB-A100/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B						HB-A100/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B						HB-A160/C***GN8-B HBT-A160/240CD***GN8-B					
Air-to-water heat pump	Y/N						Yes						Yes						Yes						Yes						Yes					
	Y/N						No						No						No						No						No					
	Y/N						No						No						No						No						No					
	Y/N						No						No						No						No						No					
	Y/N						Yes						Yes						Yes						Yes						Yes					
Heat pump combination heater	Y/N						Yes						Yes						Yes						Yes						Yes					
	Y/N						Yes						Yes						Yes						Yes						Yes					
	[m³/h]						2770						2770						4030						4030						4060					
	-						/						/						/						/						/					
	-						Inverter						Inverter						Inverter						Inverter						Inverter					
Other	[kW]						0.014						0.014						0.014						0.014						0.014					
	[kW]						0.024						0.024						0.024						0.024						0.024					
	[kW]						0.014						0.014						0.014						0.014						0.014					
	[kW]						0.000						0.000						0.000						0.000						0.000					
	[kWh]						/						/						/						/						/					
	[kWh]						/						/						/						/						/					

**Note:**  
Indoor unit type explanation:  
Hydraulic module series  
1) HB-A60/C\*\*\*GN8-B includes the following type:  
HB-A60/CGN8-B: without back-up heater.  
HB-A60/CD30GN8-B: with 3kW back-up heater and 1-Phase Source.  
2) HB-A100/C\*\*\*GN8-B includes the following type:  
HB-A100/CGN8-B: without back-up heater.  
HB-A100/CD30GN8-B: with 3kW back-up heater and 1-Phase Source.  
HB-A100/CD S90GN8-B: with 9kW back-up heater and 3-Phase Source.  
3) HB-A160/C\*\*\*GN8-B includes the following type:  
HB-A160/CGN8-B: without back-up heater.  
HB-A160/CD30GN8-B: with 3kW back-up heater and 1-Phase Source.  
HB-A160/CD S90GN8-B: with 9kW back-up heater and 3-Phase Source.

M-thermal tank seires  
1) HBT-A100/190CD\*\*\*GN8-B includes the following type:  
HBT-A100/190CD30GN8-B: 190L tank with 3kW back-up heater and 1-Phase Source.  
HBT-A100/190CD60GN8-B: 190L tank with 6kW back-up heater and 1-Phase Source.  
HBT-A100/190CDS90GN8-B: 190L tank with 9kW back-up heater and 3-Phase Source.  
2) HBT-A100/240CD\*\*\*GN8-B includes the following type:  
HBT-A100/240CD30GN8-B: 240L tank with 3kW back-up heater and 1-Phase Source.  
HBT-A100/240CD60GN8-B: 240L tank with 6kW back-up heater and 1-Phase Source.  
HBT-A100/240CDS90GN8-B: 240L tank with 9kW back-up heater and 3-Phase Source.  
3) HBT-A160/240CD\*\*\*GN8-B includes the following type:  
HBT-A160/240CD30GN8-B: 240L tank with 3kW back-up heater and 1-Phase Source.  
HBT-A160/240CD60GN8-B: 240L tank with 6kW back-up heater and 1-Phase Source.  
HBT-A160/240CDS90GN8-B: 240L tank with 9kW back-up heater and 3-Phase Source.  
Product fiche data according to energy label directive 2010/30/EC regulation (EU) 811/2013.  
\*Sound power measured according to the EN12102 under conditions of the EN14825.

Details and precautions on installation, maintenance and assembly can be found in the installation and or operation manuals.

Product fiche 6

Heat pump space heating		Outdoor	MHA-V14W/D2N8-B2	MHA-V16W/D2N8-B2	MHA-V12W/D2RN8-B2	MHA-V14W/D2RN8-B2	MHA-V16W/D2RN8-B2
Product description		Indoor	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B
	Air-to-water heat pump	Y/N	Yes	Yes	Yes	Yes	Yes
	Water-to-water heat pump	Y/N	No	No	No	No	No
	Brine-to-water heat pump	Y/N	No	No	No	No	No
	Low-temperature heat pump	Y/N	No	No	No	No	No
	Equipped with a supplementary heater	Y/N	Yes	Yes	Yes	Yes	Yes
Air to water unit	Heat pump combination heater	Y/N	Yes	Yes	Yes	Yes	Yes
	Rated airflow (outdoor)	[m <sup>3</sup> /h]	4060	4650	4060	4060	4650
	Rated water/brine flow (outdoor H/E)	-	/	/	/	/	/
	Capacity control	-	Inverter	Inverter	Inverter	Inverter	Inverter
	Poff (Power consumption Off mode)	[kW]	0.014	0.014	0.020	0.020	0.020
	Pto (Power consumption Thermostat off mode)	[kW]	0.024	0.024	0.030	0.030	0.030
Other	Psb (Power consumption Standby mode)	[kW]	0.014	0.014	0.020	0.020	0.020
	Pck (Power crankcase heater mode)	[kW]	0.000	0.000	0.000	0.000	0.000
	Qelec (Daily electricity consumption)	[kWh]	/	/	/	/	/
	Qfuel (Daily fuel consumption)	[kWh]	/	/	/	/	/

Note:

Indoor unit type explanation:

Hydraulic module series

1).HB-A60/C\*\*\*GN8-B includes the following type:

HB-A60/CGN8-B: without back-up heater.

HB-A60/CD30GN8-B: with 3kW back-up heater and 1-Phase Source.

2).HB-A100/C\*\*\*GN8-B includes the following type:

HB-A100/CGN8-B: without back-up heater.

HB-A100/CD30GN8-B: with 3kW back-up heater and 1-Phase Source.

HB-A100/CDS90GN8-B: with 9kW back-up heater and 3-Phase Source.

3).HB-A160/C\*\*\*GN8-B includes the following type:

HB-A160/CGN8-B: without back-up heater.

HB-A160/CD30GN8-B: with 3kW back-up heater and 1-Phase Source.

HB-A160/CDS90GN8-B: with 9kW back-up heater and 3-Phase Source.

M-thermal tank series

1).HBT-A100/190CD\*\*\*GN8-B includes the following type:

HBT-A100/190CD30GN8-B: 190L tank with 3kW back-up heater and 1-Phase Source.

HBT-A100/190CD60GN8-B: 190L tank with 6kW back-up heater and 1-Phase Source.

HBT-A100/190CDS90GN8-B: 190L tank with 9kW back-up heater and 3-Phase Source.

2).HBT-A100/240CD\*\*\*GN8-B includes the following type:

HBT-A100/240CD30GN8-B: 240L tank with 3kW back-up heater and 1-Phase Source.

HBT-A100/240CD60GN8-B: 240L tank with 6kW back-up heater and 1-Phase Source.

HBT-A100/240CDS90GN8-B: 240L tank with 9kW back-up heater and 3-Phase Source.

3).HBT-A160/240CD\*\*\*GN8-B includes the following type:

HBT-A160/240CD30GN8-B: 240L tank with 3kW back-up heater and 1-Phase Source.

HBT-A160/240CD60GN8-B: 240L tank with 6kW back-up heater and 1-Phase Source.

HBT-A160/240CDS90GN8-B: 240L tank with 9kW back-up heater and 3-Phase Source.

Product fiche data according to energy label directive 2010/30/EC regulation (EU) 811/2013.

\*Sound power measured according to the EN12102 under conditions of the EN14825.

Details and precautions on installation, maintenance and assembly can be found in the installation and or operation manuals.

# Product fiche 7

Heat pump space cooling							
Indoor unit sound power (*)		Outdoor	MHA-V4W/D2N8-B2	MHA-V6W/D2N8-B2	MHA-V8W/D2N8-B2	MHA-V10W/D2N8-B2	MHA-V12W/D2N8-B2
Outdoor unit sound power (*)	Average climate low temperature application	Indoor	HB-A60/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A60/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A100/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A100/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B
	Average climate medium temperature application	dB	38	40	42	42	43
	Prated (declared cooling capacity) @ 35°C	dB	56	58	60	61	65
Space cooling 7°C	Prated (declared cooling capacity) @ 35°C	dB	55	58	60	60	64
	Seasonal space cooling efficiency (ηs)	[kW]	4.7	7.0	7.4	8.2	11.6
	Annual energy consumption	[%]	196.2	209.5	230.1	235.3	194.2
Space cooling 18°C	Prated (declared cooling capacity) @ 35°C	[kW/h]	566	791	762	826	1,412
	Seasonal space cooling efficiency (ηs)	[kW]	4.5	6.55	8.4	10.0	12.0
	Annual energy consumption	[%]	307.7	326.8	354.9	348.8	282.4
Part load conditions space cooling : low temperature application@7°C							
(A) condition (35°C)	Pdc (declared cooling capacity)	[kW]	4.70	7.00	7.40	8.20	11.60
	EERd (declared EER)	-	3.45	3.00	3.38	3.30	2.75
	Cdc(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(B) condition (30°C)	Pdc (declared cooling capacity)	[kW]	3.66	5.13	5.72	6.68	8.76
	EERd (declared EER)	-	4.76	4.00	4.71	4.47	3.93
	Cdc(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(C) condition (25°C)	Pdc (declared cooling capacity)	[kW]	2.21	3.48	3.62	4.26	5.81
	EERd (declared EER)	-	5.72	6.45	6.65	7.02	5.73
	Cdc(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(D) condition (20°C)	Pdc (declared cooling capacity)	[kW]	0.94	1.53	1.64	1.94	2.63
	EERd (declared EER)	-	5.72	7.73	8.55	9.54	6.75
	Cdc(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90

(\*)Sound power measured according to the EN12102 under conditions of the EN14825.

## Product fiche 7

Heat pump space cooling									
Indoor unit sound power (*)		Outdoor	MHA-V14W/D2N8-B2	MHA-V16W/D2N8-B2	MHA-V12W/D2RN8-B2	MHA-V14W/D2RN8-B2	MHA-V16W/D2RN8-B2		
Outdoor unit sound power (*)	Average climate low temperature application	Indoor	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B
		dB	44	44	43	44	44	44	44
Space cooling 7°C	Average climate medium temperature application	dB	65	68	65	65	65	68	68
	Prated (declared cooling capacity) @ 35°C	dB	64	67	64	64	64	67	67
	Seasonal space cooling efficiency (ns)	[kW]	12.7	14.0	11.6	12.7	12.7	14.0	14.0
	Annual energy consumption	[%]	192.4	184.1	193.0	191.4	191.4	183.3	183.3
Space cooling 18°C	Prated (declared cooling capacity) @ 35°C	[kWh]	1,560	1,796	1,420	1,568	1,568	1,804	1,804
	Seasonal space cooling efficiency (ns)	[kW]	13.5	14.2	12.0	13.5	13.5	14.2	14.2
	Annual energy consumption	[%]	274.4	266.8	280.1	272.5	272.5	265.0	265.0
	Part load conditions space cooling: low temperature application@7°C	[kWh]	1,168	1,263	1,017	1,176	1,176	1,271	1,271
(A) condition (35°C)	Pdc (declared cooling capacity)	[kW]	12.70	14.00	11.60	12.70	12.70	14.00	14.00
	EERd (declared EER)	-	2.55	2.45	2.75	2.55	2.55	2.45	2.45
	Cdc(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90
(B) condition (30°C)	Pdc (declared cooling capacity)	[kW]	9.41	10.68	8.76	9.41	9.41	10.68	10.68
	EERd (declared EER)	-	3.85	3.63	3.93	3.85	3.85	3.63	3.63
	Cdc(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90
(C) condition (25°C)	Pdc (declared cooling capacity)	[kW]	6.16	6.76	5.81	6.16	6.16	6.76	6.76
	EERd (declared EER)	-	5.80	5.27	5.73	5.80	5.80	5.27	5.27
	Cdc(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90
(D) condition (20°C)	Pdc (declared cooling capacity)	[kW]	2.63	3.41	2.63	2.63	2.63	3.41	3.41
	EERd (declared EER)	-	6.74	7.29	6.75	6.74	6.74	7.29	7.29
	Cdc(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90

(\*) Sound power measured according to the EN12102 under conditions of the EN14825.

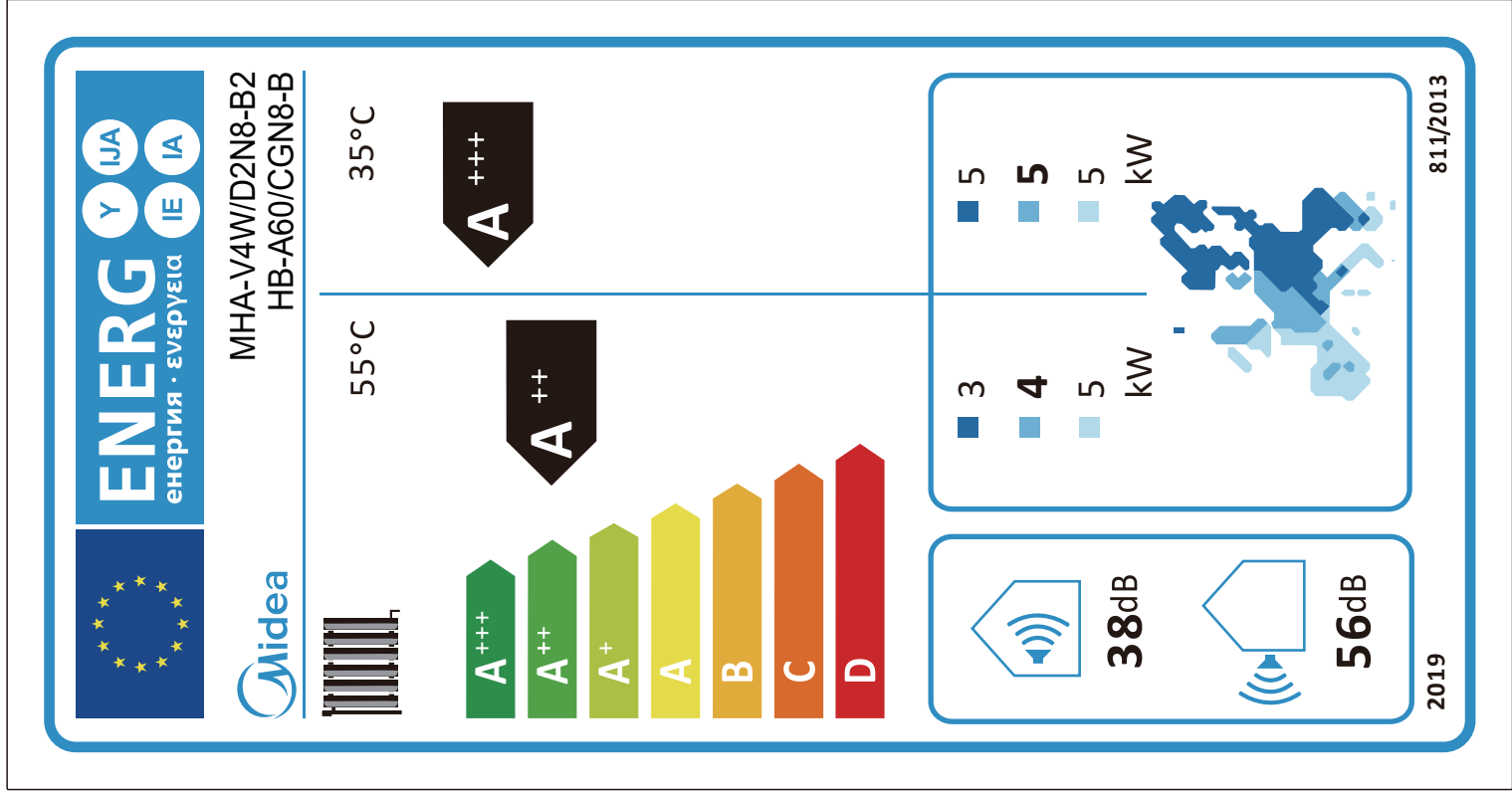


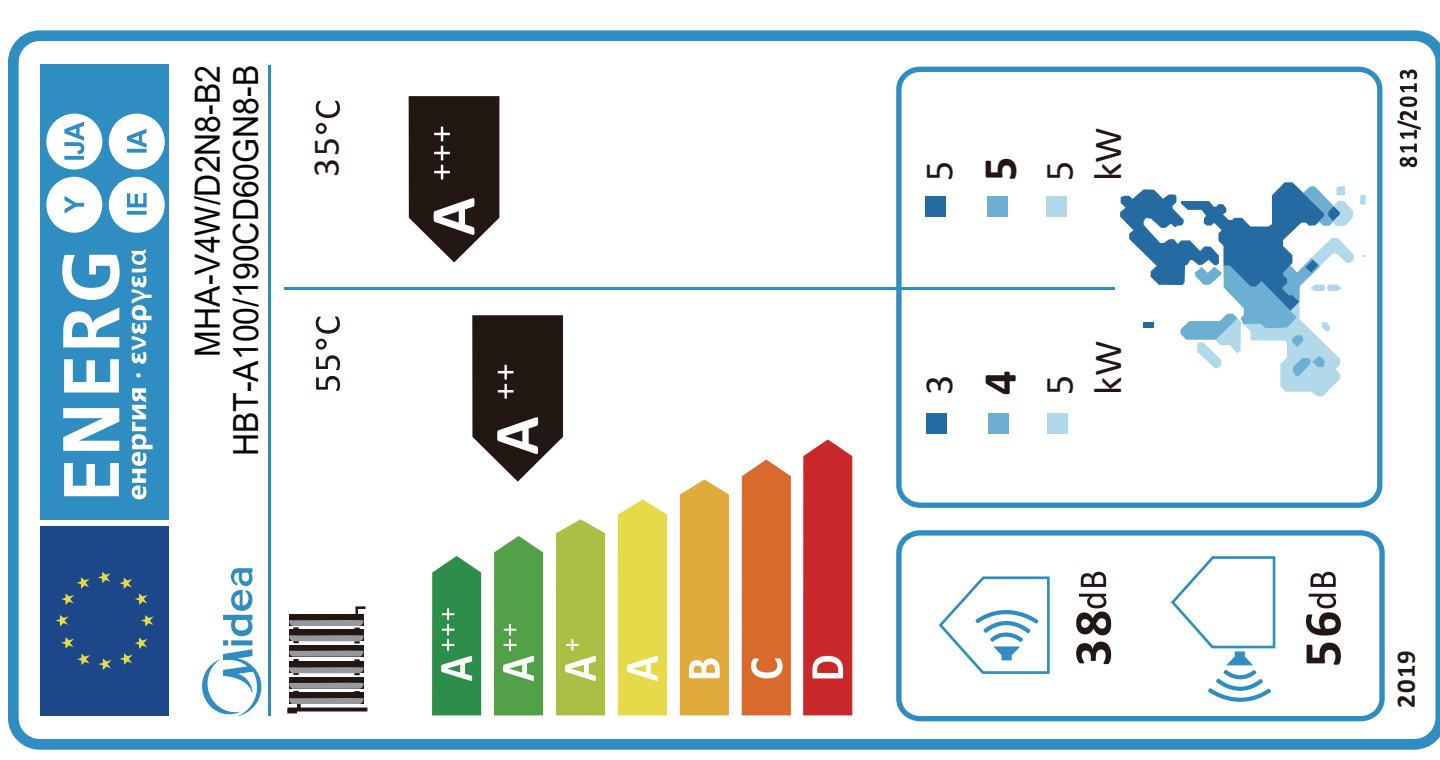
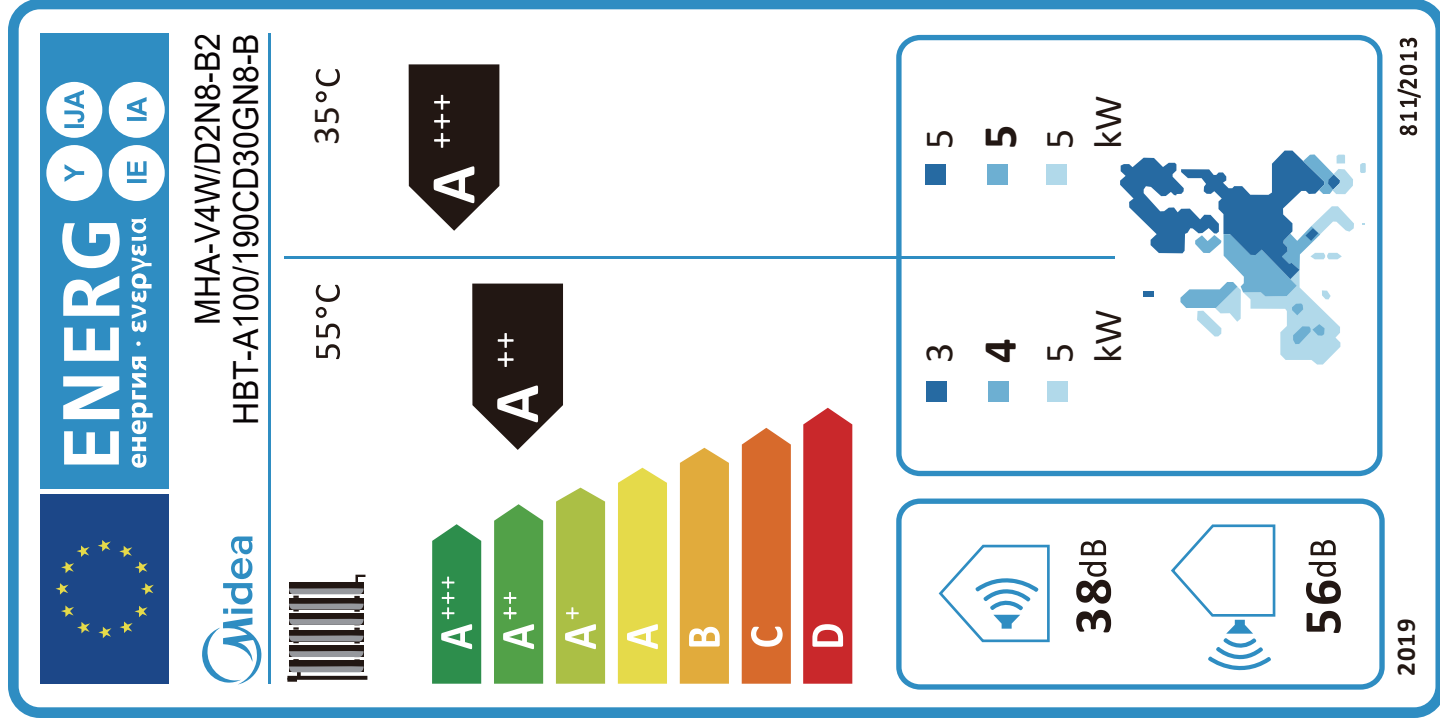
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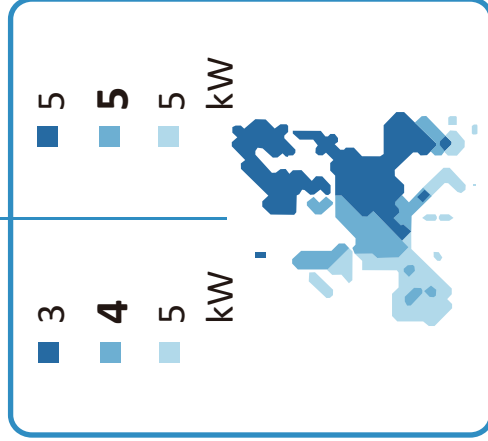
Heat pump space cooling		Outdoor	MHA-V4W/D2N8-B2	MHA-V6W/D2N8-B2	MHA-V8W/D2N8-B2	MHA-V10W/D2N8-B2	MHA-V12W/D2N8-B2
		Indoor	HB-A60/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A60/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A100/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A100/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B
Part load conditions space cooling; medium temperature application@18°C							
(A) condition (35°C)	Pdc (declared cooling capacity)	[kW]	4.50	6.55	8.40	10.00	12.00
	EERd (declared EER)	-	5.55	4.90	5.05	4.80	4.00
	Cdc(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(B) condition (30°C)	Pdc (declared cooling capacity)	[kW]	3.44	4.84	6.47	7.71	9.21
	EERd (declared EER)	-	7.23	7.16	7.02	6.45	5.50
	Cdc(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(C) condition (25°C)	Pdc (declared cooling capacity)	[kW]	2.19	3.26	4.31	5.03	5.74
	EERd (declared EER)	-	8.94	9.64	10.67	10.36	8.66
	Cdc(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(D) condition (20°C)	Pdc (declared cooling capacity)	[kW]	1.13	1.41	1.80	2.32	3.33
	EERd (declared EER)	-	10.48	11.48	13.61	14.98	10.07
	Cdc(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
Air to water unit	Rated airflow (outdoor)	[m³/h]	2770	2770	4030	4030	4060
Brine/water to water unit	Rated water/brine flow (outdoor H/E)	-	/	/	/	/	/
Other	Capacity control	-	Inverter	Inverter	Inverter	Inverter	Inverter
	Poff (Power consumption Off mode)	[kW]	0.014	0.014	0.014	0.014	0.014
	Pto (Power consumption Thermostat off mode)	[kW]	0.010	0.010	0.010	0.010	0.010
	Psb (Power consumption Standby mode)	[kW]	0.014	0.014	0.014	0.014	0.014
	Pck (Power crankcase heater mode)	[kW]	0.000	0.000	0.000	0.000	0.000
	Qelec (Daily electricity consumption)	[kWh]	/	/	/	/	/
	Qfuel (Daily fuel consumption)	[kWh]	/	/	/	/	/

## Product fiche 8

Heat pump space cooling		Outdoor	MHA-V14W/D2N8-B2	MHA-V16W/D2N8-B2	MHA-V12W/D2RN8-B2	MHA-V14W/D2RN8-B2	MHA-V16W/D2RN8-B2
Part load conditions space cooling: medium temperature application@18°C		Indoor	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B
(A) condition (35°C)	Pdc (declared cooling capacity)	[kW]	13.50	14.20	12.00	13.50	14.20
	EERd (declared EER)	-	3.61	3.61	4.00	3.61	3.61
	Cdc(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(B) condition (30°C)	Pdc (declared cooling capacity)	[kW]	10.20	11.42	9.21	10.20	11.42
	EERd (declared EER)	-	5.26	5.14	5.50	5.26	5.14
	Cdc(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(C) condition (25°C)	Pdc (declared cooling capacity)	[kW]	6.57	7.27	5.74	6.57	7.27
	EERd (declared EER)	-	8.45	7.83	8.66	8.45	7.83
	Cdc(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(D) condition (20°C)	Pdc (declared cooling capacity)	[kW]	3.33	3.40	3.33	3.33	3.40
	EERd (declared EER)	-	10.07	10.35	10.07	10.07	10.35
	Cdc(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
Air to water unit	Rated airflow (outdoor)	[m <sup>3</sup> /h]	4060	4650	4060	4060	4650
Brine/water to water unit	Rated water/brine flow (outdoor H/E)	-	/	/	/	/	/
Other	Capacity control	-	Inverter	Inverter	Inverter	Inverter	Inverter
	Poff (Power consumption Off mode)	[kW]	0.014	0.014	0.020	0.020	0.020
	Pto (Power consumption Thermostat off mode)	[kW]	0.010	0.010	0.010	0.010	0.010
	Psb (Power consumption Standby mode)	[kW]	0.014	0.014	0.020	0.020	0.020
	Pck (Power crankcase heater mode)	[kW]	0.000	0.000	0.000	0.000	0.000
	Qelec (Daily electricity consumption)	[kWh]	/	/	/	/	/
	Qfuel (Daily fuel consumption)	[kWh]	/	/	/	/	/



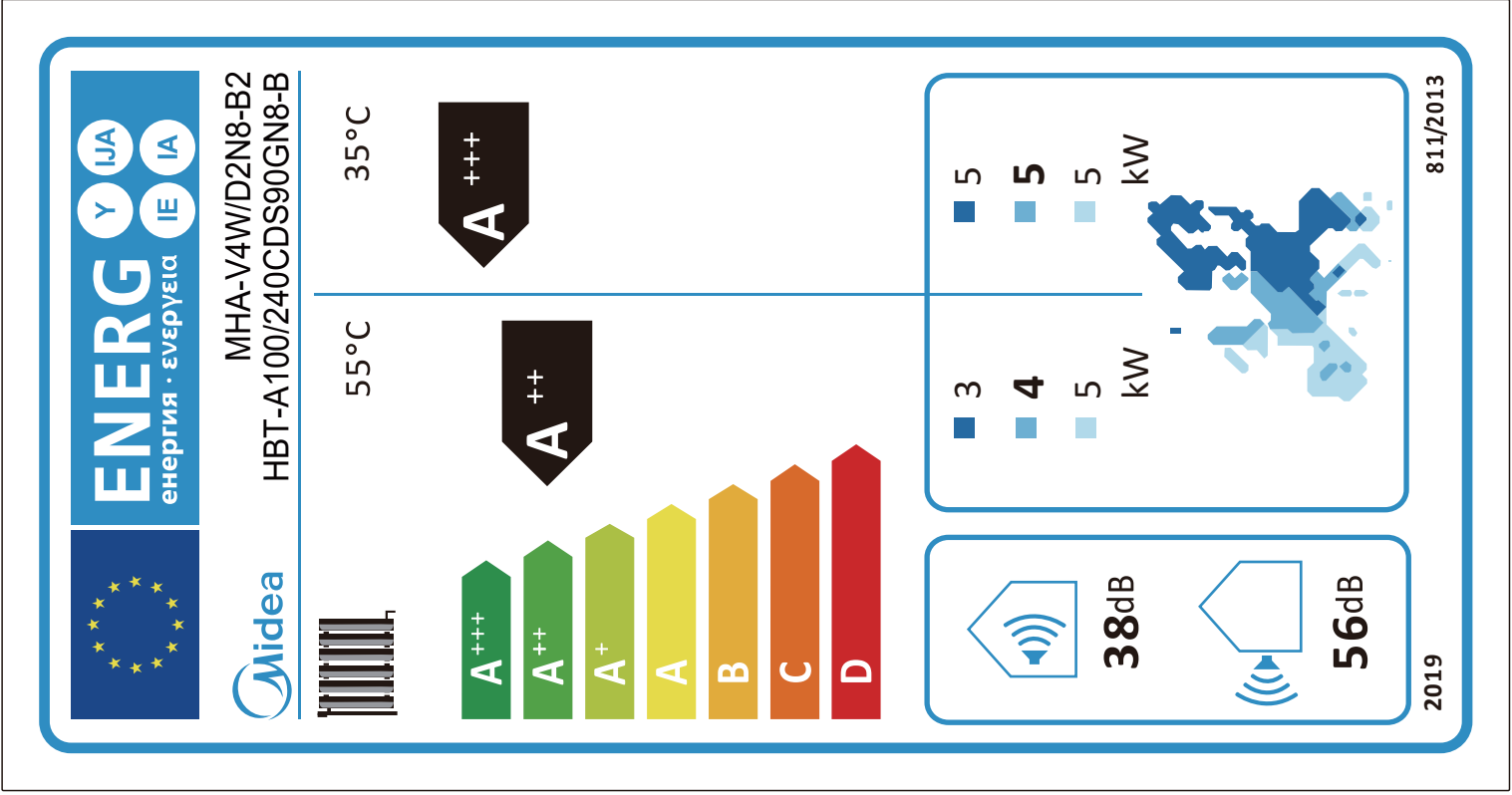
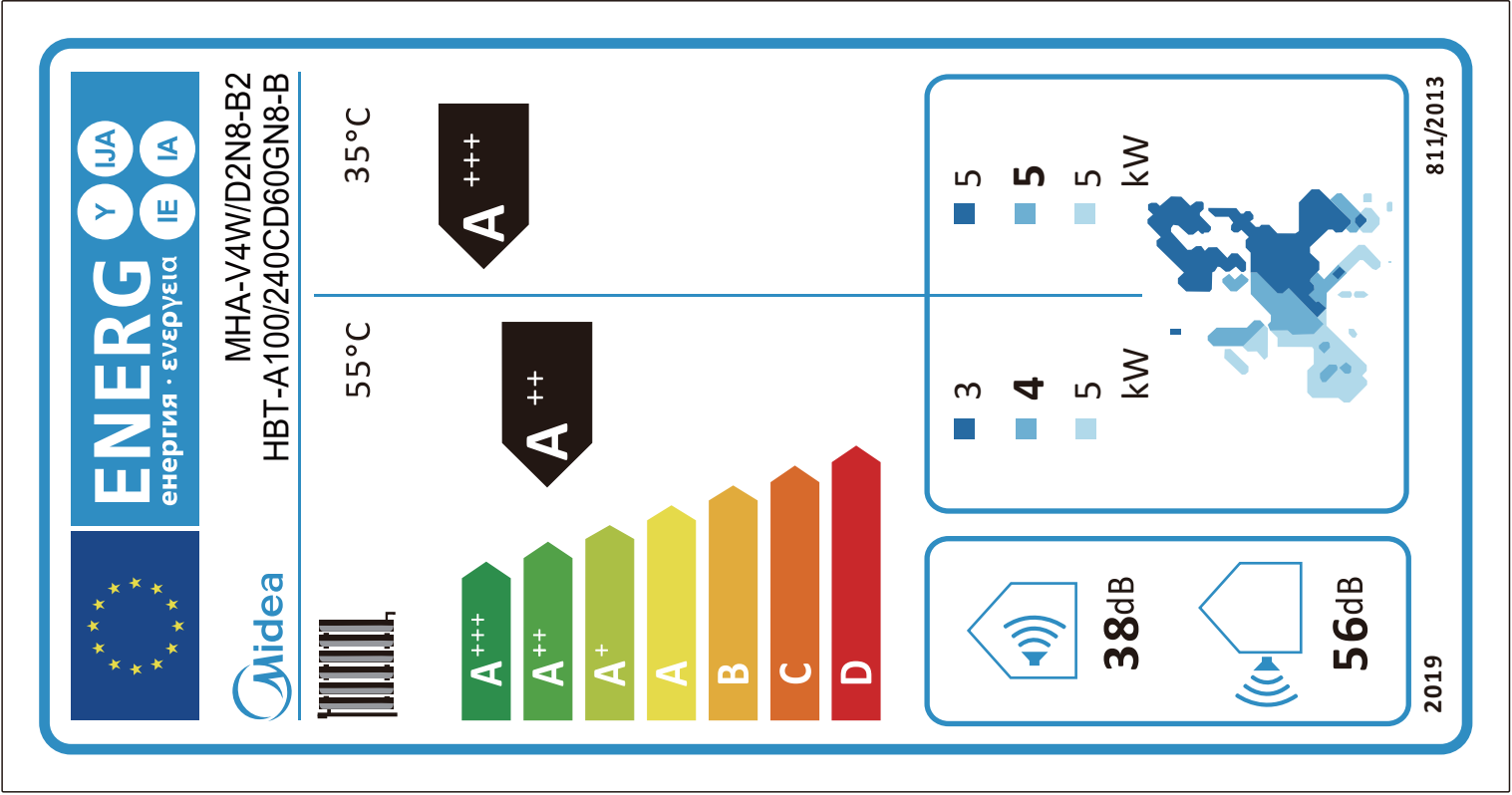


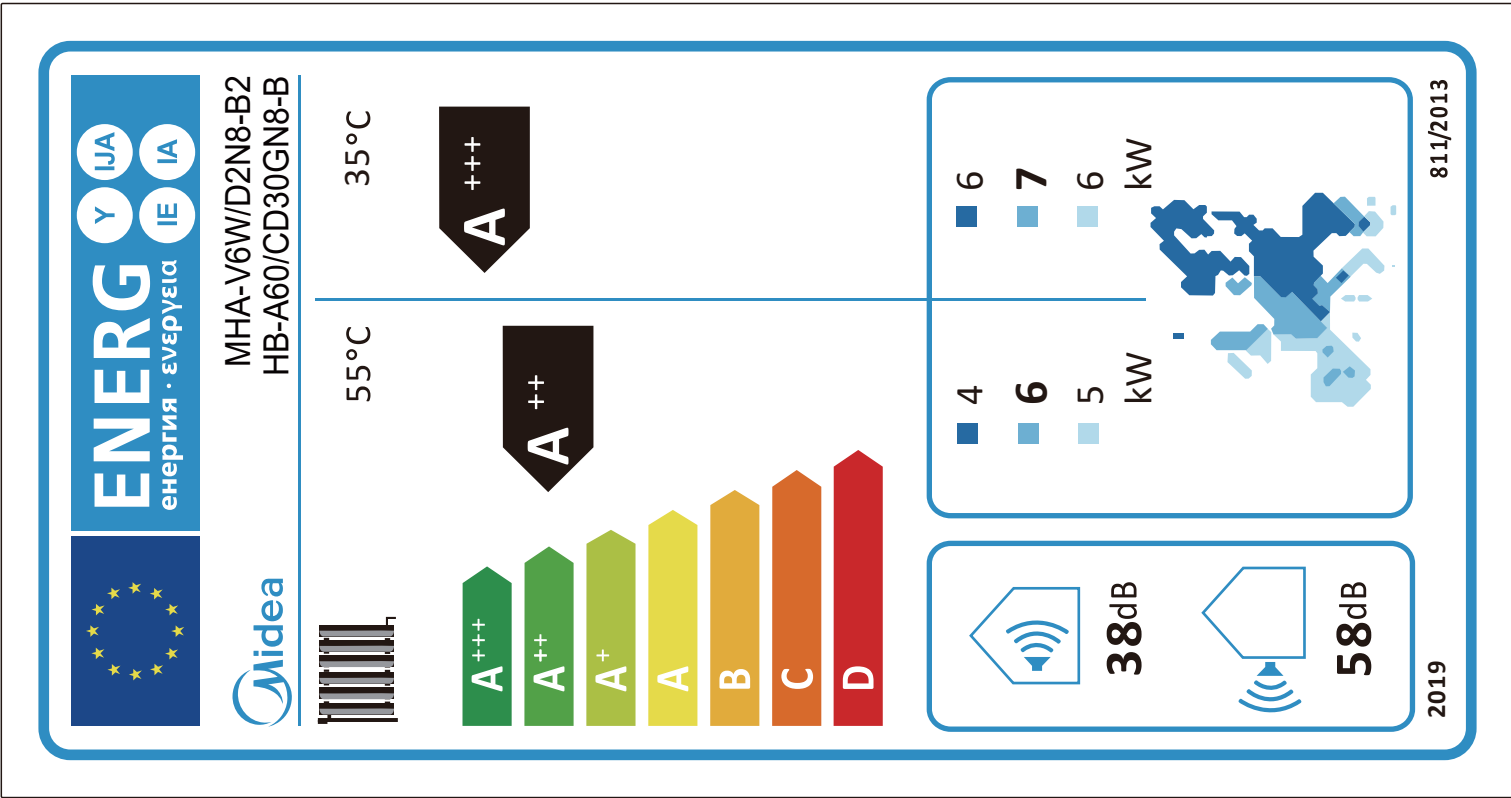
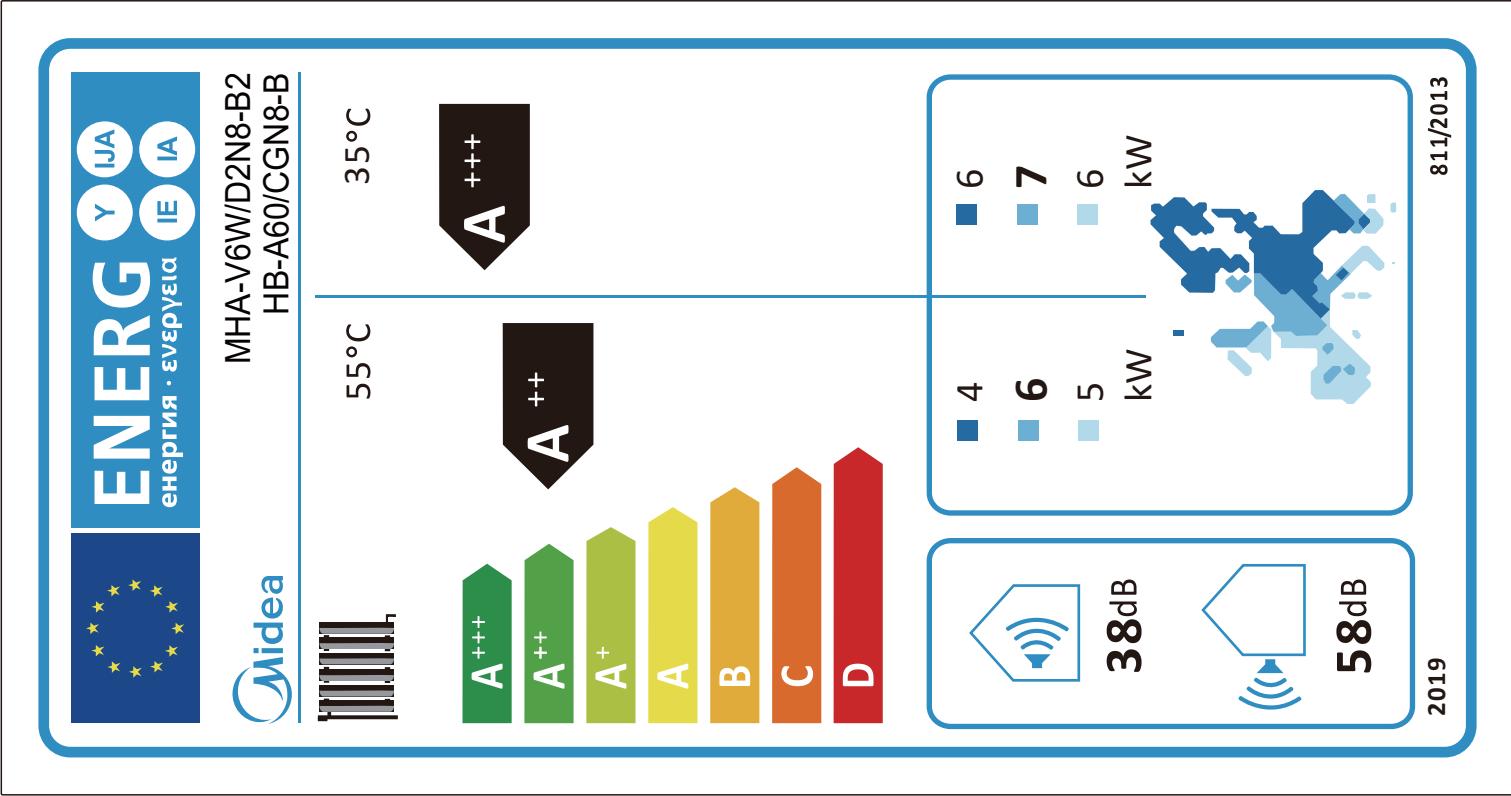


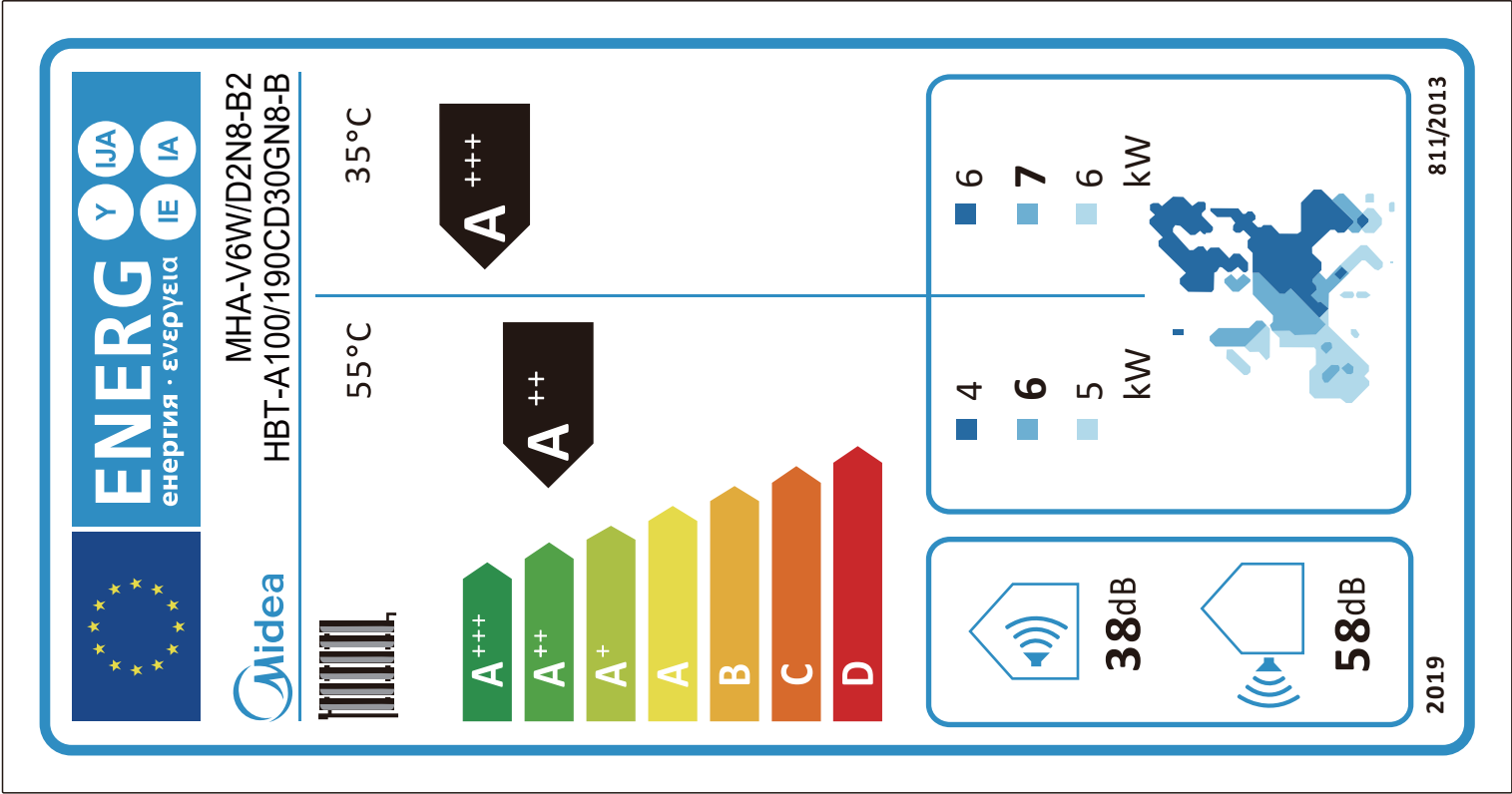
811/2013



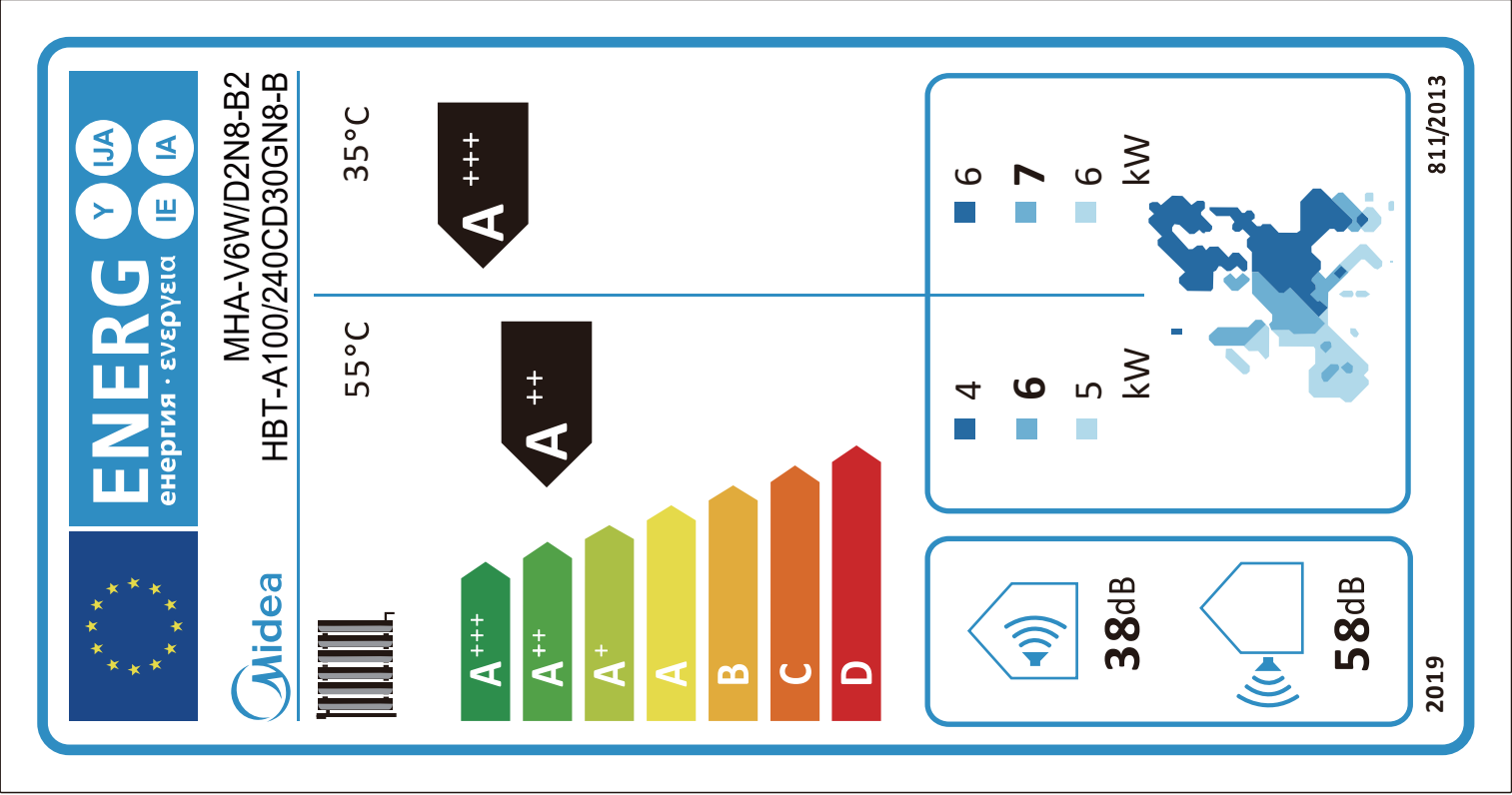
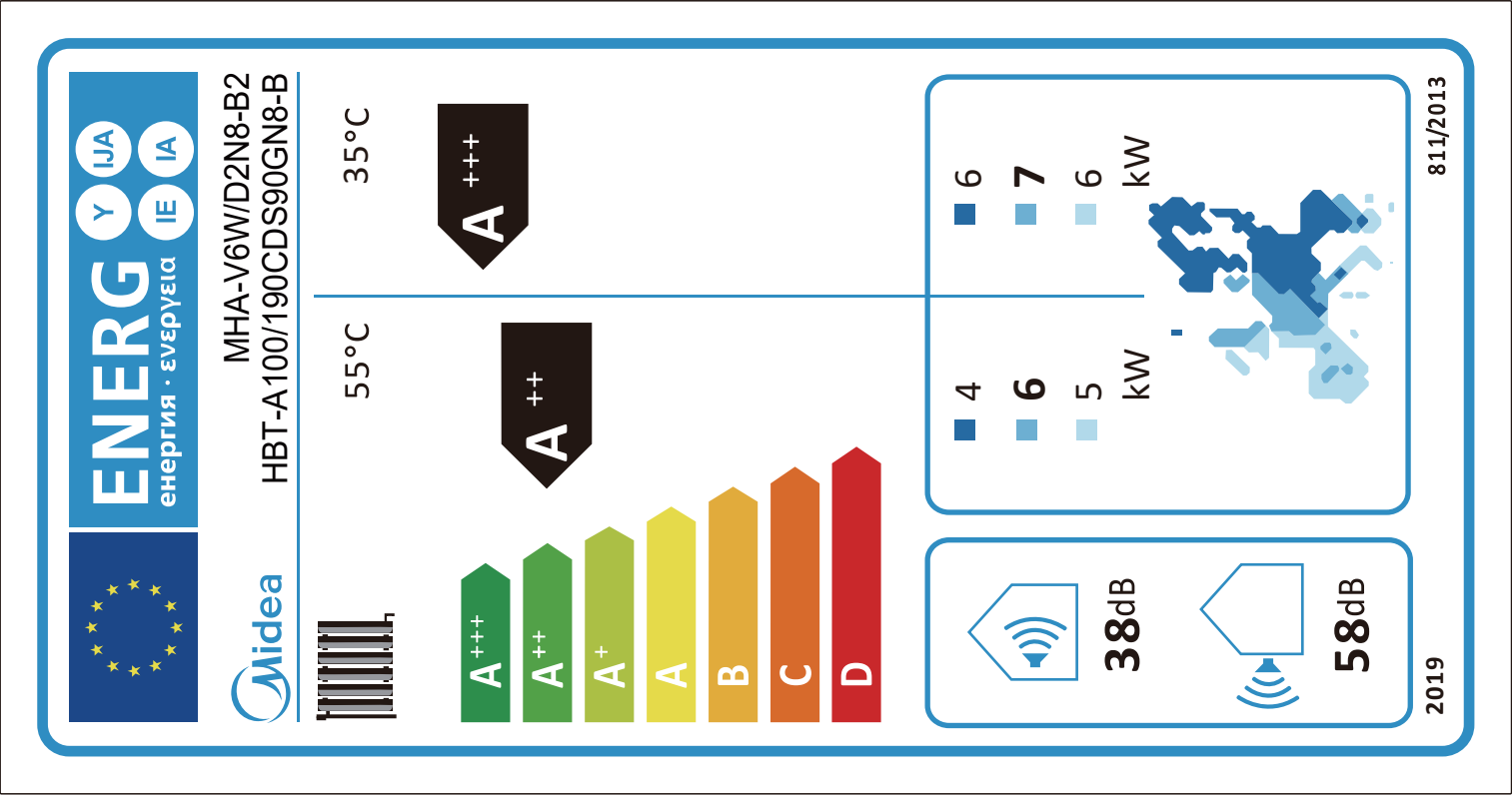
811/2013

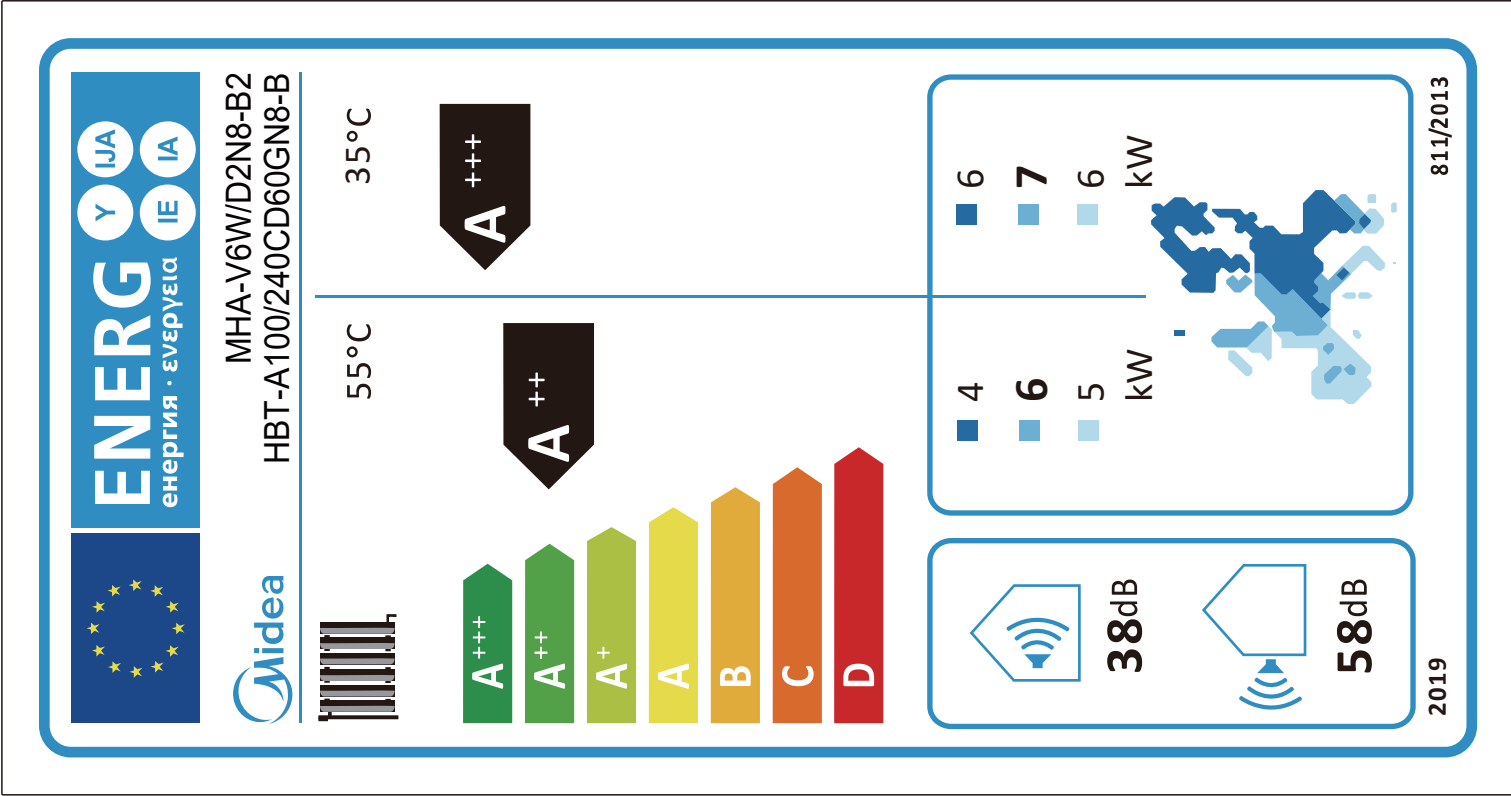


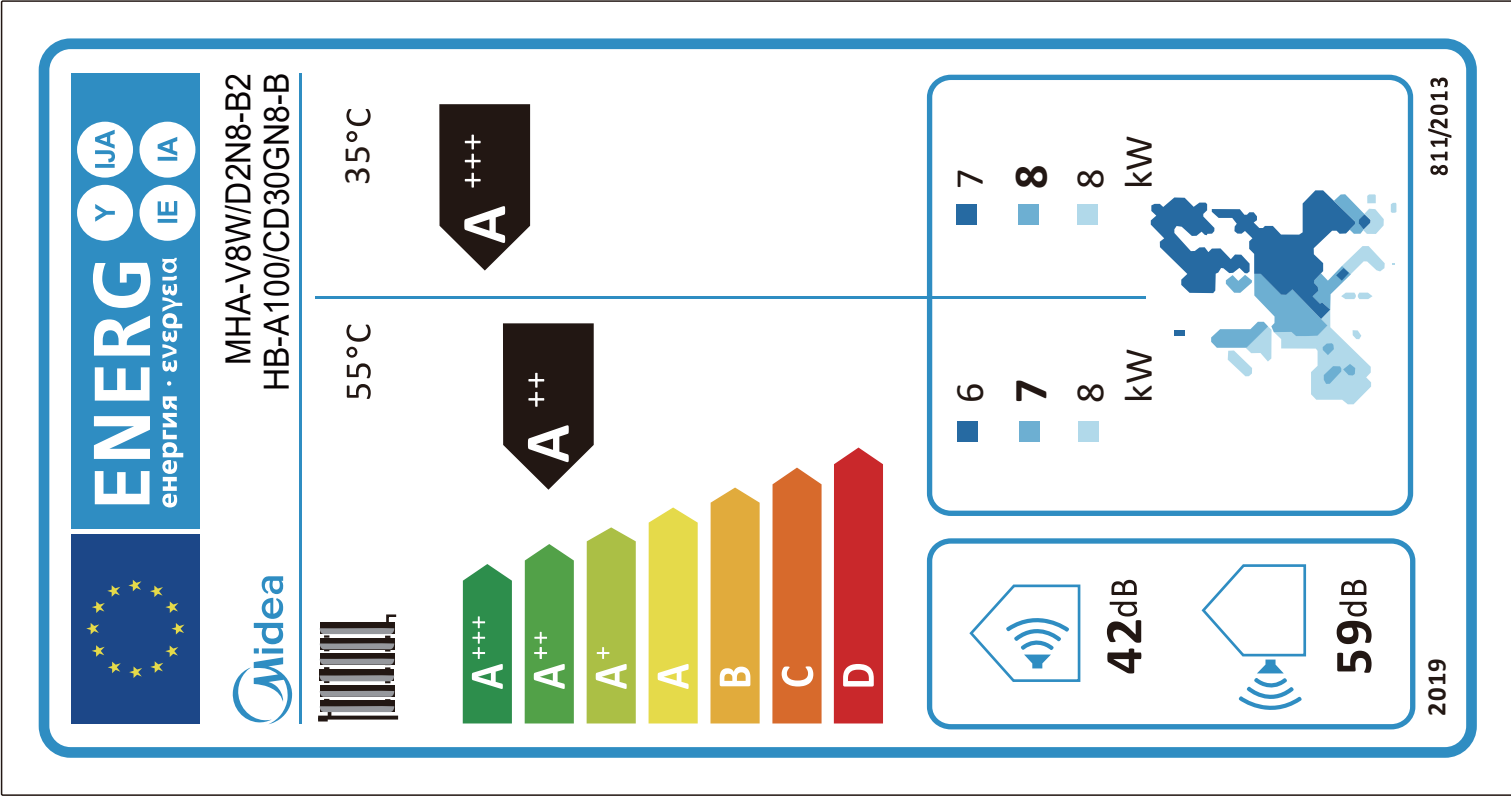
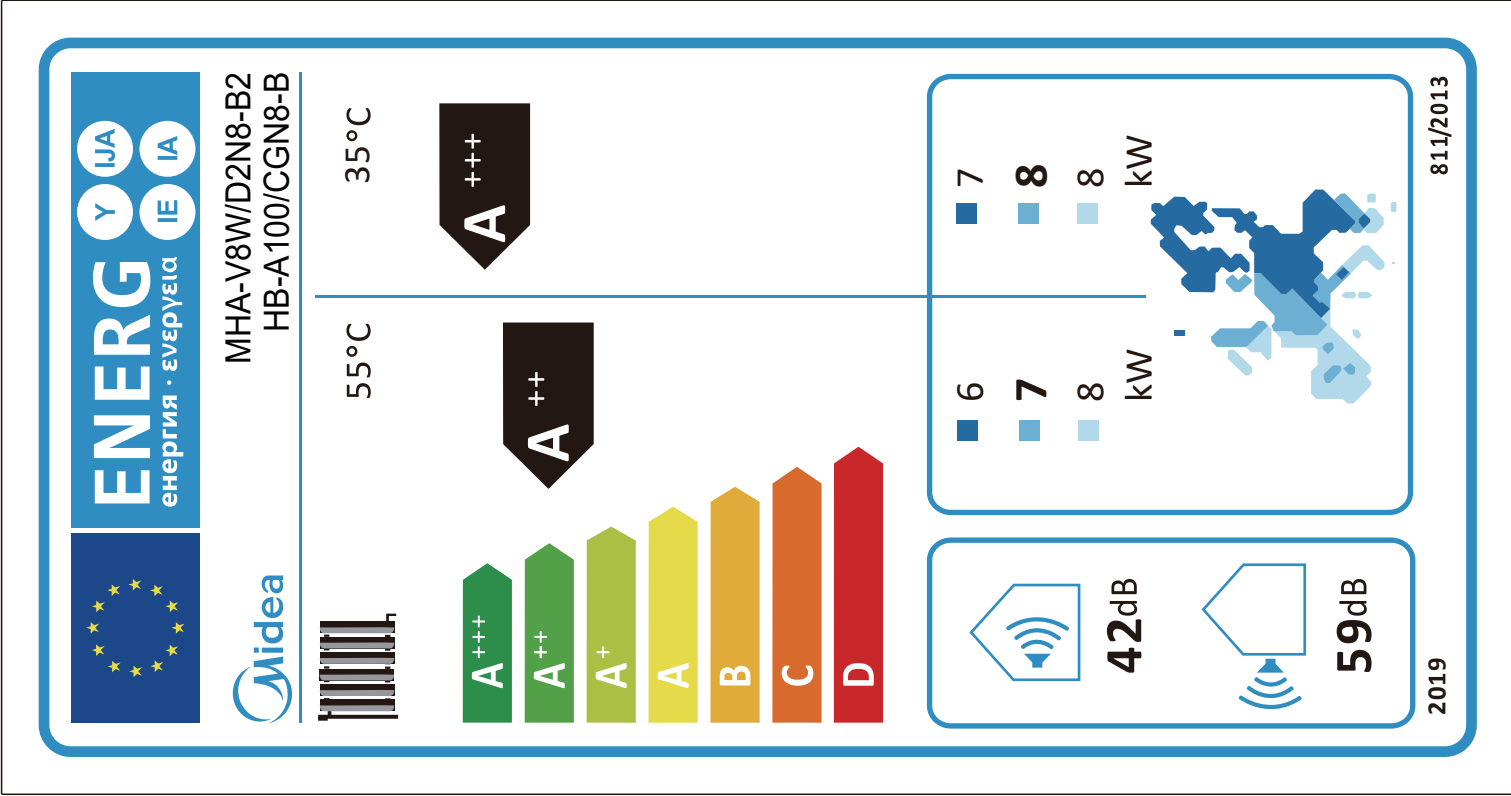


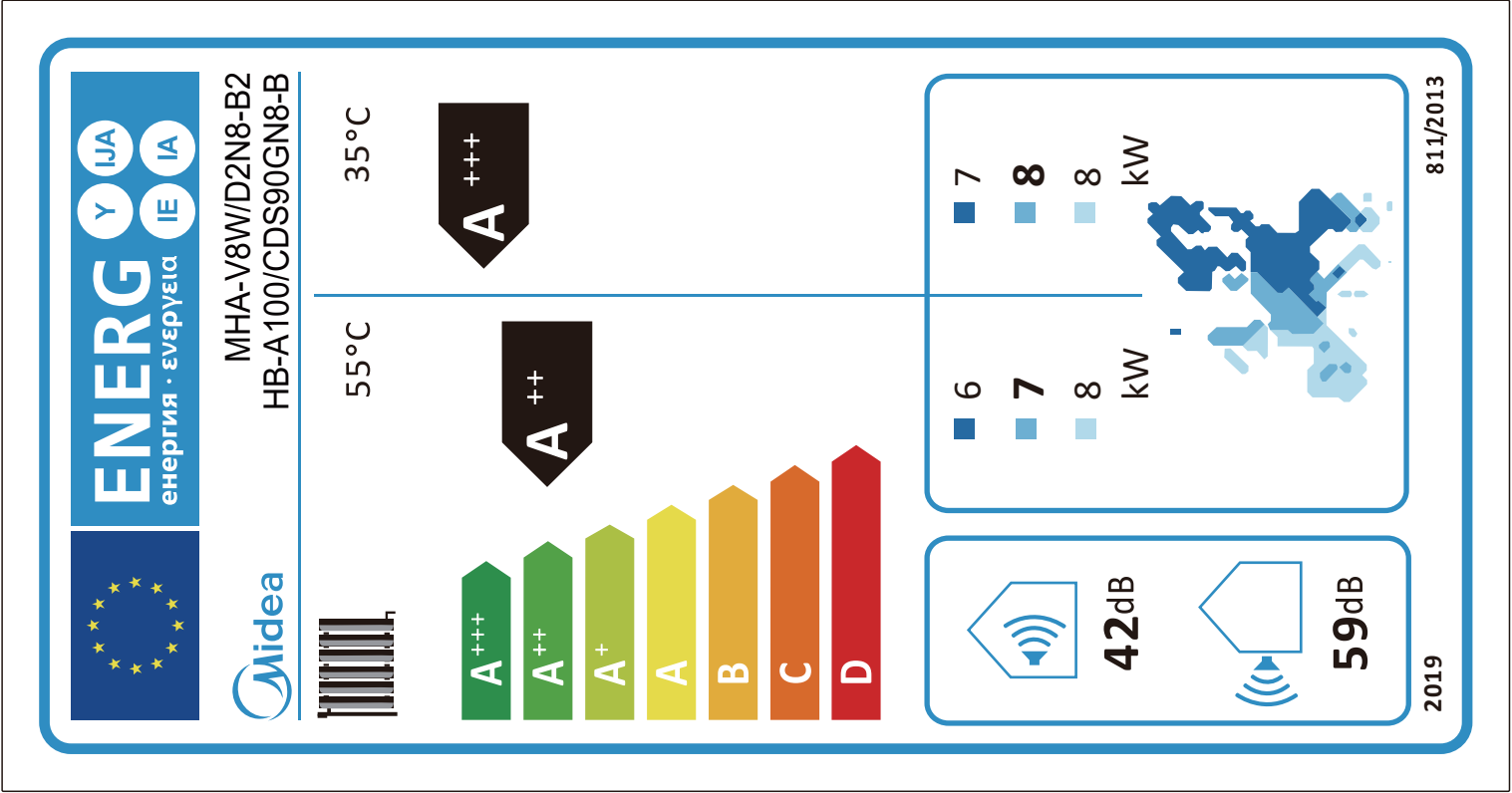


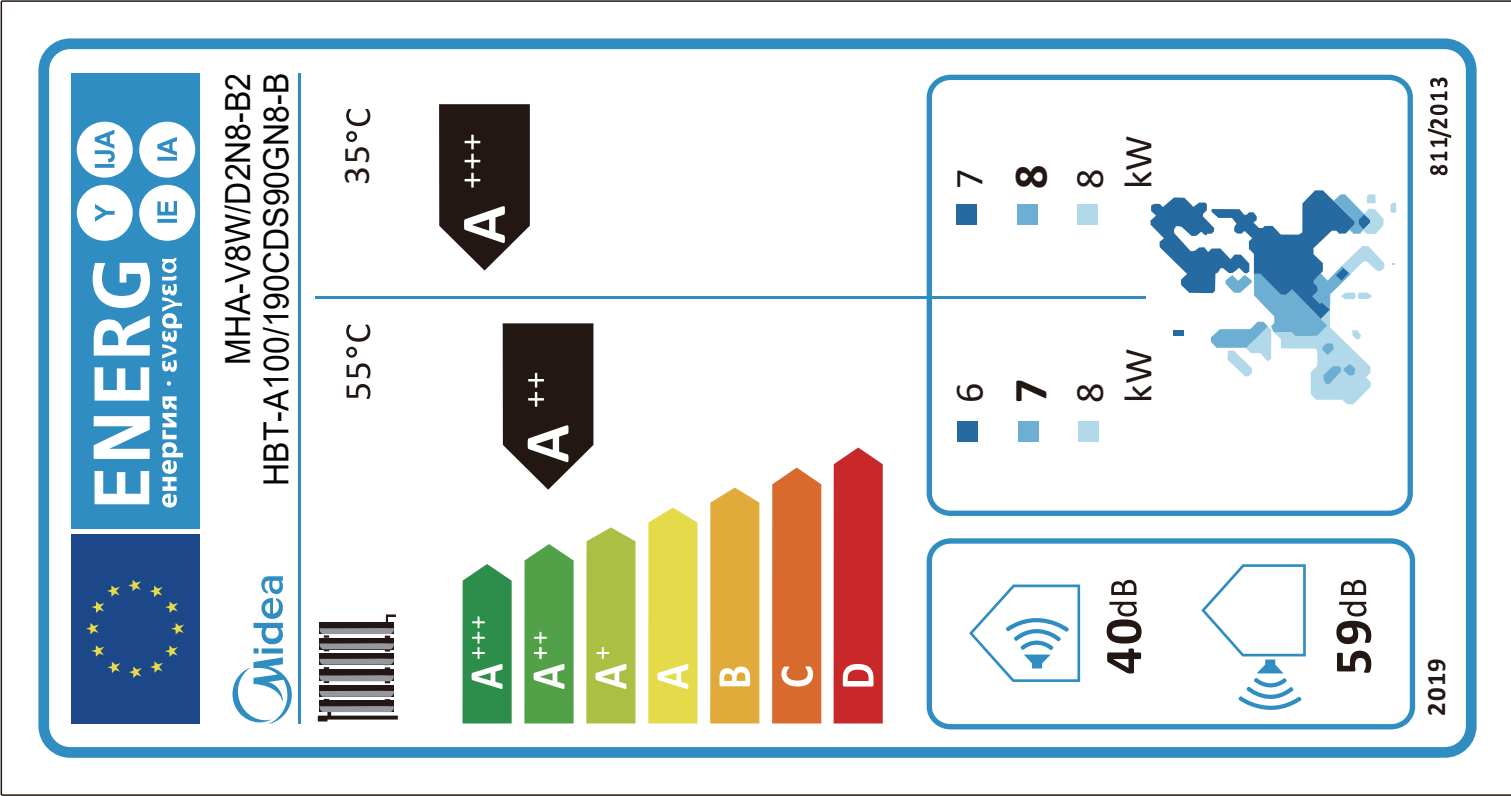
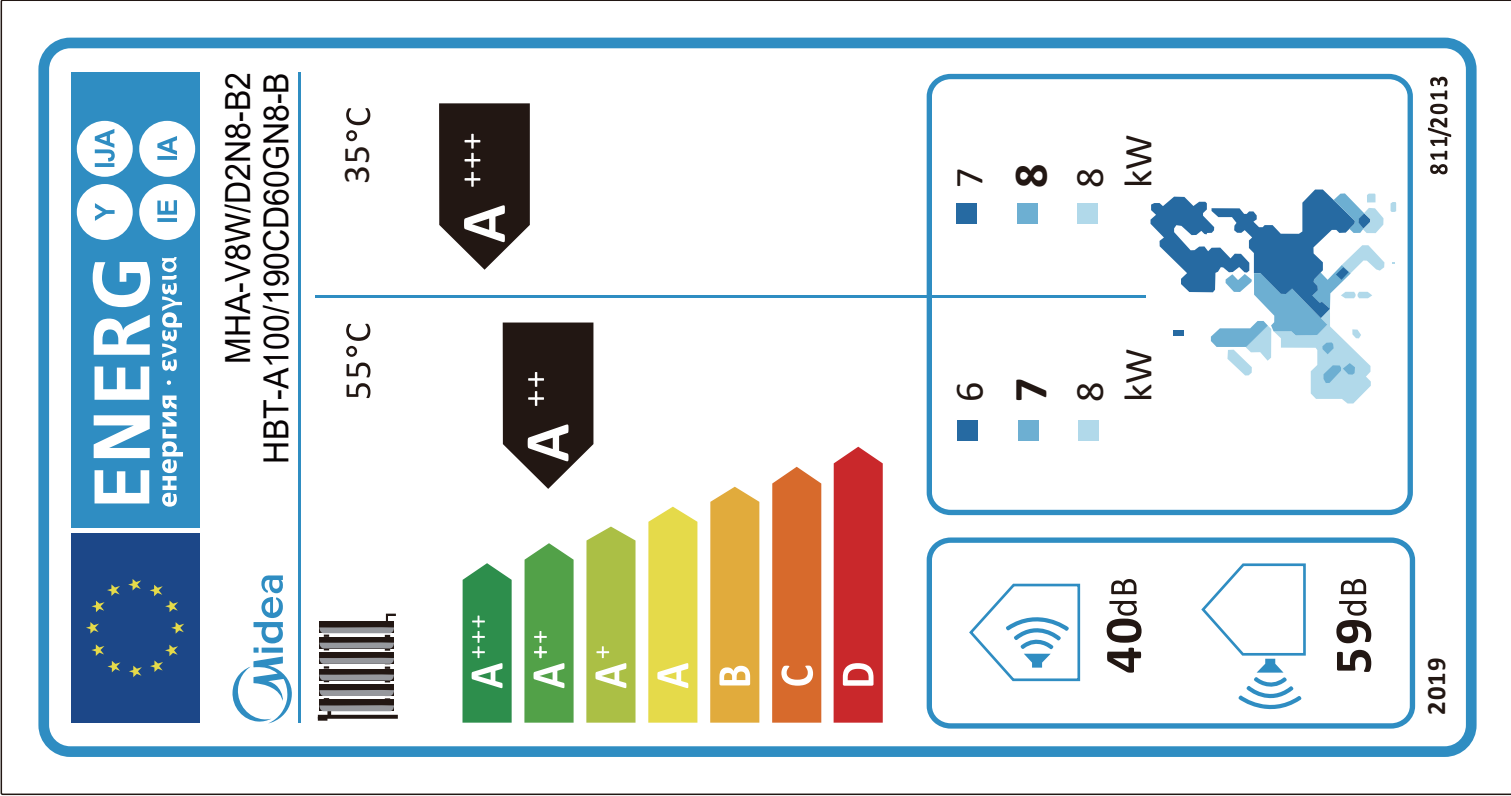


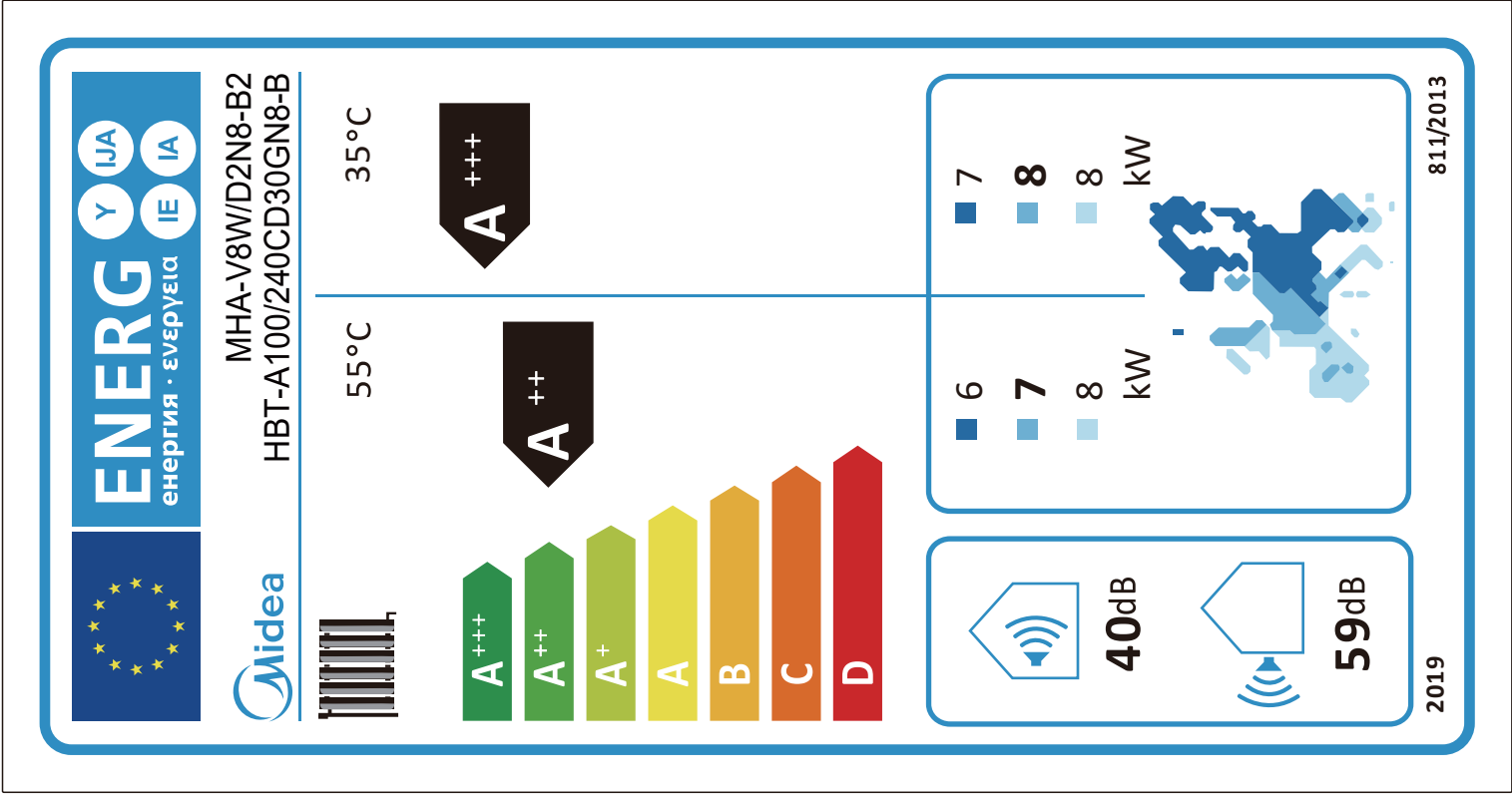


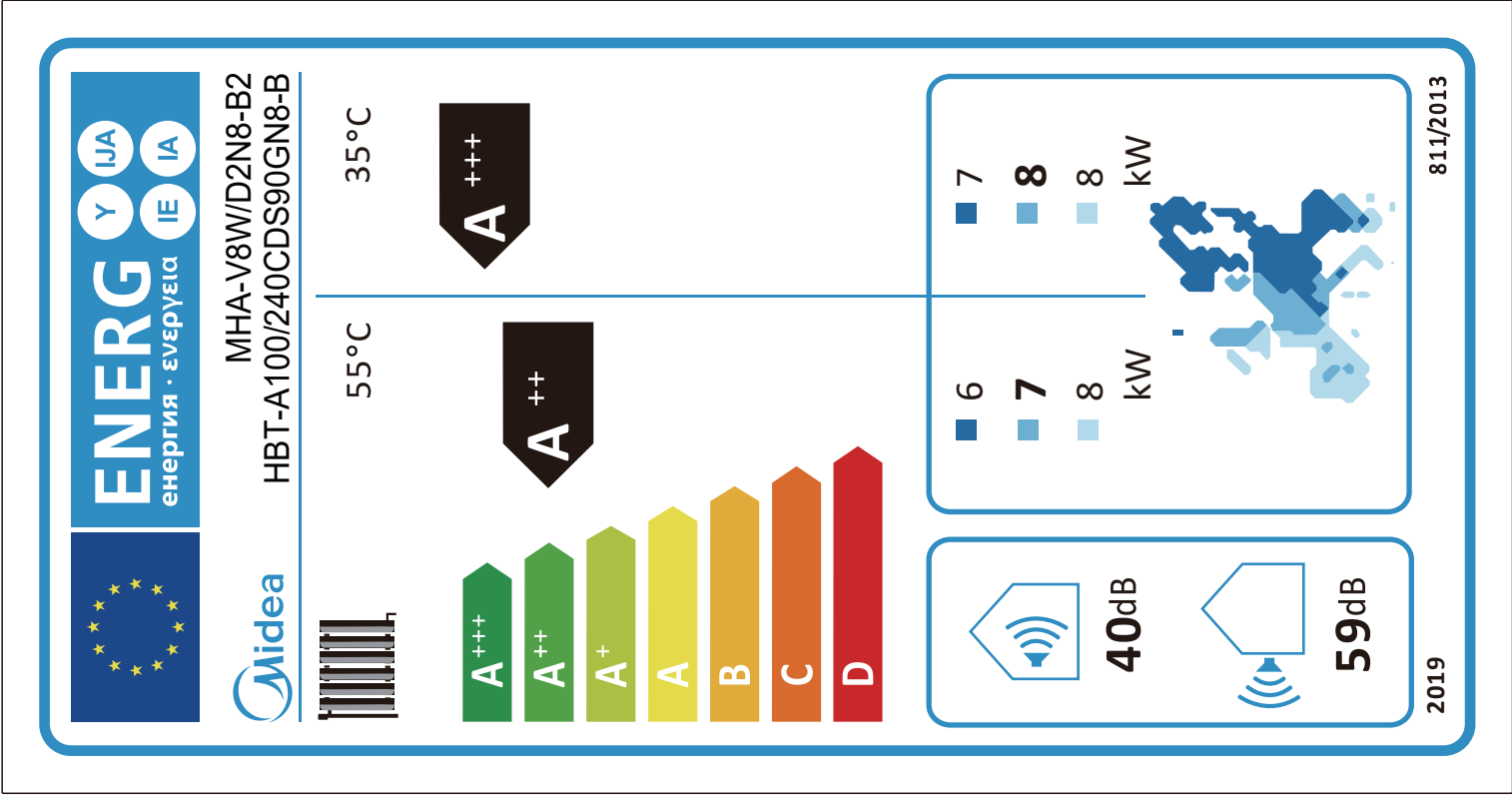


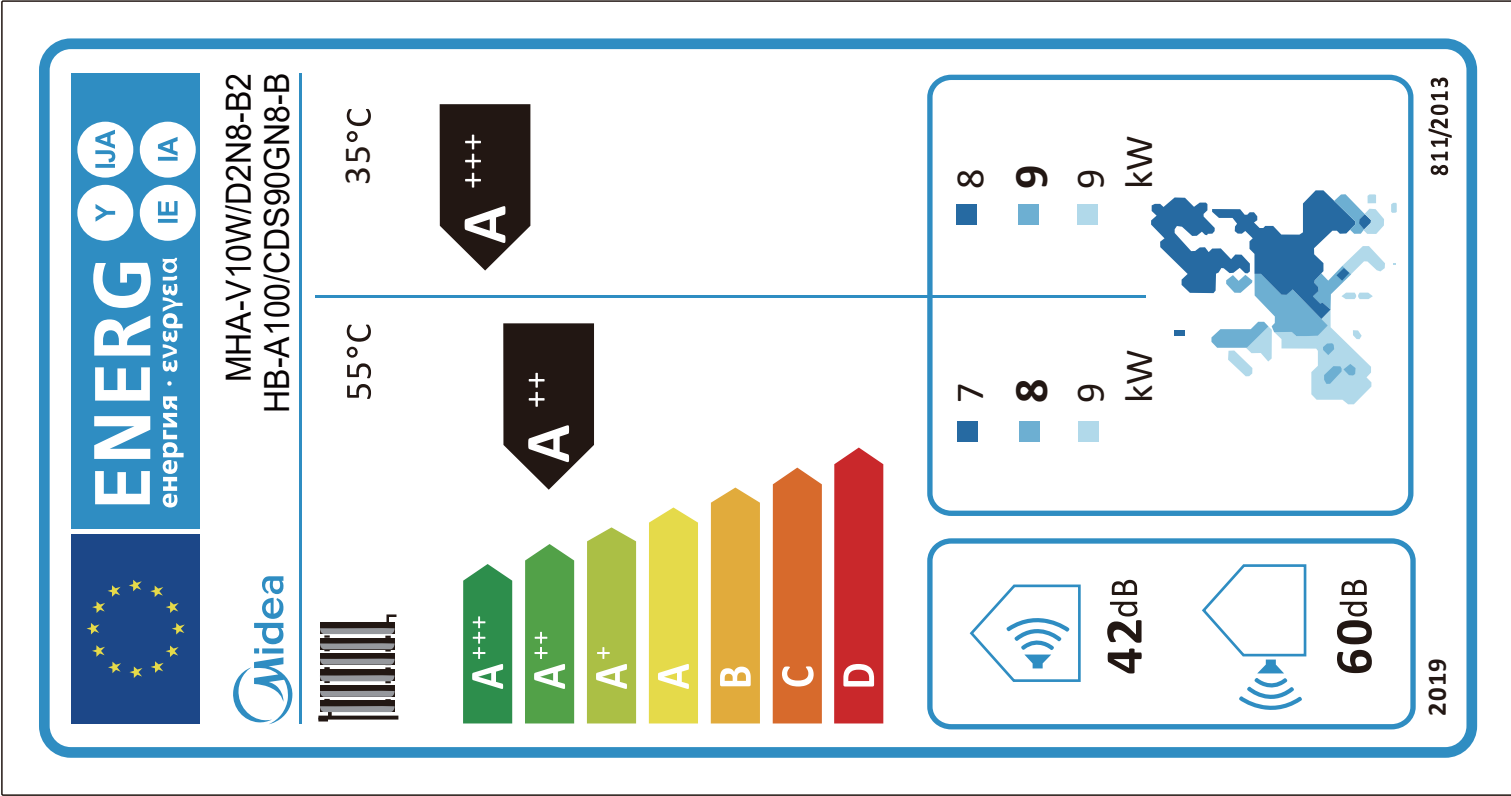
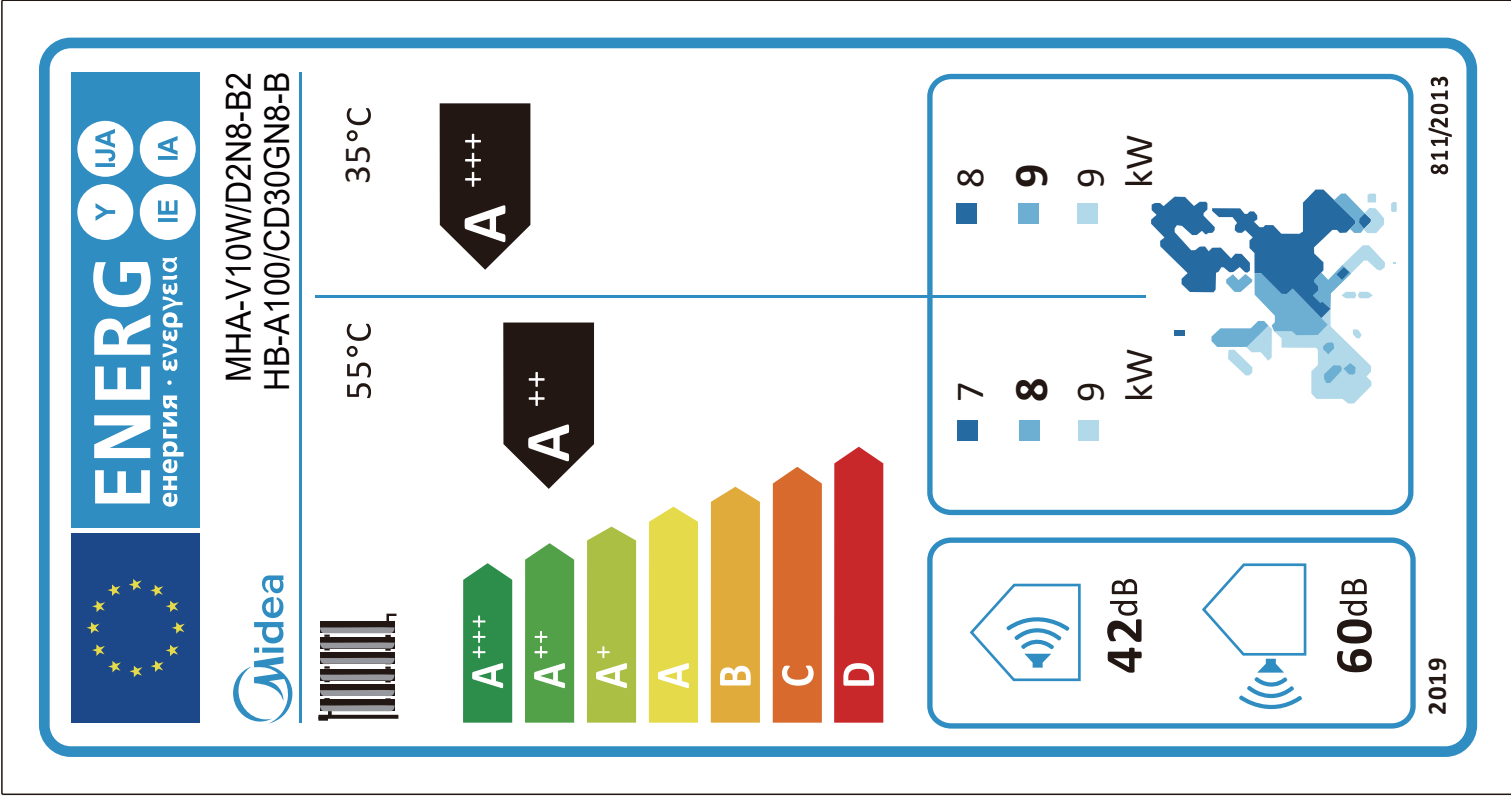




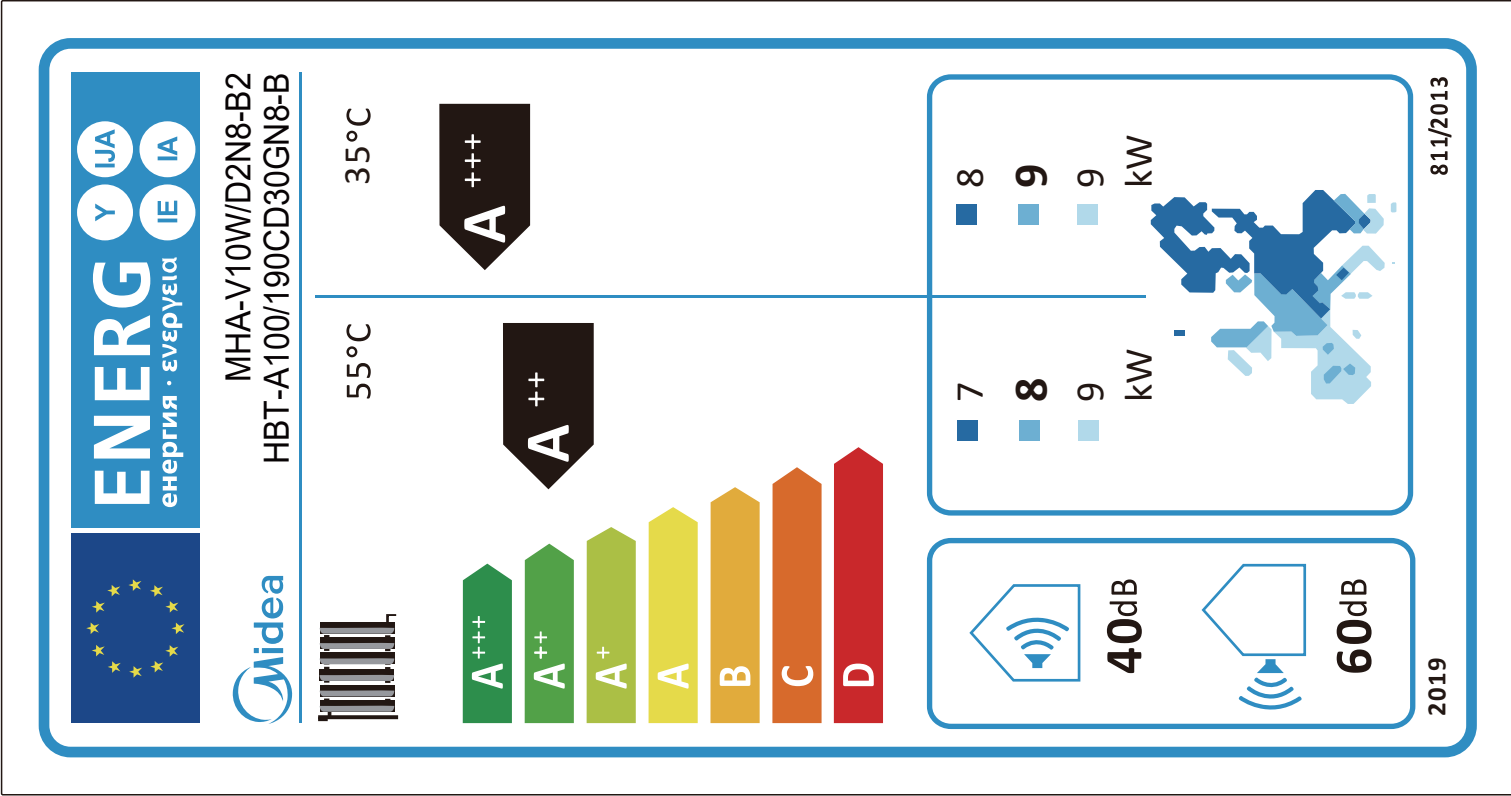












**ENERG**  
енергия · ενεργεια

Y IJA  
IE IA

Midea

MHA-V10W/D2N8-B2  
HBT-A100/190CDS90GN8-B

55°C 35°C

A+++ A++ A+ A B C D

A+++ A++

40dB 60dB

7 8 9 kW

8 9 kW

2019 811/2013

**ENERG**  
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Y IJA  
IE IA

MHA-V10W/D2N8-B2  
HBT-A100/240CD30GN8-B

55°C 35°C

A+++ A++ A+ A B C D

7 8 9 kW

8 9 9 kW

40dB 60dB

2019 811/2013

**ENERG**  
енергия · ενεργεια

Y IJA

IE IA

Midea

MHA-V10W/D2N8-B2  
HBT-A100/240CD60GN8-B

55°C

35°C

A+++

A++

A+

A

B

C

D

A+++

A++

40dB

60dB

7 8 9 kW

8 9 9 kW

2019

811/2013

**ENERG**  
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Y IJA

IE IA

Midea

MHA-V10W/D2N8-B2  
HBT-A100/240CDS90GN8-B

55°C

35°C

A+++

A++

A+

A

B

C

D

A+++

A++

40dB

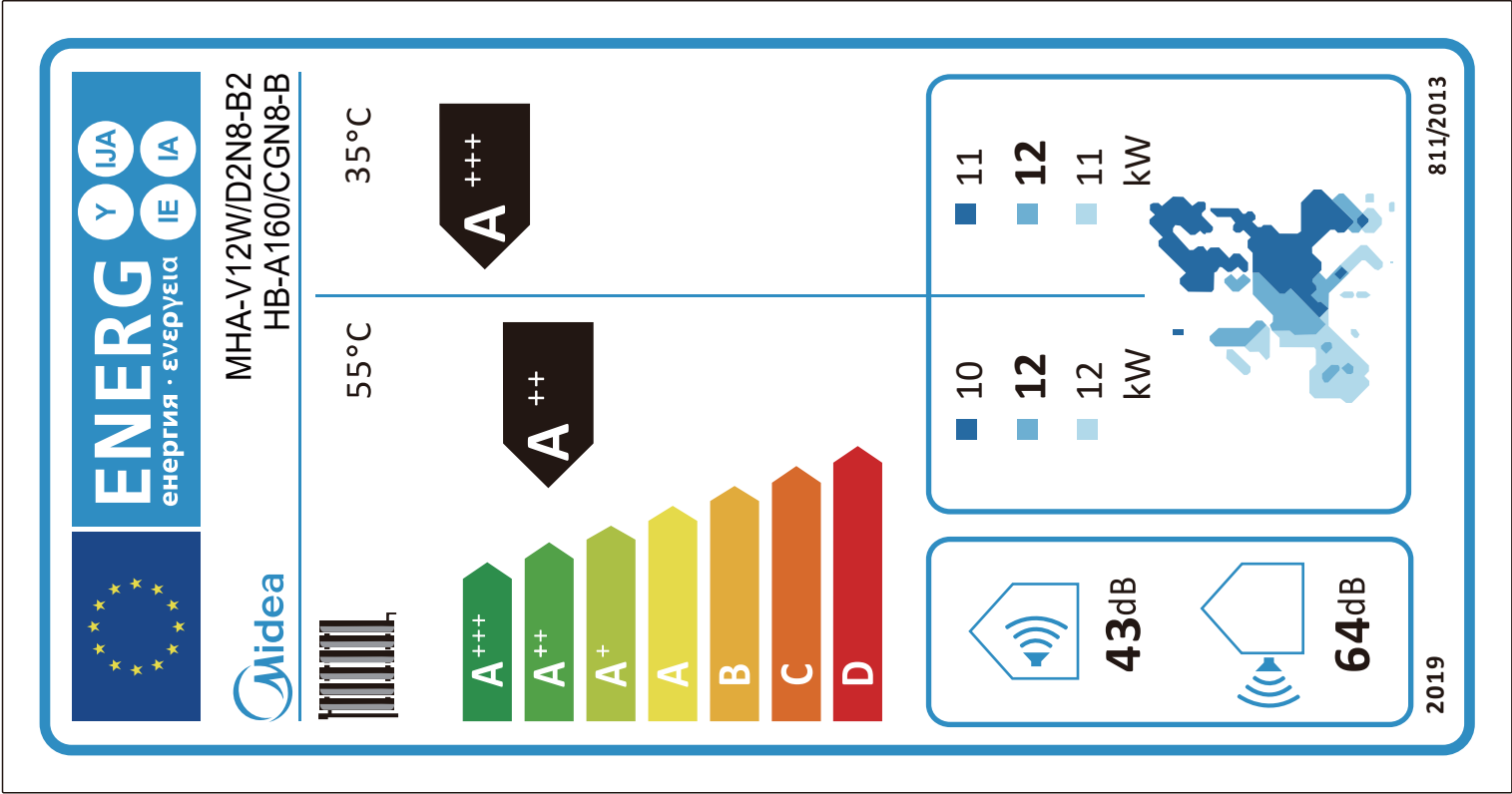
60dB

7 8 9 kW

8 9 9 kW

2019

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Y IJA

IE IA

MHA-V12W/D2N8-B2

HB-A160/CDS90GN8-B

55°C

35°C

A+++

A++

A+

A

B

C

D

A++

A+++

43dB

64dB

101212

1111

kWkW

2019

811/2013

**ENERG**  
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Y IJA

IE IA

MHA-V12W/D2N8-B2

HB-T-A160/240CD30GN8-B

55°C

35°C

A+++

A++

A+

A

B

C

D

A++

A+++

42dB

64dB

101212


1111

kWkW

2019

811/2013

63



ENERG


енергия · ενεργεια

Y IJA

IE IA

Midea

MHA-V12W/D2N8-B2  
HBT-A160/240CD60GN8-B



55°C

35°C

A+++

A++

A+

A


B

C


D

A+++

A++



42dB



64dB

10

12

12


11

12

11


kW

kW



2019

811/2013



ENERG


енергия · ενεργεια

Y IJA

IE IA

Midea

MHA-V12W/D2N8-B2  
HBT-A160/240CDS90GN8-B



55°C

35°C

A+++

A++

A+

A


B

C


D

A+++

A++



42dB



64dB

10

12

12


11

12

11

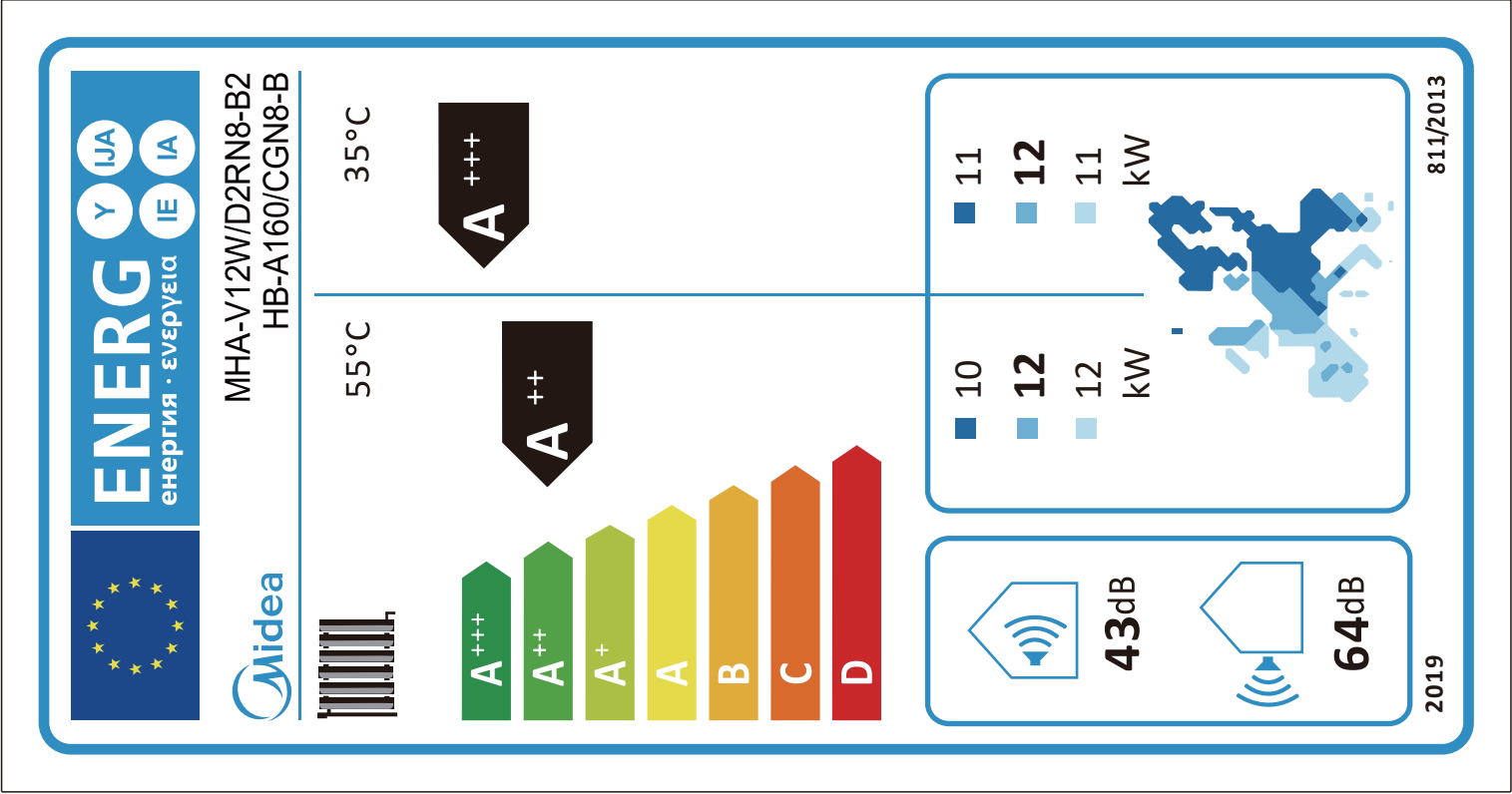
kW

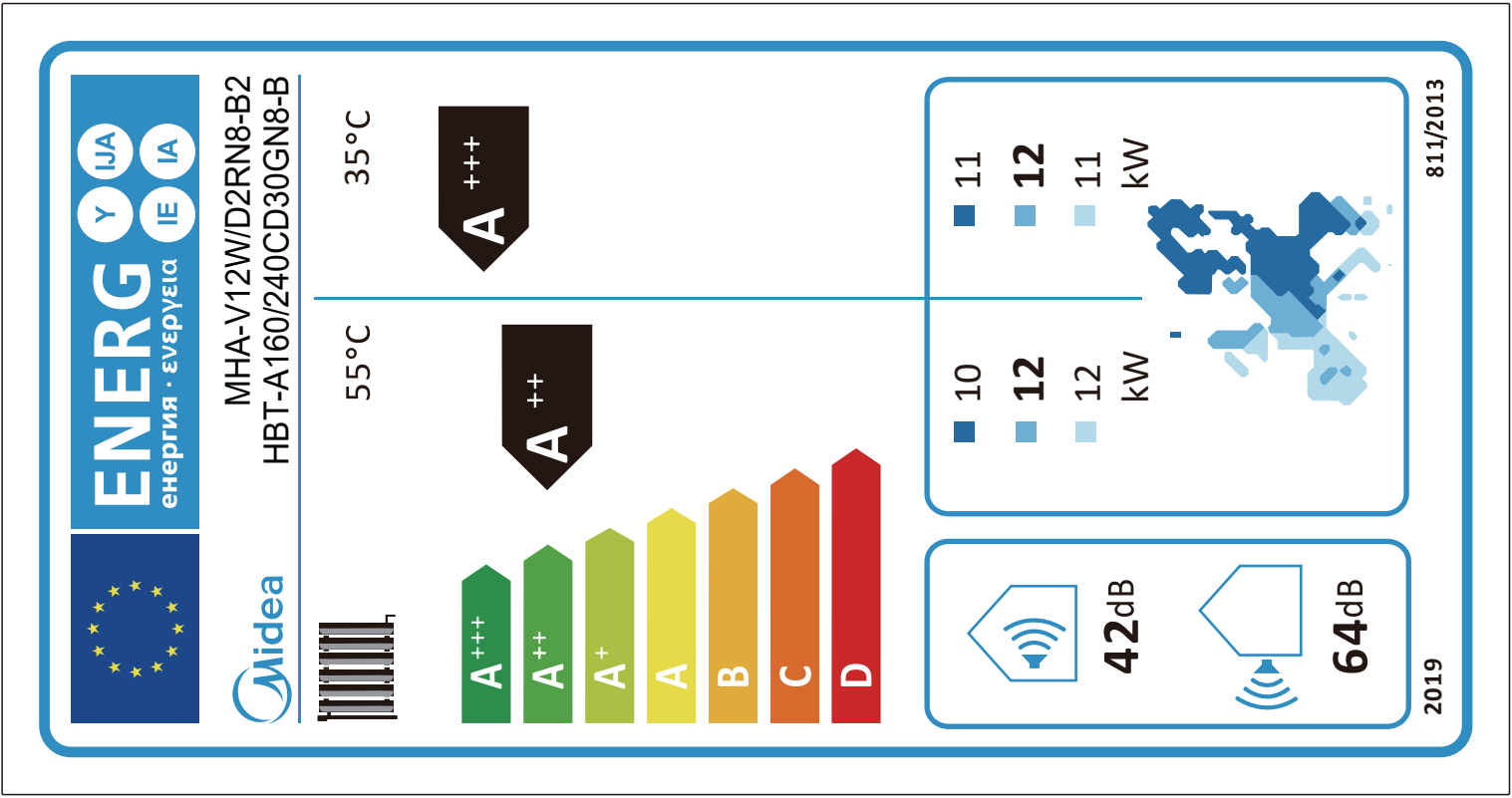
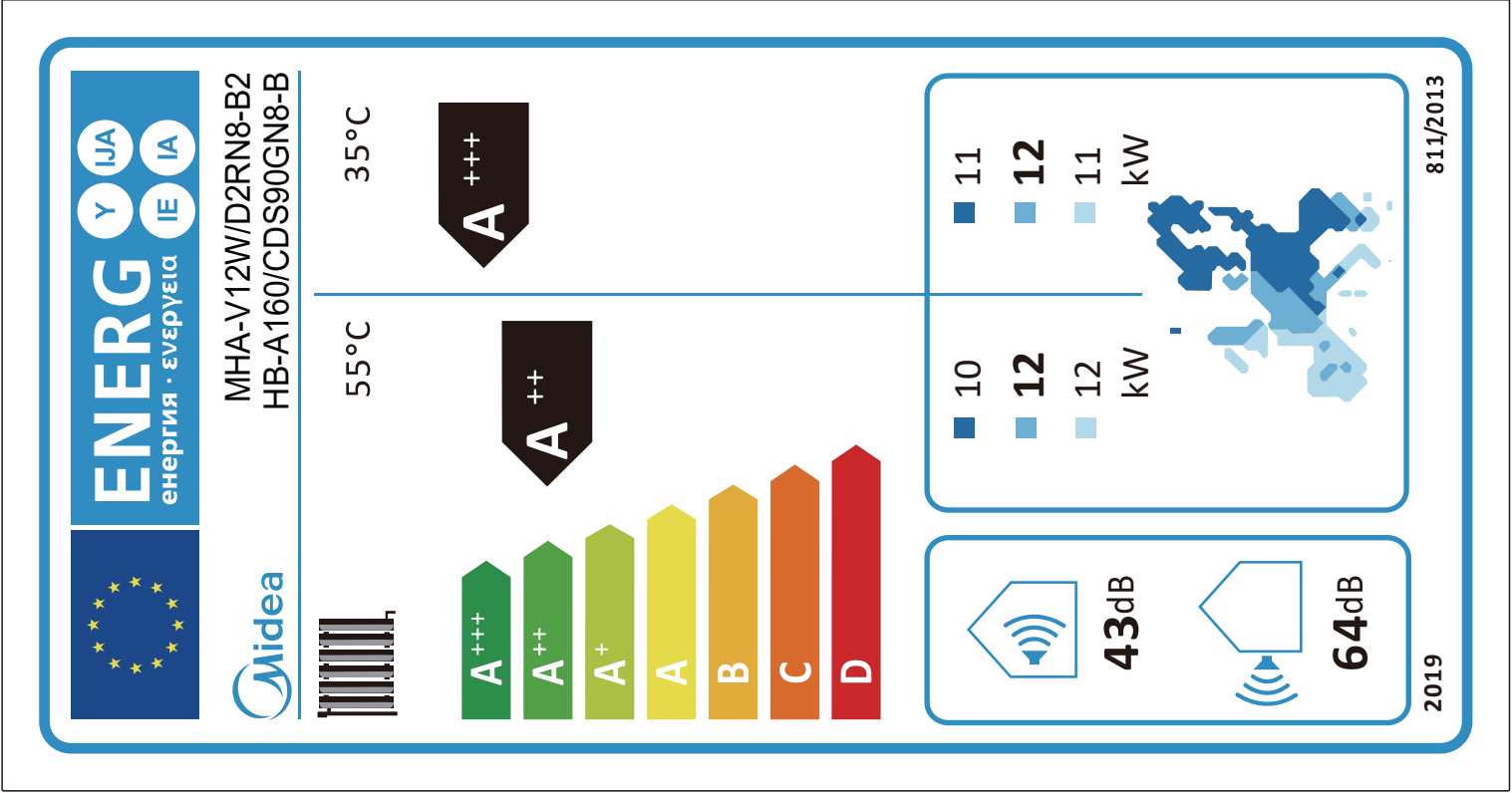
kW



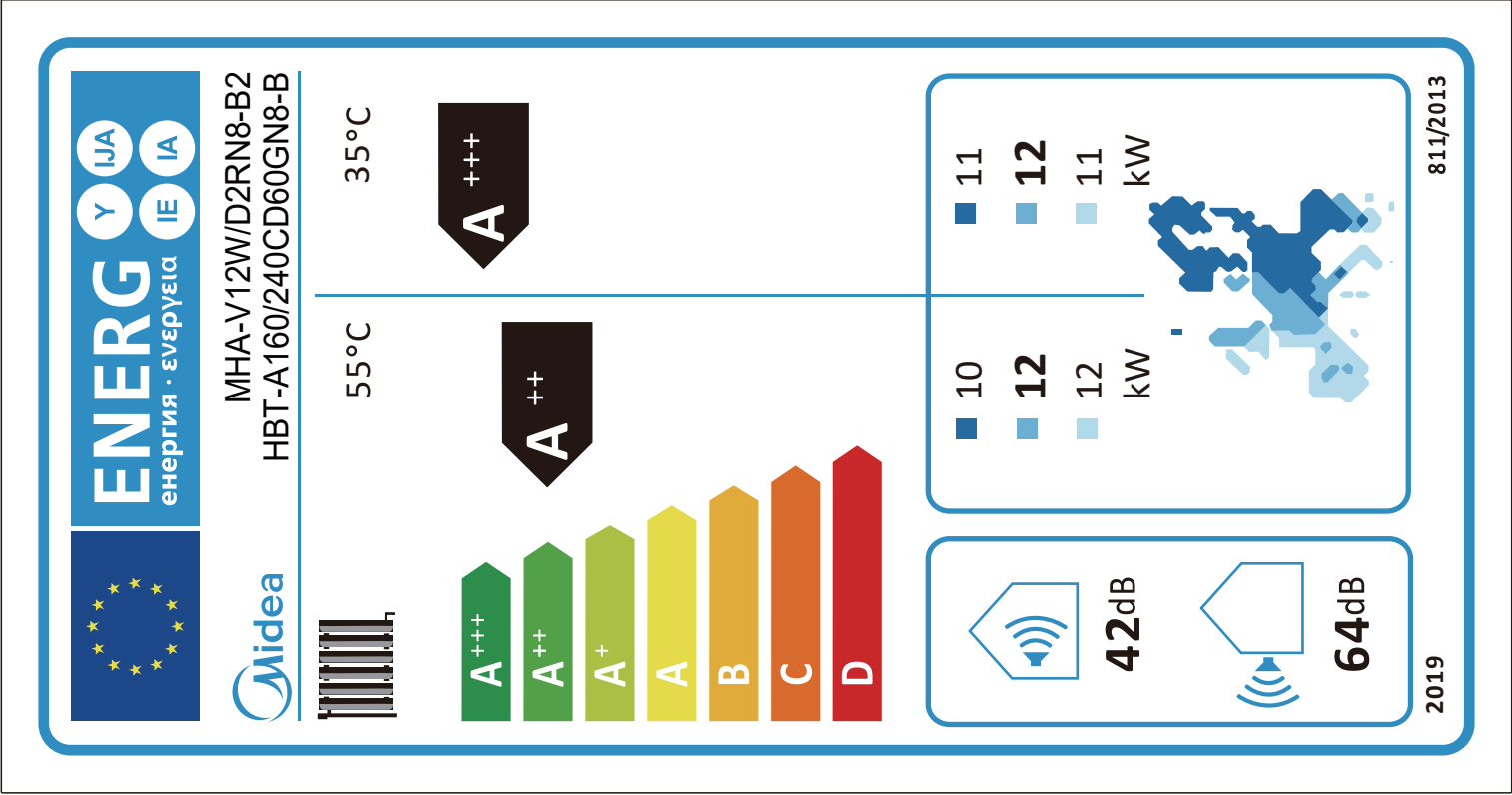
2019

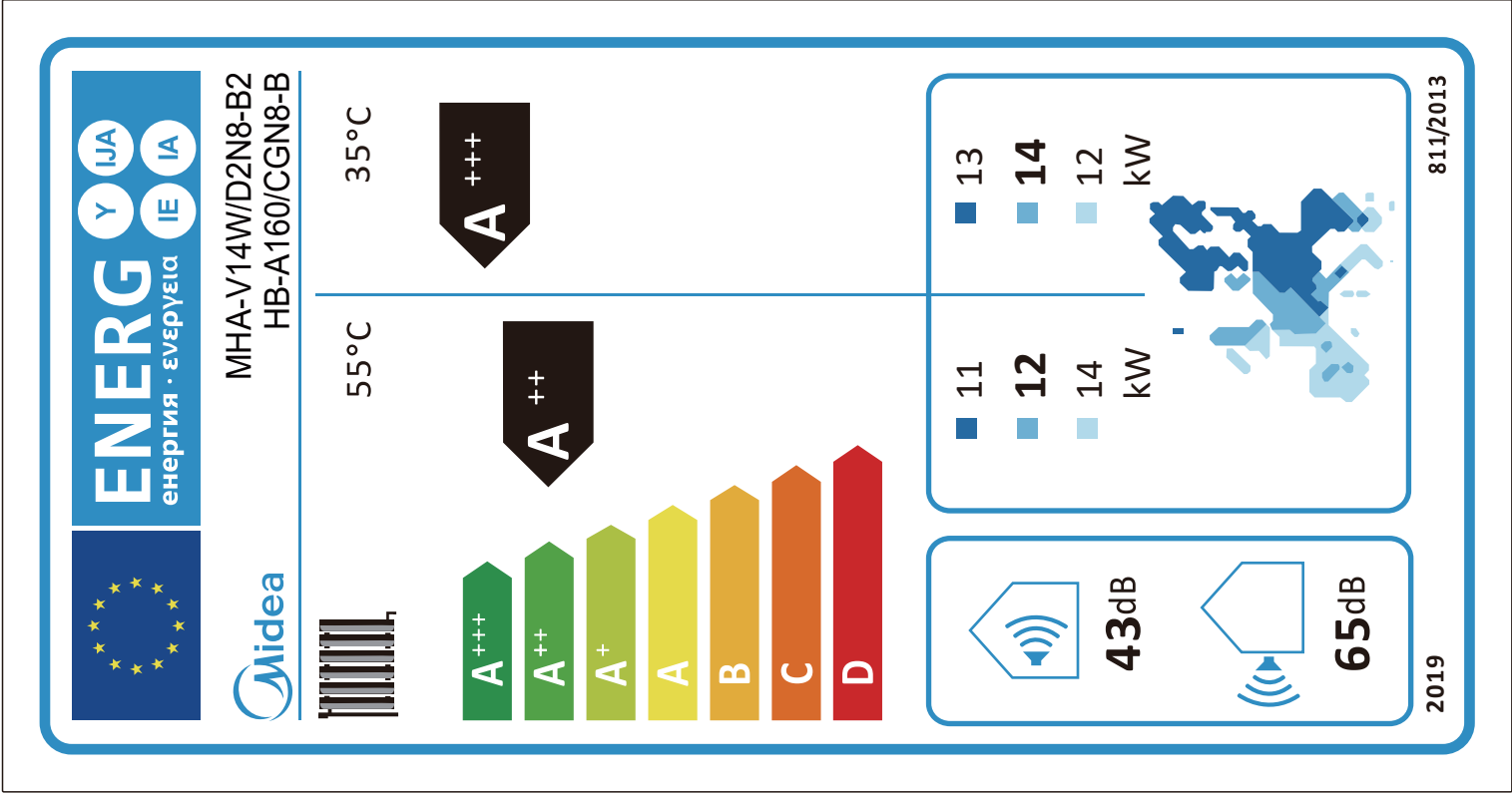
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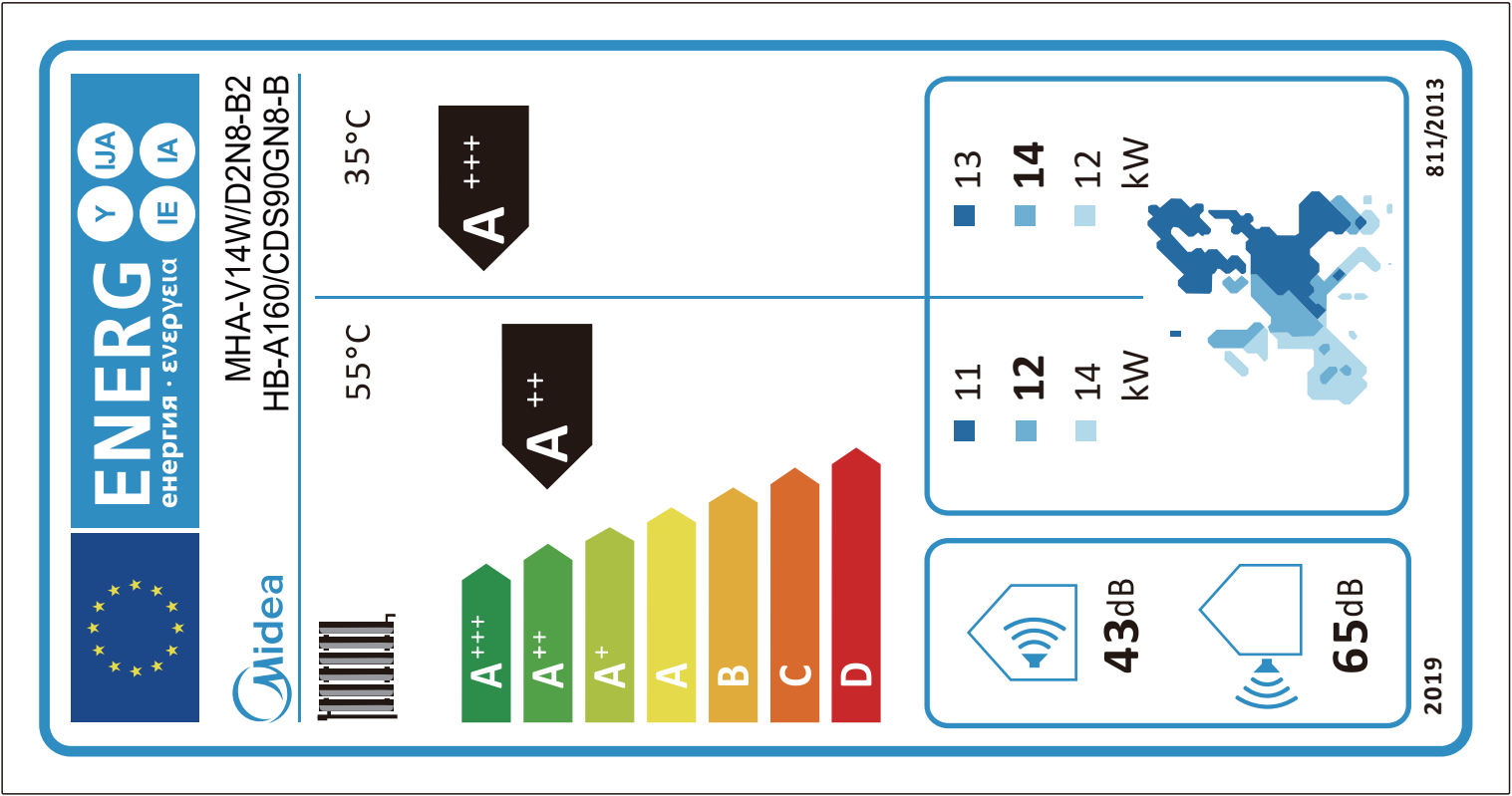


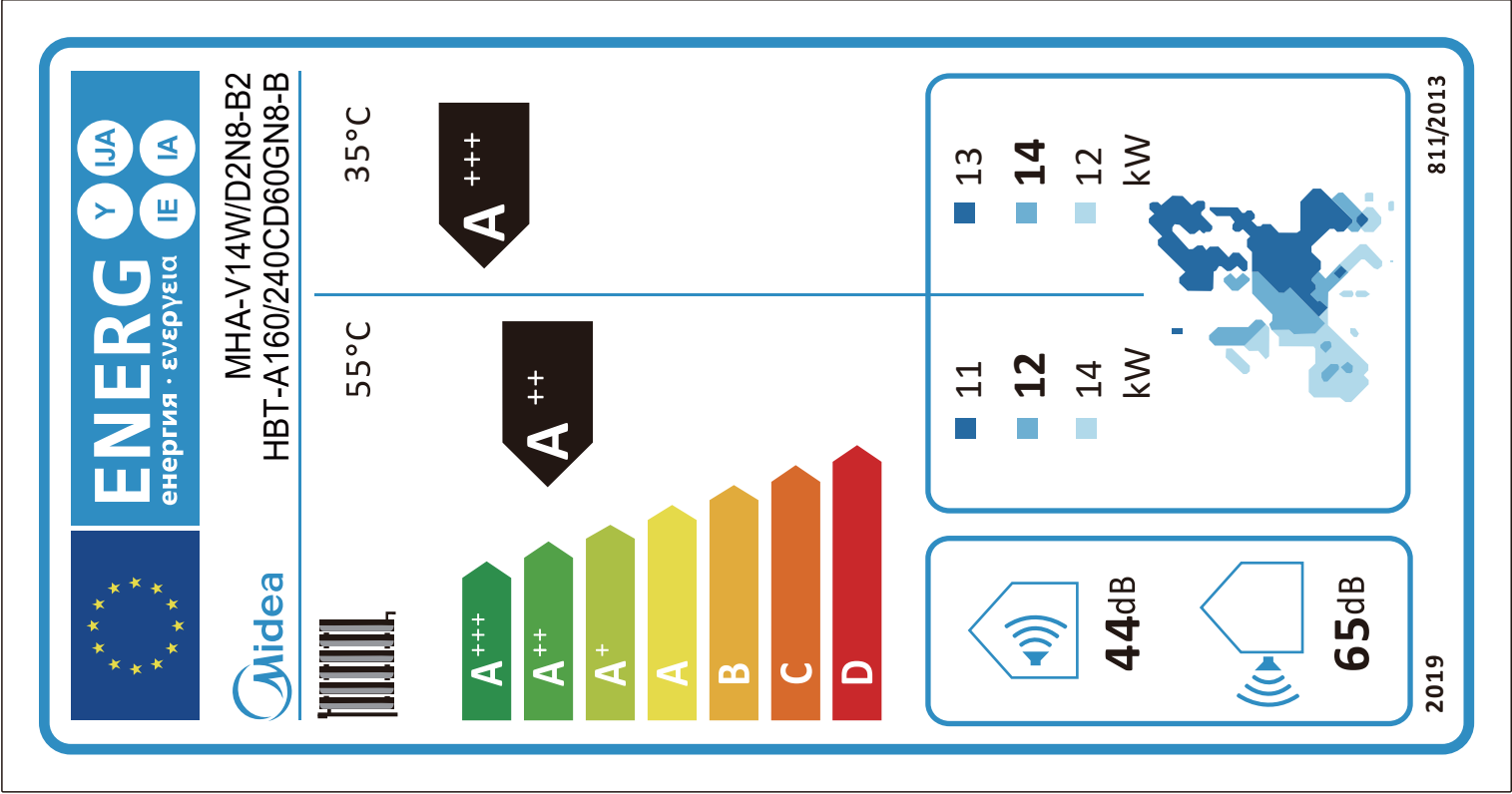












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Y IJA

IE IA

MHA-V14W/D2RN8-B2

HB-A160/CGN8-B

55°C

35°C

A+++

A++

A+

A

B

C

D

A+++

A++

43dB

65dB

11

12

14

13

14

12

kW

kW

2019

811/2013

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енергия · ενεργεια

Y IJA

IE IA

MHA-V14W/D2RN8-B2

HB-A160/CD30GN8-B

55°C

35°C

A+++

A++

A+

A

B

C

D

A+++

A++

43dB

65dB

11

12

14

13

14

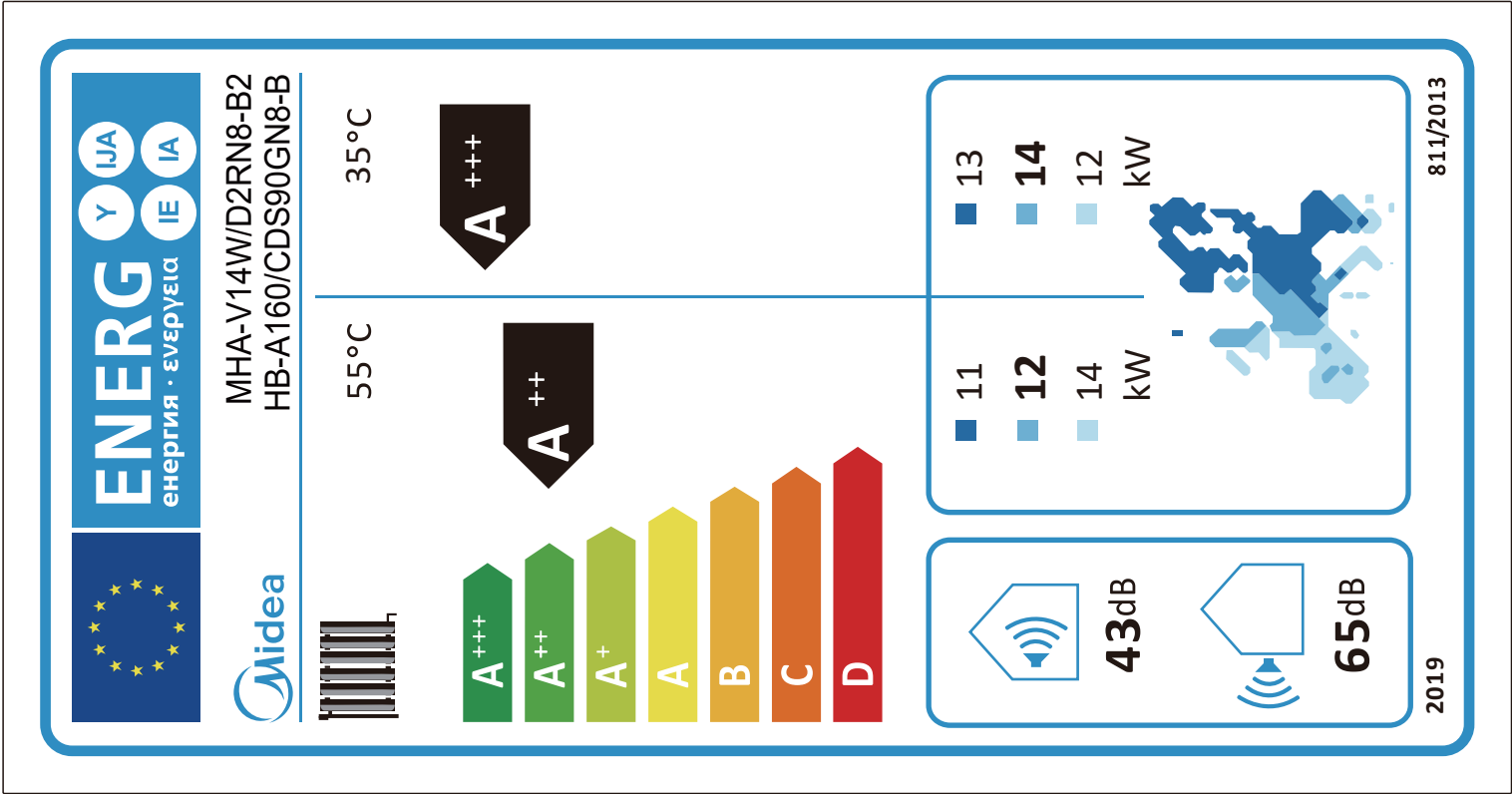
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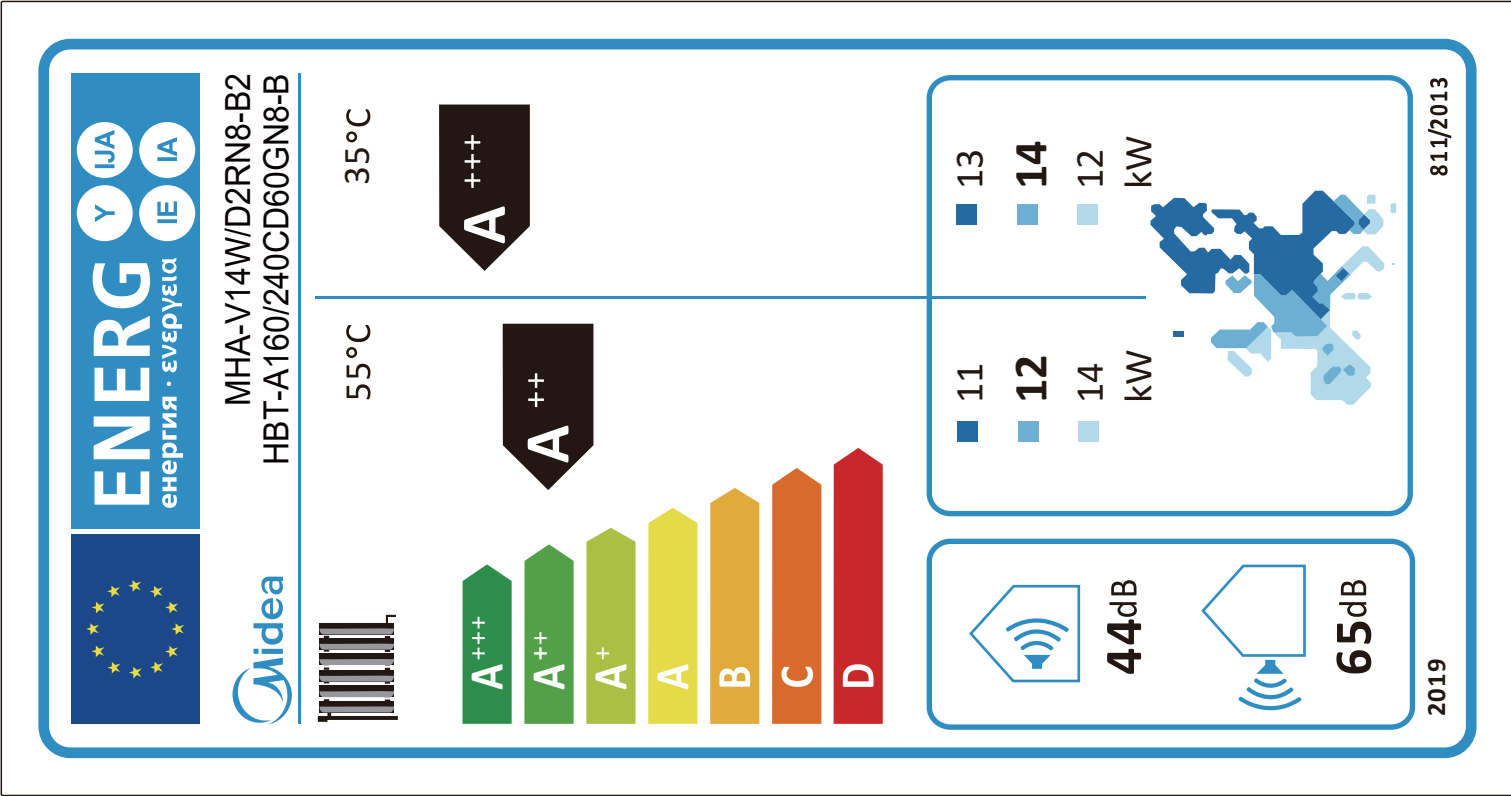
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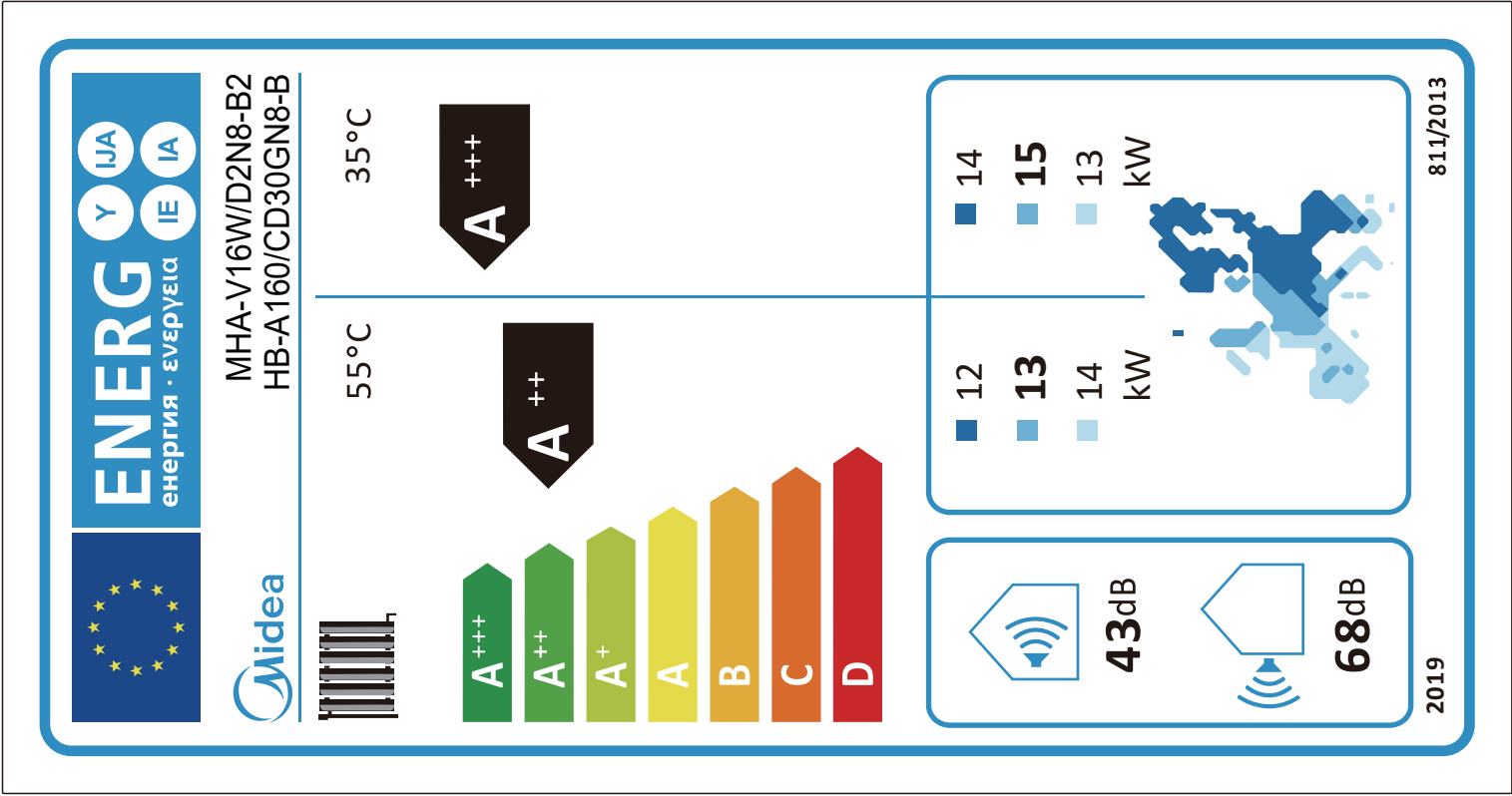
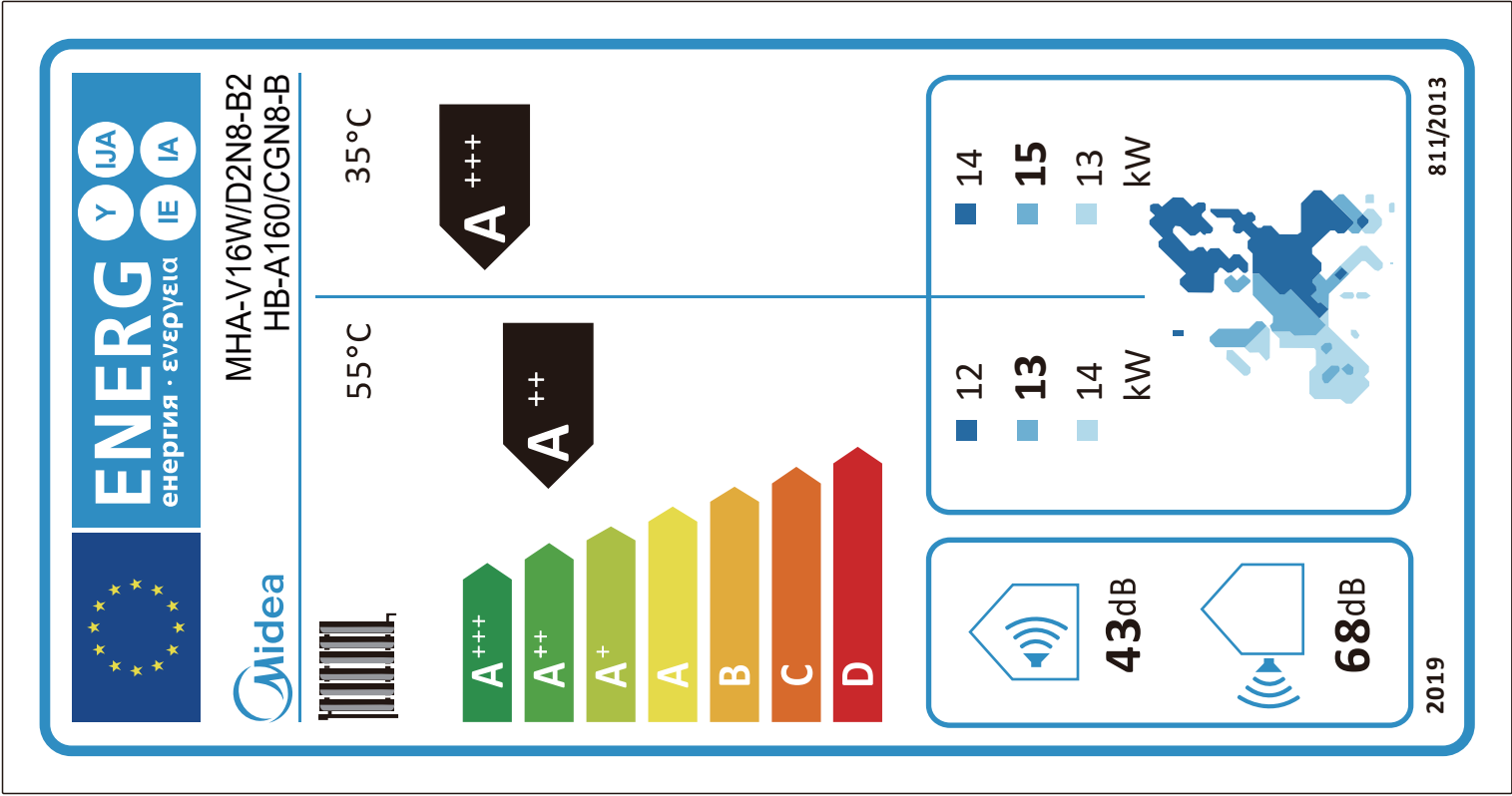
kW

2019

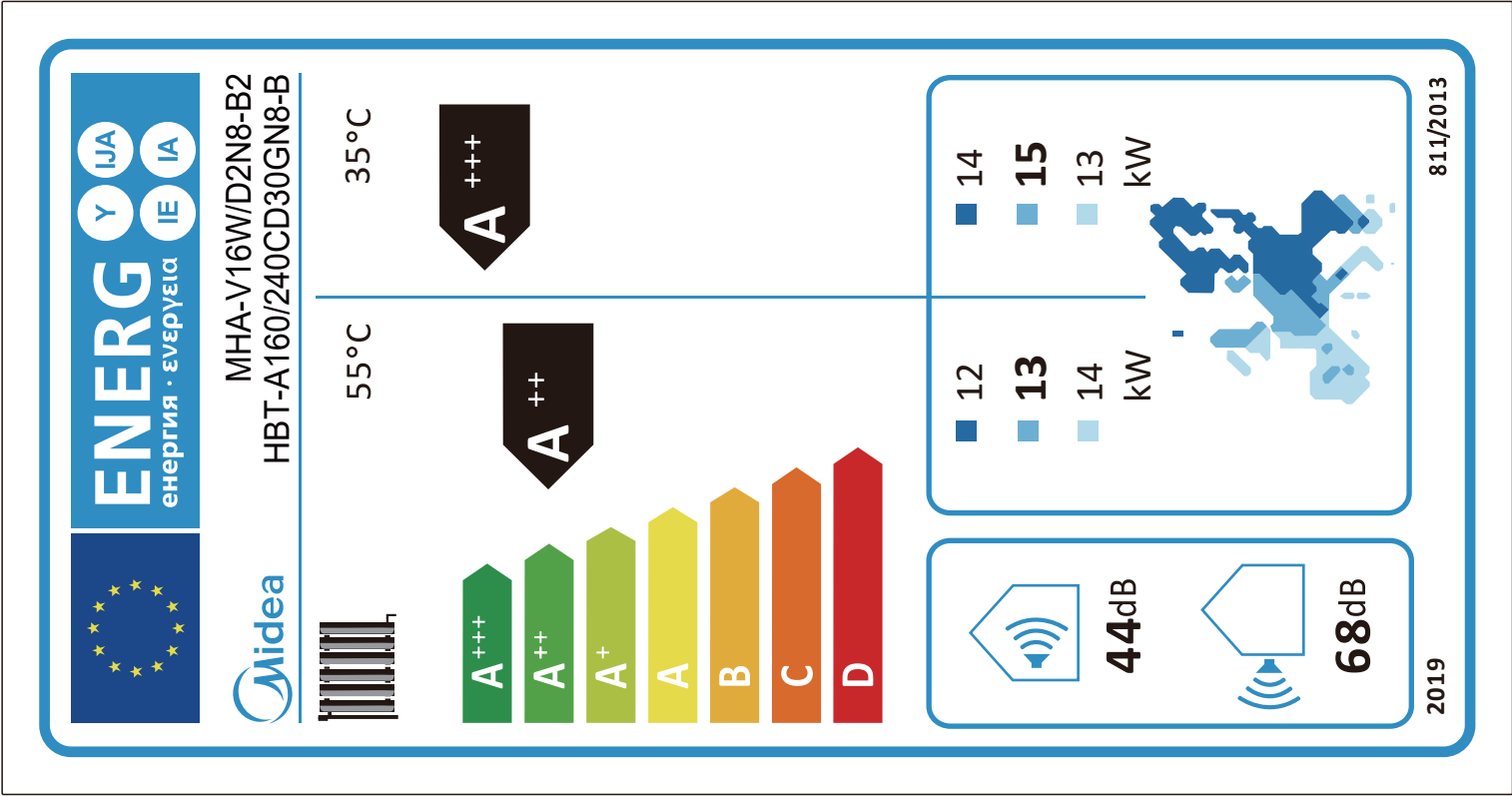
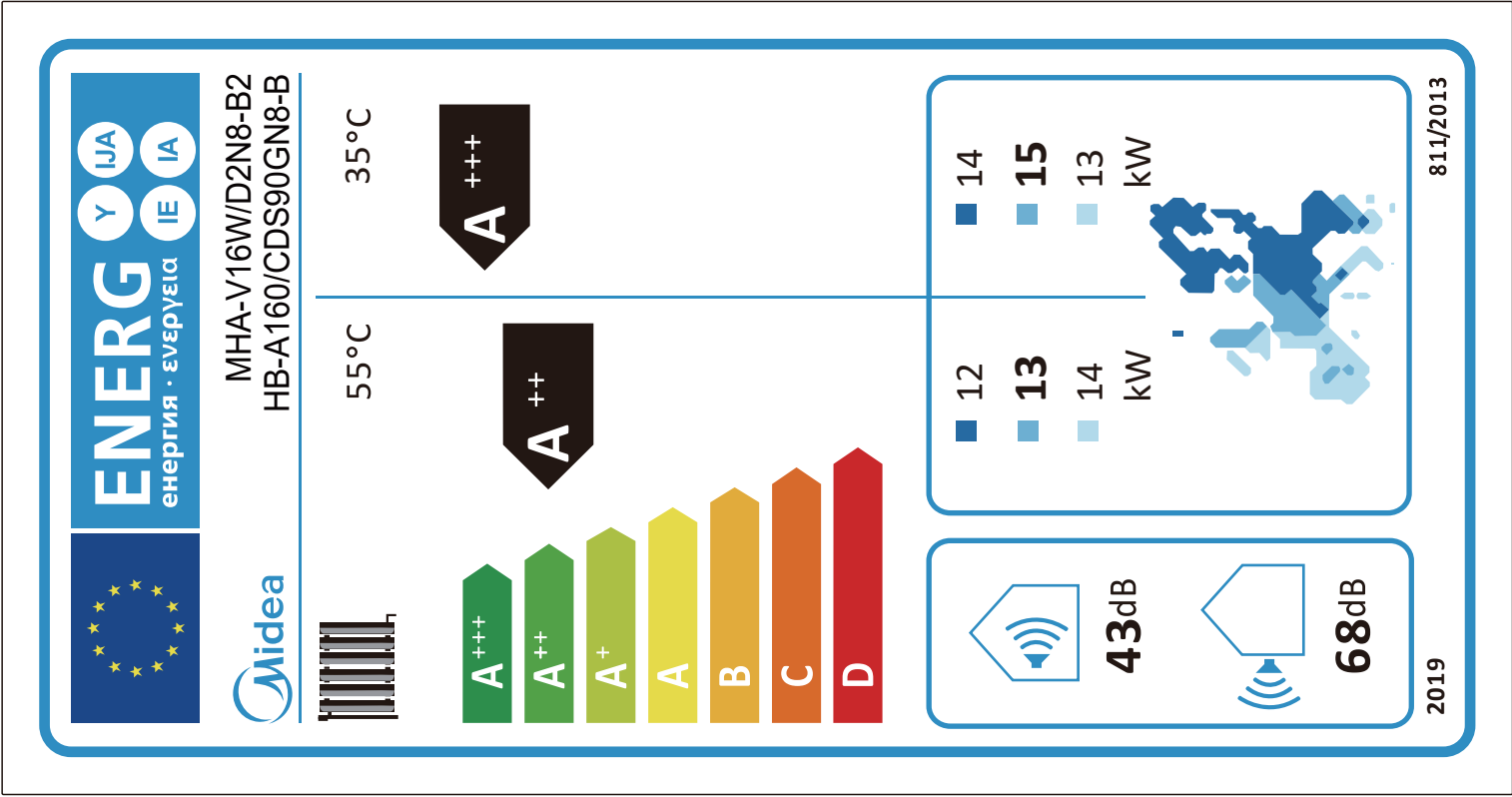
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Y IJA

IE IA



MHA-V16W/D2N8-B2  
HBT-A160/240CD60GN8-B



55°C

35°C

A+++

A++

A+

A


B

C


D

A+++

A++



44dB




68dB

1214151314


kW

141513

kW




2019811/2013




**ENERG**  
енергия · ενεργεια

Y IJA

IE IA



MHA-V16W/D2N8-B2  
HBT-A160/240CDS90GN8-B



55°C

35°C

A+++

A++

A+

A


B

C


D

A+++

A++



44dB




68dB

1214151314

kW

141513

kW



2019811/2013

76



ENERG

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MHA-V16W/D2RN8-B2  
HB-A160/CGN8-B



55°C

35°C

A<sup>+++</sup>

A<sup>++</sup>

A<sup>+</sup>

A

B

C

D

A<sup>+++</sup>

A<sup>++</sup>

A<sup>+++</sup>

A<sup>++</sup>



43dB



68dB

12

13

14

kW

14

15

13

kW



2019

811/2013



ENERG

енергия · ενεργεια



MHA-V16W/D2RN8-B2  
HB-A160/CD30GN8-B



55°C

35°C

A<sup>+++</sup>

A<sup>++</sup>

A<sup>+</sup>

A

B

C

D

A<sup>+++</sup>

A<sup>++</sup>



43dB



68dB

12

13

14

kW

14

15

13

kW



2019

811/2013



ENERG  
енергия · ενεργεια

Y IJA  
IE IA



MHA-V16W/D2RN8-B2  
HB-A160/CDS90GN8-B



55°C

35°C

A<sup>+++</sup>

A<sup>++</sup>

A<sup>+</sup>

A

B

C

D

A<sup>+++</sup>

A<sup>++</sup>



43dB



68dB

12 13 14 kW

14 15 13 kW



2019

811/2013



ENERG  
енергия · ενεργεια

Y IJA  
IE IA



MHA-V16W/D2RN8-B2  
HBT-A160/240CD30GN8-B



55°C

35°C

A<sup>+++</sup>

A<sup>++</sup>

A<sup>+</sup>

A

B

C

D

A<sup>+++</sup>

A<sup>++</sup>



44dB



68dB

12 13 14 kW

14 15 13 kW



2019

811/2013



ENERG  
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MHA-V16W/D2RN8-B2  
HBT-A160/240CD60GN8-B



55°C

35°C

A<sup>+++</sup>

A<sup>++</sup>

A<sup>+</sup>

A

B

C

D

A<sup>+++</sup>

A<sup>++</sup>



44dB



68dB

12

13

14

kW

14

15

13

kW



2019

811/2013



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MHA-V16W/D2RN8-B2  
HBT-A160/240CDS90GN8-B



55°C

35°C

A<sup>+++</sup>

A<sup>++</sup>

A<sup>+</sup>

A

B

C

D

A<sup>+++</sup>

A<sup>++</sup>



44dB



68dB

12

13

14

kW

14

15

13

kW



2019

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Outdoor unit	Indoor unit	Ambient Temperature: 35/24 Water temperature: 23/18			Ambient Temperature: 35/24 Water temperature: 12/7			Ambient Temperature: 7/6 Water temperature: 30/35			Ambient Temperature: 2/1 Water temperature: 30/35		
		Capacity kW	Power input kW	EER	Capacity kW	Power input kW	EER	Capacity kW	Power input kW	COP	Capacity kW	Power input kW	COP
MHA-V4W/D2N8-B2	HB-A60/C***GN8-B	4.50	0.81	5.55	4.70	1.36	3.45	4.25	0.82	5.20	4.45	1.10	4.05
	HBT-A100/190CD***GN8-B	4.50	0.81	5.55	4.70	1.36	3.45	4.25	0.82	5.20	4.45	1.10	4.05
	HBT-A100/240CD***GN8-B	4.50	0.81	5.55	4.70	1.36	3.45	4.25	0.82	5.20	4.45	1.10	4.05
MHA-V6W/D2N8-B2	HB-A60/C***GN8-B	6.55	1.34	4.90	7.00	2.33	3.00	6.20	1.24	5.00	5.50	1.39	3.95
	HBT-A100/190CD***GN8-B	6.55	1.34	4.90	7.00	2.33	3.00	6.20	1.24	5.00	5.50	1.39	3.95
	HBT-A100/240CD***GN8-B	6.55	1.34	4.90	7.00	2.33	3.00	6.20	1.24	5.00	5.50	1.39	3.95
MHA-V8W/D2N8-B2	HB-A100/C***GN8-B	8.40	1.66	5.05	7.40	2.19	3.38	8.30	1.60	5.20	7.10	1.73	4.10
	HBT-A100/190CD***GN8-B	8.40	1.66	5.05	7.40	2.19	3.38	8.30	1.60	5.20	7.10	1.73	4.10
	HBT-A100/240CD***GN8-B	8.40	1.66	5.05	7.40	2.19	3.38	8.30	1.60	5.20	7.10	1.73	4.10
MHA-V10W/D2N8-B2	HB-A100/C***GN8-B	10.00	2.08	4.80	8.20	2.48	3.30	10.00	2.00	5.00	8.20	2.02	4.05
	HBT-A100/190CD***GN8-B	10.00	2.08	4.80	8.20	2.48	3.30	10.00	2.00	5.00	8.20	2.02	4.05
	HBT-A100/240CD***GN8-B	10.00	2.08	4.80	8.20	2.48	3.30	10.00	2.00	5.00	8.20	2.02	4.05
MHA-V12W/D2N8-B2	HB-A160/C***GN8-B	12.00	3.00	4.00	11.60	4.22	2.75	12.10	2.44	4.95	9.30	2.35	3.95
	HBT-A160/240CD***GN8-B	12.00	3.00	4.00	11.60	4.22	2.75	12.10	2.44	4.95	9.30	2.35	3.95
	HBT-A160/240CD***GN8-B	12.00	3.00	4.00	11.60	4.22	2.75	12.10	2.44	4.95	9.30	2.35	3.95
MHA-V14W/D2N8-B2	HB-A160/C***GN8-B	13.50	3.74	3.61	12.70	4.98	2.55	14.50	3.09	4.70	11.40	3.12	3.65
	HBT-A160/240CD***GN8-B	13.50	3.74	3.61	12.70	4.98	2.55	14.50	3.09	4.70	11.40	3.12	3.65
	HBT-A160/240CD***GN8-B	13.50	3.74	3.61	12.70	4.98	2.55	14.50	3.09	4.70	11.40	3.12	3.65
MHA-V16W/D2N8-B2	HB-A160/C***GN8-B	14.20	3.94	3.61	14.00	5.71	2.45	16.00	3.56	4.50	13.00	3.71	3.50
	HBT-A160/240CD***GN8-B	14.20	3.94	3.61	14.00	5.71	2.45	16.00	3.56	4.50	13.00	3.71	3.50
	HBT-A160/240CD***GN8-B	14.20	3.94	3.61	14.00	5.71	2.45	16.00	3.56	4.50	13.00	3.71	3.50
MHA-V16W/D2RN8-B2	HB-A160/C***GN8-B	14.20	3.94	3.61	14.00	5.71	2.45	16.00	3.56	4.50	13.00	3.71	3.50
	HBT-A160/240CD***GN8-B	14.20	3.94	3.61	14.00	5.71	2.45	16.00	3.56	4.50	13.00	3.71	3.50
	HBT-A160/240CD***GN8-B	14.20	3.94	3.61	14.00	5.71	2.45	16.00	3.56	4.50	13.00	3.71	3.50

Outdoor unit	Indoor unit	Ambient Temperature: -7/-8 Water temperature: 30/35			Ambient Temperature: 7/6 Water temperature: 40/45			Ambient Temperature: 2/1 Water temperature: 40/45			Ambient Temperature: -7/-8 Water temperature: 40/45		
		Capacity kW	Power input kW	COP	Capacity kW	Power input kW	COP	Capacity kW	Power input kW	COP	Capacity kW	Power input kW	COP
MHA-V4W/D2N8-B2	HB-A60/C***GN8-B	4.80	1.52	3.15	4.35	1.14	3.80	5.10	1.70	3.00	4.30	1.83	2.35
	HBT-A100/190CD***GN8-B	4.80	1.52	3.15	4.35	1.14	3.80	5.10	1.70	3.00	4.30	1.83	2.35
	HBT-A100/240CD***GN8-B	4.80	1.52	3.15	4.35	1.14	3.80	5.10	1.70	3.00	4.30	1.83	2.35
MHA-V6W/D2N8-B2	HB-A60/C***GN8-B	6.10	2.00	3.05	6.35	1.69	3.75	5.80	1.93	3.00	5.40	2.25	2.40
	HBT-A100/190CD***GN8-B	6.10	2.00	3.05	6.35	1.69	3.75	5.80	1.93	3.00	5.40	2.25	2.40
	HBT-A100/240CD***GN8-B	6.10	2.00	3.05	6.35	1.69	3.75	5.80	1.93	3.00	5.40	2.25	2.40
MHA-V8W/D2N8-B2	HB-A100/C***GN8-B	7.10	2.18	3.25	8.20	2.08	3.95	7.40	2.28	3.25	6.60	2.59	2.55
	HBT-A100/190CD***GN8-B	7.10	2.18	3.25	8.20	2.08	3.95	7.40	2.28	3.25	6.60	2.59	2.55
	HBT-A100/240CD***GN8-B	7.10	2.18	3.25	8.20	2.08	3.95	7.40	2.28	3.25	6.60	2.59	2.55
MHA-V10W/D2N8-B2	HB-A100/C***GN8-B	8.25	2.62	3.15	10.00	2.63	3.80	7.85	2.45	3.20	7.35	2.88	2.55
	HBT-A100/190CD***GN8-B	8.25	2.62	3.15	10.00	2.63	3.80	7.85	2.45	3.20	7.35	2.88	2.55
	HBT-A100/240CD***GN8-B	8.25	2.62	3.15	10.00	2.63	3.80	7.85	2.45	3.20	7.35	2.88	2.55
MHA-V12W/D2N8-B2	HB-A160/C***GN8-B	10.00	3.33	3.00	12.30	3.24	3.80	10.70	3.57	3.00	10.20	4.25	2.40
	HBT-A100/240CD***GN8-B	10.00	3.33	3.00	12.30	3.24	3.80	10.70	3.57	3.00	10.20	4.25	2.40
	HBT-A160/240CD***GN8-B	10.00	3.33	3.00	12.30	3.24	3.80	10.70	3.57	3.00	10.20	4.25	2.40
MHA-V14W/D2N8-B2	HB-A160/C***GN8-B	12.00	4.29	2.80	14.20	3.89	3.65	11.70	4.09	2.86	11.80	5.02	2.35
	HBT-A160/240CD***GN8-B	12.00	4.29	2.80	14.20	3.89	3.65	11.70	4.09	2.86	11.80	5.02	2.35
	HBT-A160/240CD***GN8-B	12.00	4.29	2.80	14.20	3.89	3.65	11.70	4.09	2.86	11.80	5.02	2.35
MHA-V16W/D2N8-B2	HB-A160/C***GN8-B	13.30	4.93	2.70	16.00	4.44	3.60	12.80	4.49	2.85	12.90	5.78	2.23
	HBT-A160/240CD***GN8-B	13.30	4.93	2.70	16.00	4.44	3.60	12.80	4.49	2.85	12.90	5.78	2.23
	HBT-A160/240CD***GN8-B	13.30	4.93	2.70	16.00	4.44	3.60	12.80	4.49	2.85	12.90	5.78	2.23
MHA-V16W/D2RN8-B2	HB-A160/C***GN8-B	13.30	4.93	2.70	16.00	4.44	3.60	12.80	4.49	2.85	12.90	5.78	2.23
	HBT-A160/240CD***GN8-B	13.30	4.93	2.70	16.00	4.44	3.60	12.80	4.49	2.85	12.90	5.78	2.23
	HBT-A160/240CD***GN8-B	13.30	4.93	2.70	16.00	4.44	3.60	12.80	4.49	2.85	12.90	5.78	2.23

Outdoor unit	Indoor unit	Ambient Temperature: 7/6 Water temperature: 47/55			Ambient Temperature: 2/1 Water temperature: 47/55			Ambient Temperature: -7/-8 Water temperature: 47/55		
		Capacity kW	Power input kW	COP	Capacity kW	Power input kW	COP	Capacity kW	Power input kW	COP
MHA-V4W/D2N8-B2	HB-A60/C***GN8-B	4.40	1.49	2.95	5.10	2.08	2.45	4.00	2.05	1.95
	HBT-A100/190CD***GN8-B	4.40	1.49	2.95	5.10	2.08	2.45	4.00	2.05	1.95
	HBT-A100/240CD***GN8-B	4.40	1.49	2.95	5.10	2.08	2.45	4.00	2.05	1.95
MHA-V6W/D2N8-B2	HB-A60/C***GN8-B	6.00	2.00	3.00	5.65	2.31	2.45	5.15	2.58	2.00
	HBT-A100/190CD***GN8-B	6.00	2.00	3.00	5.65	2.31	2.45	5.15	2.58	2.00
	HBT-A100/240CD***GN8-B	6.00	2.00	3.00	5.65	2.31	2.45	5.15	2.58	2.00
MHA-V8W/D2N8-B2	HB-A100/C***GN8-B	7.50	2.36	3.18	7.10	2.73	2.60	6.15	3.00	2.05
	HBT-A100/190CD***GN8-B	7.50	2.36	3.18	7.10	2.73	2.60	6.15	3.00	2.05
	HBT-A100/240CD***GN8-B	7.50	2.36	3.18	7.10	2.73	2.60	6.15	3.00	2.05
MHA-V10W/D2N8-B2	HB-A100/C***GN8-B	9.50	3.06	3.10	8.10	3.16	2.56	6.85	3.43	2.00
	HBT-A100/190CD***GN8-B	9.50	3.06	3.10	8.10	3.16	2.56	6.85	3.43	2.00
	HBT-A100/240CD***GN8-B	9.50	3.06	3.10	8.10	3.16	2.56	6.85	3.43	2.00
MHA-V12W/D2N8-B2	HB-A160/C***GN8-B	12.00	3.87	3.10	11.40	4.47	2.55	10.00	4.88	2.05
	HBT-A160/240CD***GN8-B	12.00	3.87	3.10	11.40	4.47	2.55	10.00	4.88	2.05
	HBT-A160/240CD***GN8-B	12.00	3.87	3.10	11.40	4.47	2.55	10.00	4.88	2.05
MHA-V14W/D2N8-B2	HB-A160/C***GN8-B	13.80	4.60	3.00	12.40	5.06	2.45	11.00	5.37	2.05
	HBT-A160/240CD***GN8-B	13.80	4.60	3.00	12.40	5.06	2.45	11.00	5.37	2.05
	HBT-A160/240CD***GN8-B	13.80	4.60	3.00	12.40	5.06	2.45	11.00	5.37	2.05
MHA-V16W/D2N8-B2	HB-A160/C***GN8-B	16.00	5.52	2.90	13.40	5.58	2.40	12.50	6.19	2.02
	HBT-A160/240CD***GN8-B	16.00	5.52	2.90	13.40	5.58	2.40	12.50	6.19	2.02
	HBT-A160/240CD***GN8-B	16.00	5.52	2.90	13.40	5.58	2.40	12.50	6.19	2.02
MHA-V18W/D2N8-B2	HB-A160/C***GN8-B	16.00	5.52	2.90	13.40	5.58	2.40	12.50	6.19	2.02
	HBT-A160/240CD***GN8-B	16.00	5.52	2.90	13.40	5.58	2.40	12.50	6.19	2.02
	HBT-A160/240CD***GN8-B	16.00	5.52	2.90	13.40	5.58	2.40	12.50	6.19	2.02



# ErP Information

Fan Types	Axial fan		
Directive (or Standard) for Regulation		ErP Directive 2009/125/EC COMMISSION REGULATION (EU) No 327/2011	
Model Name	WZDK170-38G-1+ ZL-580*190*15-3	Rev.	
Prepare by			

Specified Information of Fan:

No.	Information Item	Comment
1	$\eta_{\text{target}} =$	29.1%
2	Overall efficiency ( $\eta_e$ ) =	33.1%
3	Pass or not (Criteria: $\eta_e \geq \eta_{\text{target}}$ )	Pass
4	Measurement category (A-D)	A
5	Efficiency category (static or total)	Static
6	Efficiency grade at optimum energy efficiency point	N =43.9
7	VSD is integrated within the fan	YES
8	Year of Manufacture	Ref. to the Unit Nameplate
9	Manufacturer's name and place of manufacture	Ref. to the Unit Nameplate
10.1	Rated motor power input(s) (kW), at optimum energy efficiency	0.190kw
10.2	Rated motor flow rate(s) at optimum energy efficiency	1.368m <sup>3</sup> /s
10.3	Rated motor pressure(s) at optimum energy efficiency	40Pa
11	Rotations per minute (R.P.M)at the optimum energy efficiency point	800r/min
12	Specific ratio	1.001
13	Information relevant for facilitating disassembly, recycling or disposal at end-of-life	all materials can be recycled
14	Information relevant to minimize impact on the environment and ensure optimal life expectancy as regards installation, use and maintenance of the fan	For installation, the clearance of 500 mm shall be kept from inlet
15	Description of additional items used when determining the fan energy efficiency,such as ducts, that are not described in the measurement category and not supplied with the fan.	Measure ment category A, fan is free inlet and outlet conditions
16	Motor manufacturer	NIDEC SHIBAURA (ZHEJIANG) CORP.

# ErP Information

Fan Types	Axial fan		
Directive (or Standard) for Regulation		ErP Directive 2009/125/EC COMMISSION REGULATION (EU) No 327/2011	
Model Name	WZDK170-38G-1+ ZL-580*190*15-3	Rev.	
Prepare by			

Specified Information of Fan:

No.	Information Item	Comment
1	$\eta_{\text{target}} =$	29.1%
2	Overall efficiency ( $\eta_e$ ) =	33.7%
3	Pass or not (Criteria: $\eta_e \geq \eta_{\text{target}}$ )	Pass
4	Measurement category (A-D)	A
5	Efficiency category (static or total)	Static
6	Efficiency grade at optimum energy efficiency point	N =44.6
7	VSD is integrated within the fan	YES
8	Year of Manufacture	Ref. to the Unit Nameplate
9	Manufacturer's name and place of manufacture	Ref. to the Unit Nameplate
10.1	Rated motor power input(s) (kW), at optimum energy efficiency	0.186kw
10.2	Rated motor flow rate(s) at optimum energy efficiency	1.37m <sup>3</sup> /s
10.3	Rated motor pressure(s) at optimum energy efficiency	40Pa
11	Rotations per minute (R.P.M)at the optimum energy efficiency point	800r/min
12	Specific ratio	1.001
13	Information relevant for facilitating disassembly, recycling or disposal at end-of-life	all materials can be recycled
14	Information relevant to minimize impact on the environment and ensure optimal life expectancy as regards installation, use and maintenance of the fan	For installation, the clearance of 500 mm shall be kept from inlet
15	Description of additional items used when determining the fan energy efficiency,such as ducts, that are not described in the measurement category and not supplied with the fan.	Measurement category A, fan is free inlet and outlet conditions
16	Motor manufacturer	GUANGDONG WELLING MOTOR MANUFACTURING CO.,LTD.

# ErP Information

Fan Types	Axial fan		
Directive (or Standard) for Regulation		ErP Directive 2009/125/EC COMMISSION REGULATION (EU) No 327/2011	
Model Name	WZDK170-38G-1+ ZL-580*190*15-3	Rev.	
Prepare by			

Specified Information of Fan:

No.	Information Item	Comment
1	$\eta_{\text{target}} =$	29.0%
2	Overall efficiency ( $\eta_e$ ) =	34.6%
3	Pass or not (Criteria: $\eta_e \geq \eta_{\text{target}}$ )	Pass
4	Measurement category (A-D)	A
5	Efficiency category (static or total)	Static
6	Efficiency grade at optimum energy efficiency point	N =4.57
7	VSD is integrated within the fan	YES
8	Year of Manufacture	Ref. to the Unit Nameplate
9	Manufacturer's name and place of manufacture	Ref. to the Unit Nameplate
10.1	Rated motor power input(s) (kW), at optimum energy efficiency	0.180kw
10.2	Rated motor flow rate(s) at optimum energy efficiency	1.378m <sup>3</sup> /s
10.3	Rated motor pressure(s) at optimum energy efficiency	40Pa
11	Rotations per minute (R.P.M)at the optimum energy efficiency point	800r/min
12	Specific ratio	1.001
13	Information relevant for facilitating disassembly, recycling or disposal at end-of-life	all materials can be recycled
14	Information relevant to minimize impact on the environment and ensure optimal life expectancy as regards installation, use and maintenance of the fan	For installation, the clearance of 500 mm shall be kept from inlet
15	Description of additional items used when determining the fan energy efficiency,such as ducts, that are not described in the measurement category and not supplied with the fan.	Measurement category A, fan is free inlet and outlet conditions
16	Motor manufacturer	Panasonic Motor (HangZhou) CO.,LTD



印刷技术要求

材质	封面铜板纸105g，内页80g双胶纸
规格	210*297(胶装，双面打印，沿短边装订)
颜色	彩色
其他	

设计更改记录表（仅做说明用，不做菲林）

版本升级	更改人	更改日期	更改主要内容	涉及更改页面 (印刷页码)
V. A-V. B	钟永华	2024. 1. 16	见附件修改记录表	见附件修改记录表

颜色标注, 请参照下图:

