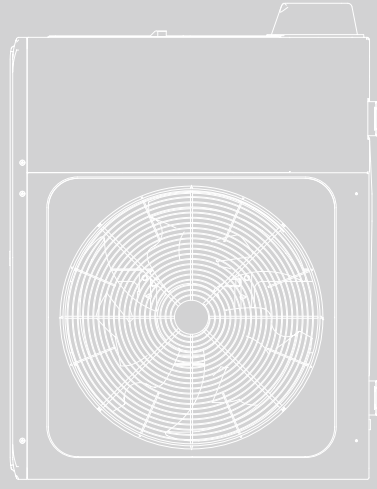


TECHNICAL DATA MANUAL AND ENERGY EFFICIENCY

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		Energy efficiency class							
		MHA-V4W/D2N8-B HBT-A100/190CD***GN8-B	MHA-V4W/D2N8-B HBT-A100/240CD***GN8-B	MHA-V6W/D2N8-B HBT-A100/190CD***GN8-B	MHA-V6W/D2N8-B HBT-A100/240CD***GN8-B	MHA-V8W/D2N8-B HBT-A100/190CD***GN8-B	MHA-V8W/D2N8-B HBT-A100/240CD***GN8-B	MHA-V10W/D2N8-B HBT-A100/190CD***GN8-B	MHA-V10W/D2N8-B HBT-A100/240CD***GN8-B
Indoor unit sound power(*)	Outdoor								
Outdoor unit sound power(*)	Indoor								
Water heating	dB	38	38	38	38	40	40	40	40
Space heating	dB	56	56	58	58	59	59	60	60
Declared load profile	-	L	XL	L	XL	L	XL	L	XL
Energy efficiency class	-	A+	A+	A+	A+	A+	A+	A+	A+
Energy efficiency class at 55 °C (High temp. app.)	-	A++	A++	A++	A++	A++	A++	A++	A++
Average climate									
Water heating	Water heating energy efficiency (η_{wh})	127	136	127	136	125	137	125	135
Space heating	Annual electricity consumption (AEC)	801	1229	801	1229	820	1218	820	820
	P_{elec} (declared heating capacity)@-10 °C	4.4	4.4	5.7	5.7	6.6	6.6	7.7	7.7
	Seasonal space heating efficiency (η_s)	129.5	129.5	137.9	137.9	131.5	131.5	136.6	136.6
	Annual energy consumption	2744	2744	3345	3345	4056	4056	4539	4539
Off-peak operation function integrated in heat pump	Y/N	Y	Y	Y	Y	Y	Y	Y	Y
Colder climate									
Water heating	Water heating energy efficiency (η_{wh})	102	107	102	107	107	111	107	107
Space heating	Annual energy consumption	998	1561	998	1561	950	1508	950	950
	P_{elec} (declared heating capacity)@-22 °C	3.36	3.36	4.26	4.26	5.77	5.77	6.71	6.71
	Seasonal space heating efficiency (η_s)	102.1	102.1	111.1	111.1	112.0	112.0	116.4	116.4
	Annual energy consumption	3159	3159	3681	3681	4950	4950	5540	5540
Warmer climate									
Water heating	Water heating energy efficiency (η_{wh})	157	174	157	174	151	171	151	151
Space heating	Annual energy consumption	649	963	649	963	675	977	675	675
	P_{elec} (declared heating capacity)@2 °C	5.01	5.01	5.14	5.14	8.37	8.37	8.63	8.63
	Seasonal space heating efficiency (η_s)	162.4	162.4	164.7	164.7	176.9	176.9	180.3	180.3
	Annual energy consumption	1621	1621	1640	1640	2485	2485	2516	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	4030	4030	4030	4030
Brine/water-to-water heat pump	Rated brine/water flow (outdoor H/E)	[m³/h]	-	-	-	-	-	-	-

Heat pump combination heater									
Indoor unit sound power(*)	Outdoor		MHA-V10W/D2N8-B	MHA-V12W/D2N8-B	MHA-V16W/D2RN8-B	MHA-V14W/D2RN8-B	MHA-V16W/D2N8-B	MHA-V16W/D2RN8-B	MHA-V16W/D2RN8-B
	Indoor	dB	HBT-A100/240CD***GN8-B	HBT-A160/240CD***GN8-B	HBT-A160/240CD***GN8-B	HBT-A160/240CD***GN8-B	HBT-A160/240CD***GN8-B	HBT-A160/240CD***GN8-B	HBT-A160/240CD***GN8-B
Outdoor unit sound power(*)	dB		40	42	42	44	44	44	44
Water heating	dB		60	64	64	65	68	68	68
Declared load profile	-		XL	XL	XL	XL	XL	XL	XL
Energy efficiency class	-		A+	A+	A+	A+	A+	A+	A+
Energy efficiency class at 55°C (High temp. app.)	-		A++	A++	A++	A++	A++	A++	A++
Average climate									
Water heating		[%]	137	123	123	123	123	123	123
Annual electricity consumption (AEC)		[kWh]	1218	1360	1360	1360	1360	1360	1360
P _{rated} (declared heating capacity)@-10°C		[kW]	7.7	11.6	11.6	12.1	12.1	13.0	13.0
Seasonal space heating efficiency(η _s)		[%]	136.6	135.1	135.1	135.6	133.3	133.2	133.2
Annual energy consumption		[kWh]	4539	6927	6928	7202	7203	7895	7896
Off-peak operation function integrated in heat pump		Y/N	Y	Y	Y	Y	Y	Y	Y
Colder climate									
Water heating		[%]	111	92	92	92	92	92	92
Annual energy consumption		[kWh]	1508	1822	1822	1822	1822	1822	1822
P _{rated} (declared heating capacity)@-22°C		[kW]	6.71	10.31	10.3	10.96	11	11.8	11.8
Seasonal space heating efficiency(η _s)		[%]	116.4	117.8	117.7	118.9	118.9	121.8	121.8
Annual energy consumption		[kWh]	5540	8419	8420	8866	8867	9309	9310
Warmer climate									
Water heating		[%]	171	153	153	153	153	153	153
Annual energy consumption		[kWh]	977	1088	1088	1088	1088	1088	1088
P _{rated} (declared heating capacity)@2°C		[kW]	8.63	12.5	12.5	14.17	14.17	14.17	14.17
Seasonal space heating efficiency(η _s)		[%]	180.3	174.0	173.8	174.9	174.7	176.0	175.8
Annual energy consumption		[kWh]	2516	3776	3780	4258	4262	4231	4236
Ecodesign technical data									
Product description		Y/N	Y	Y	Y	Y	Y	Y	Y
Air-to-water heat pump		Y/N	N	N	N	N	N	N	N
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		[m³/h]	4030	4060	4060	4060	4060	4650	4650
Brine/water-to-water heat pump		[m³/h]	-	-	-	-	-	-	-

Heat pump combination heater		Outdoor		MHA-V4W/D2N8-B	MHA-V4W/D2N8-B	MHA-V6W/D2N8-B	MHA-V6W/D2N8-B	MHA-V8W/D2N8-B	MHA-V8W/D2N8-B	MHA-V10W/D2N8-B
		Inoor		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
Capacity control		-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
P _{off} (Power consumption Off mode)		[kW]	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014
P _b (Power consumption Thermostat off mode)		[kW]	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024
P _{sb} (Power consumption standby mode)		[kW]	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014
P _{ck} (Power crankcase heater model)		[kW]	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
O _{elec} (Daily electricity consumption)		[kWh]	3.66	5.71	3.66	5.71	3.66	5.71	3.66	5.71
O _{fuel} (Daily fuel consumption)		[kWh]	-	-	-	-	-	-	-	-
Part load conditions space heating average climate										
P _{ah} (declared heating capacity)		[kW]	3.89	3.89	5.04	5.04	5.04	5.84	5.84	6.78
COP _d (declared COP)		-	2.17	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	0.90
P _{ah} (declared heating capacity)		[kW]	2.38	2.38	3.12	3.12	3.12	3.76	3.76	4.28
COP _d (declared COP)		-	3.30	3.30	3.51	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	0.90
P _{ah} (declared heating capacity)		[kW]	2.94	2.94	2.08	2.08	2.08	2.43	2.43	2.77
COP _d (declared COP)		-	4.41	4.41	4.54	4.54	4.54	4.34	4.34	4.52
Cdh (degradation coefficient)		-	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
P _{ah} (declared heating capacity)		[kW]	1.32	1.32	1.28	1.28	1.28	1.39	1.39	1.58
COP _d (declared COP)		-	5.66	5.66	5.66	5.66	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	0.90
Tol (Temperature Operating Limit)		[°C]	-10	-10	-10	-10	-10	-10	-10	-10
P _{ah} (declared heating capacity)		[kW]	3.42	3.42	4.52	4.52	4.52	4.91	4.91	5.38
COP _d (declared COP)		-	1.91	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	65
T _{bw}		[°C]	-7	-7	-7	-7	-7	-7	-7	-7
P _{ah} (declared heating capacity)		[kW]	3.89	3.89	5.04	5.04	5.04	5.84	5.84	6.78
COP _d (declared COP)		-	2.17	2.17	2.17	2.17	2.17	2.16	2.16	2.24
P _{sub} back-up heater (@ Tdesignh: -10°C)		[kW]	3/6/9	3/6/9	3/6/9	3/6/9	3/6/9	3/6/9	3/6/9	3/6/9
P _{sub} (@ Tdesignh: -10°C)		[kW]	0.98	0.98	1.18	1.18	1.18	1.69	1.69	2.28

Heat pump combination heater									
		Capacity control	MHA-V10W/D2N8-B HBT-A100/240CD***GN8-B	MHA-V12W/D2N8-B HBT-A160/240CD***GN8-B	MHA-V14W/D2N8-B HBT-A160/240CD***GN8-B	MHA-V14W/D2RN8-B HBT-A160/240CD***GN8-B	MHA-V16W/D2N8-B HBT-A160/240CD***GN8-B	MHA-V16W/D2RN8-B HBT-A160/240CD***GN8-B	MHA-V18W/D2RN8-B HBT-A180/240CD***GN8-B
Outdoor	Indoor	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	[kW]		0.014	0.014	0.014	0.020	0.014	0.014	0.020
Other	[kW]		0.024	0.024	0.024	0.030	0.024	0.024	0.030
	[kW]		0.014	0.014	0.014	0.020	0.014	0.014	0.020
	[kW]		0.000	0.000	0.000	0.000	0.000	0.000	0.000
	[kW/h]		5.67	6.35	6.35	6.35	6.35	6.35	6.35
	[kW/h]		-	-	-	-	-	-	-
Part load conditions space heating average climate									
(A) condition (7°C)	[kW]		6.78	10.24	10.24	10.68	10.68	11.52	11.52
	-		2.24	2.01	2.01	2.01	2.01	1.99	1.99
	-		0.90	0.90	0.90	0.90	0.90	0.90	0.90
	[kW]		4.28	6.52	6.52	6.86	6.86	7.18	7.18
(B) condition (2°C)	-		3.42	3.44	3.44	3.43	3.43	3.34	3.34
	-		0.90	0.90	0.90	0.90	0.90	0.90	0.90
	[kW]		2.77	4.36	4.36	4.63	4.63	4.67	4.67
(C) condition (7°C)	-		4.52	4.59	4.59	4.66	4.66	4.61	4.61
	-		0.90	0.90	0.90	0.90	0.90	0.90	0.90
	[kW]		1.58	3.29	3.29	3.31	3.31	3.32	3.32
(D) condition (12°C)	-		5.68	6.05	6.05	6.13	6.13	6.07	6.07
	-		0.90	0.90	0.90	0.90	0.90	0.90	0.90
	[°C]		-10	-10	-10	-10	-10	-10	-10
(E) Tol (Temperature Operating Limit)	[kW]		5.38	9.1	9.1	9.19	9.19	10.33	10.33
	-		1.83	1.79	1.79	1.76	1.76	1.80	1.80
	[°C]		65	65	65	65	65	65	65
	[°C]		-7	-7	-7	-7	-7	-7	-7
(F) Trivalent Temperature	[kW]		6.78	10.27	10.27	10.68	10.68	11.52	11.52
	-		2.24	2.01	2.01	2.01	2.01	1.99	1.99
Capacity of the back-up heater integrated in the unit	[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_design	[kW]		2.28	2.5	2.5	2.91	2.91	2.67	2.67

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-A100/190CD90GN8-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-A100/190CD90GN8-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-A160/240CD90GN8-B: 240L tank with 9kW back-up heater and 3-Phase Source.

Note:

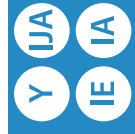
Details and precautions on installation, maintenance and assembly can be found in the installation and or operation manuals.

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

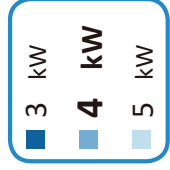
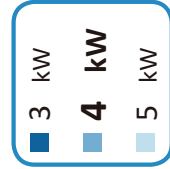
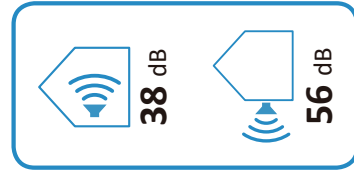
This data is for comparison of Energy efficiencies according to Energy label directive 2010/30/EU, for correct selection of products for your application, contact your dealer.
Depending on your application and the product selected an additional supplementary heater may have to be installed.



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



2019

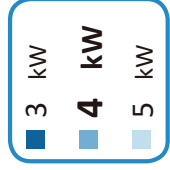
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MHA-V4W/D2N8-B
HBT-A100/190CD60GN8-B

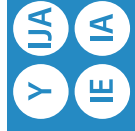


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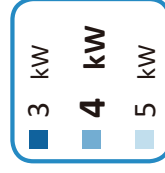
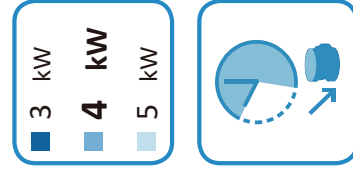
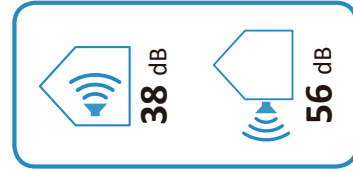
Midea

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



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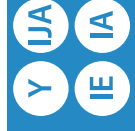


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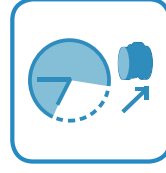
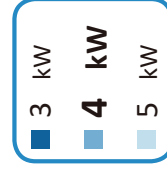
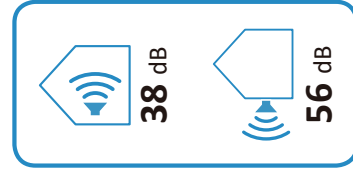
Midea

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



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Y IJA
IE IA

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














38 dB



56 dB









2019


811/2013





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Y IJA
IE IA


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











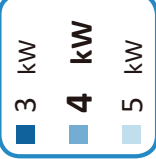







38 dB



56 dB





2019

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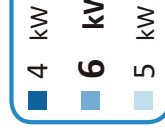
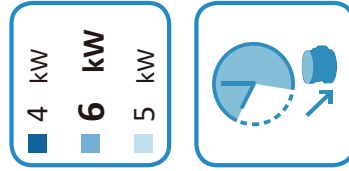
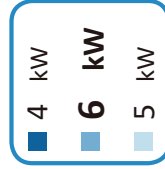
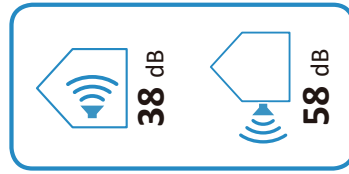
MHA-V6W/D2N8-B
HBT-A100/190CD30GN8-B



A++



A+



2019

811/2013



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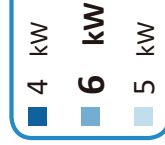
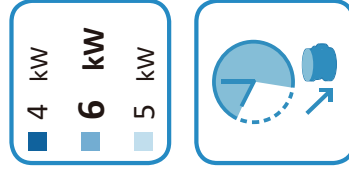
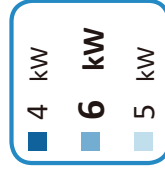
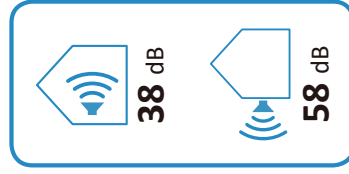
MHA-V6W/D2N8-B
HBT-A100/190CD60GN8-B



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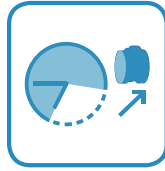
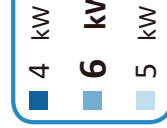
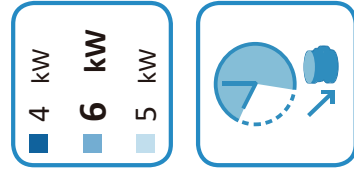
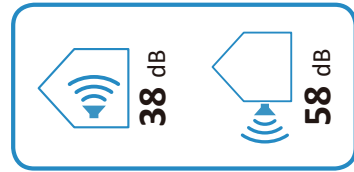
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HBT-A100/190CDS90GN8-B



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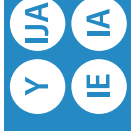


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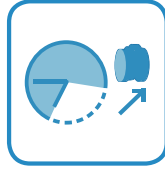
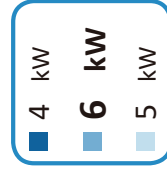
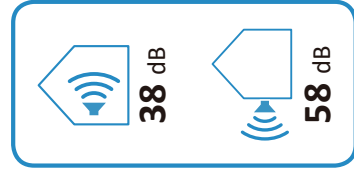
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HBT-A100/240CD30GN8-B



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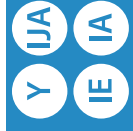


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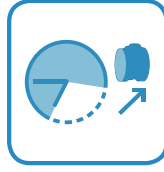
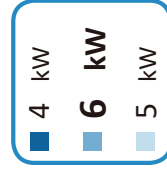
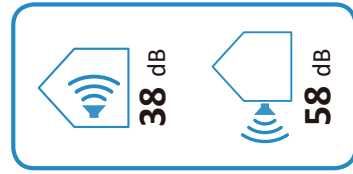


MHA-V6W/D2N8-B
HBT-A100/240CD60GN8-B



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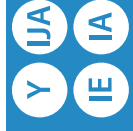


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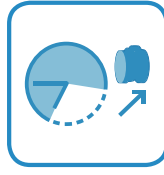
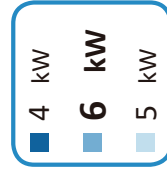
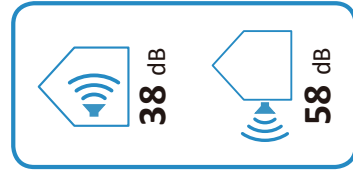


MHA-V6W/D2N8-B
HBT-A100/240CDS90GN8-B



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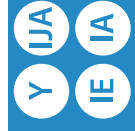


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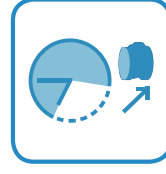
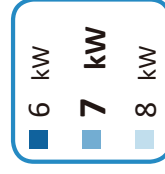
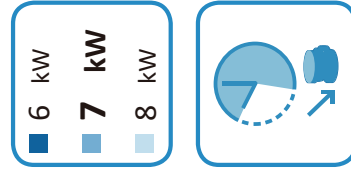
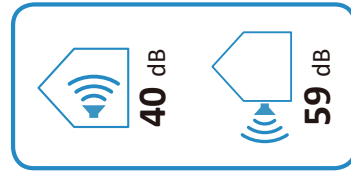
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HBT-A100/190CD30GN8-B



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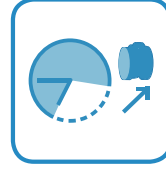
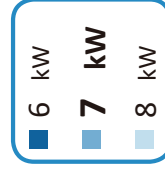
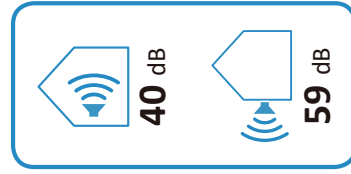
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MHA-V8W/D2N8-B
HBT-A100/190CD60GN8-B



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



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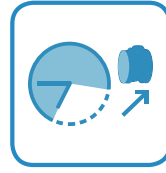
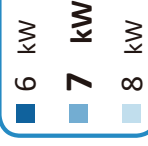
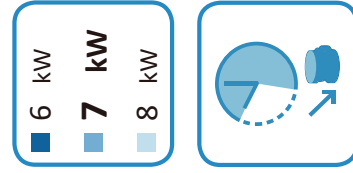
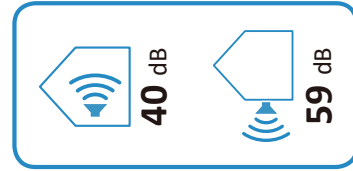
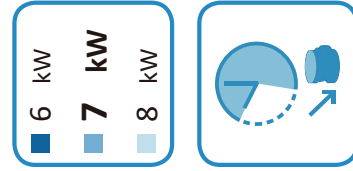
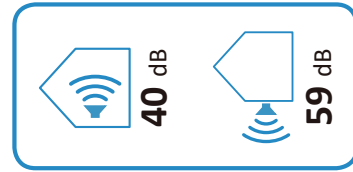
MHA-V8W/D2N8-B
HBT-A100/240CD30GN8-B



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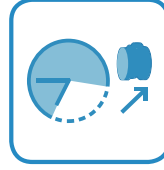
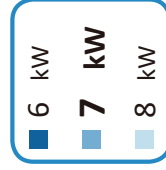
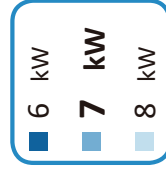
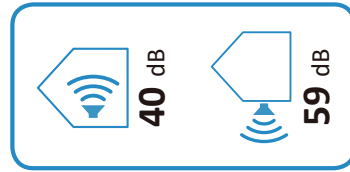


MHA-V8W/D2N8-B
HBT-A100/240CD60GN8-B



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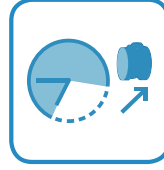
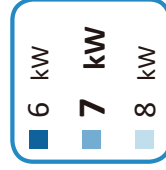
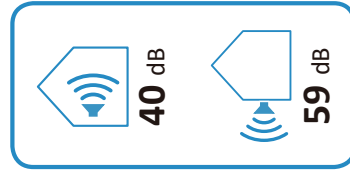


MHA-V8W/D2N8-B
HBT-A100/240CDS90GN8-B



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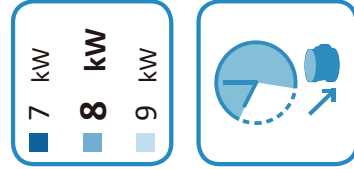
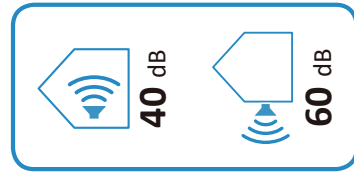
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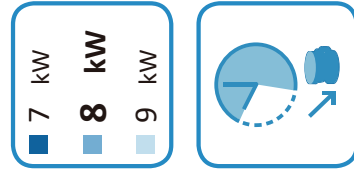
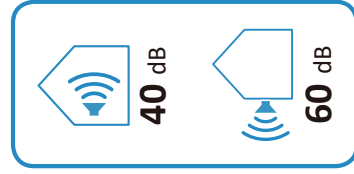
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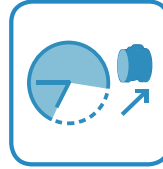
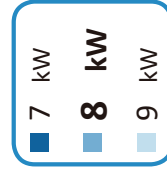
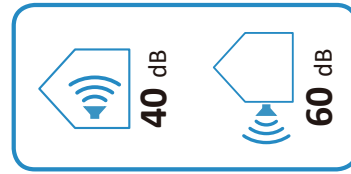
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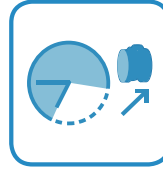
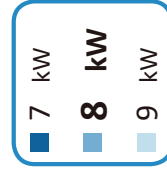
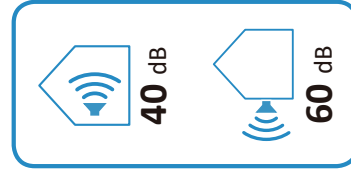
MHA-V10W/D2N8-B
HBT-A100/240CD30GN8-B



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Midea

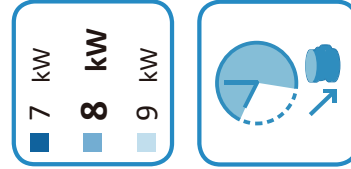
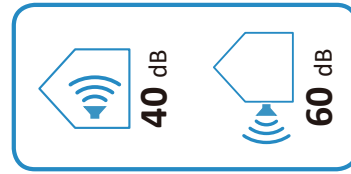
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Midea

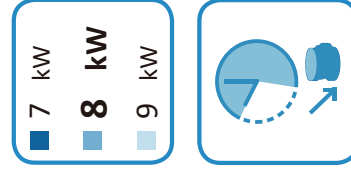
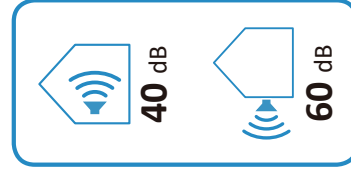
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HBT-A100/240CDS90GN8-B



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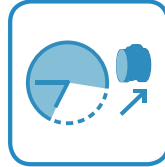
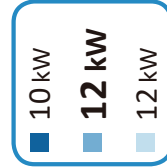
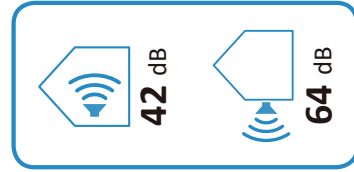
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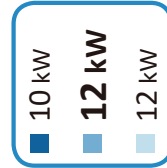
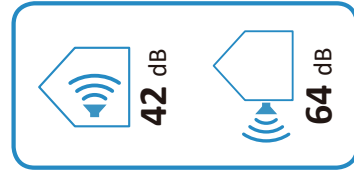
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HBT-A160/240CD60GN8-B



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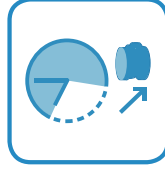
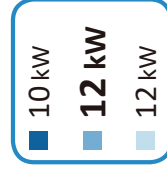
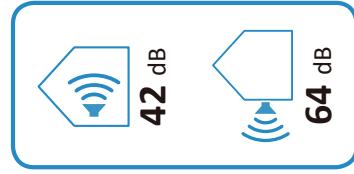
MHA-V12W/D2N8-B
HBT-A160/240CDS90GN8-B



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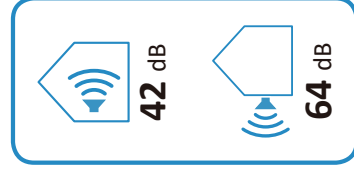
MHA-V12W/D2RN8-B
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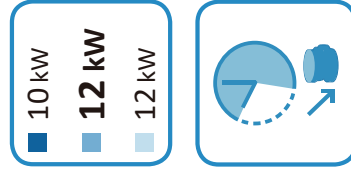
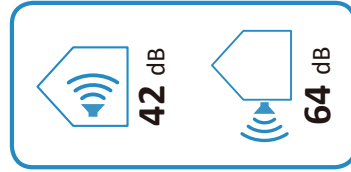
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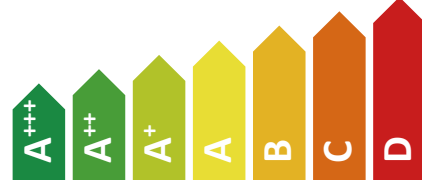
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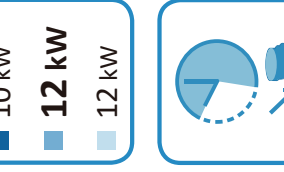
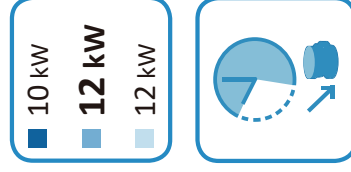
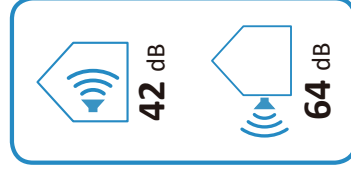
MHA-V12W/D2RN8-B
HBT-A160/240CDS90GN8-B



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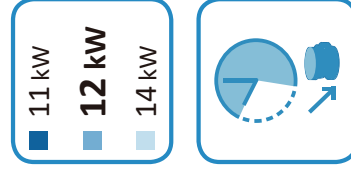
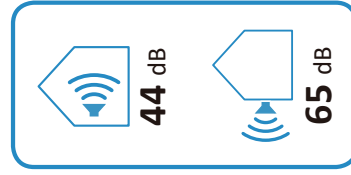
MHA-V14W/D2N8-B
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Y IJA
IE IA



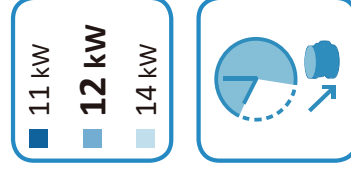
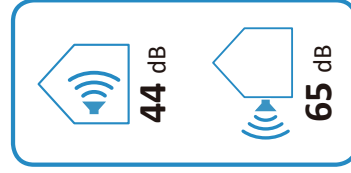
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HBT-A160/240CD60GN8-B



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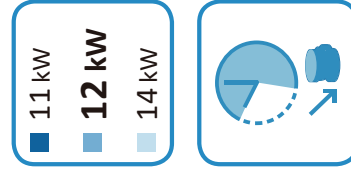
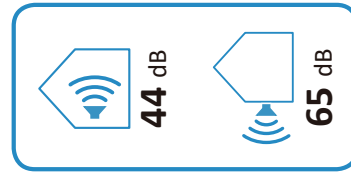
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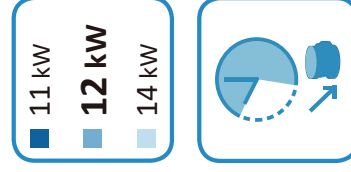
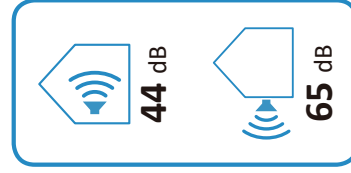
MHA-V14W/D2RN8-B
HBT-A160/240CD30GN8-B



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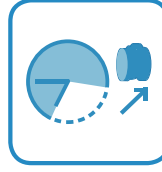
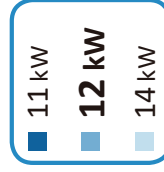
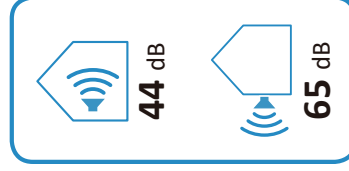
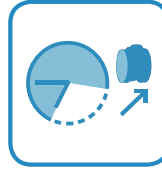
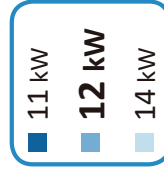
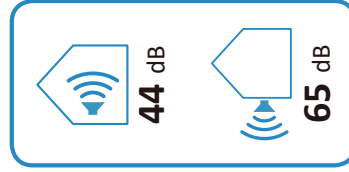
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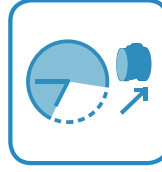
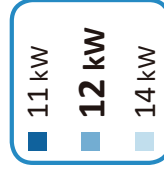
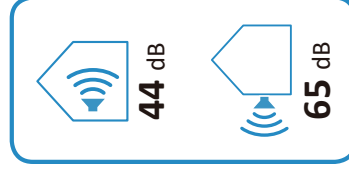
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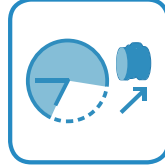
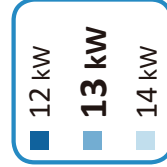
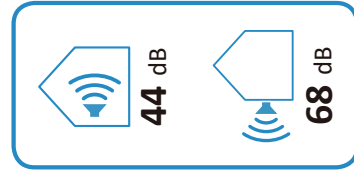
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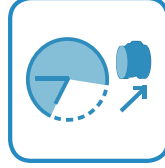
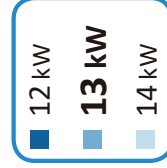
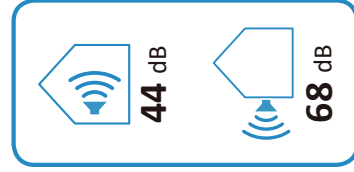
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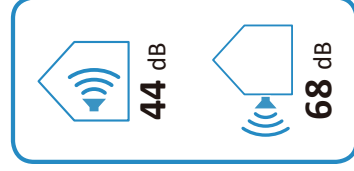
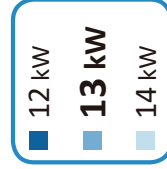
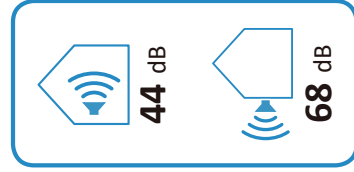
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HBT-A160/240CDS90GN8-B



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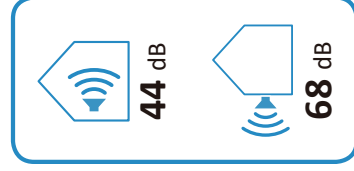
MHA-V16W/D2RN8-B
HBT-A160/240CD30GN8-B



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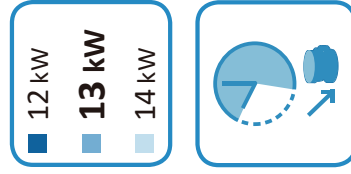
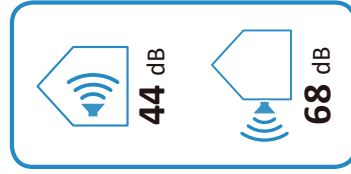
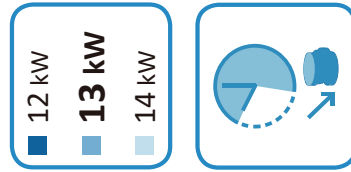
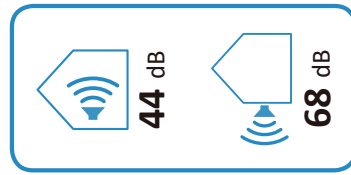
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HBT-A160/240CD60GN8-B

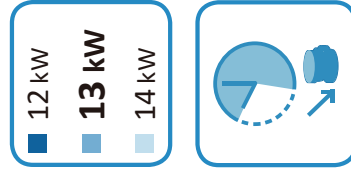
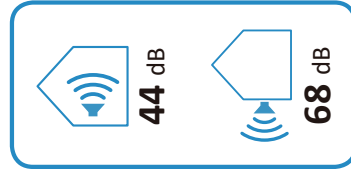


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HBT-A160/240CDS90GN8-B

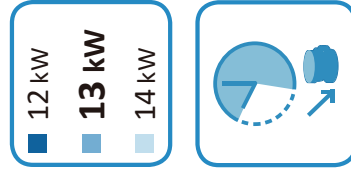
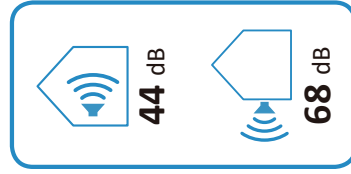


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MHA-V16W/D2RN8-B
HBT-A160/240CDS90GN8-B



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
		-	dB	dB	kW	%	kWh	kW	%	kWh	kW	%	kWh
MHA-V4W/D2N8-B	HB-A60/C***GN8-B	A++	38	56	4.4	129.5	2744	3.4	102.1	3158	5.0	163.1	1614
	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
MHA-V6W/D2N8-B	HB-A60/C***GN8-B	A++	38	58	5.7	137.9	3345	4.3	111.1	3680	5.1	165.4	1634
	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
MHA-V8W/D2N8-B	HB-A100/C***GN8-B	A++	42	59	6.6	131.5	4056	5.8	112.1	4948	8.37	176.9	2485
	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
MHA-V10W/D2N8-B	HB-A100/C***GN8-B	A++	42	60	7.7	136.6	4539	6.7	116.5	5539	8.6	180.3	2496
	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
MHA-V12W/D2N8-B	HB-A160/C***GN8-B	A++	43	64	11.6	135.1	6927	10.3	117.8	8419	12.5	174.0	3776
	HBT-A160/240CD***GN8-B	A++	42	64	11.6	135.1	6927	10.3	117.8	8419	12.5	174.0	3776
	HBT-A160/C***GN8-B	A++	43	64	11.6	135.1	6928	10.3	117.7	8420	12.5	173.8	3780
MHA-V14W/D2N8-B	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
	HBT-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-B	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
	HBT-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 dB	Outdoor unit sound power dB	average climate			colder climate			warmer climate		
					Rated heat output kW	Seasonal space heating energy efficiency %	For space heating, annual energy consumption kWh	Rated heat output kW	Seasonal space heating energy efficiency %	For space heating, annual energy consumption kWh	Rated heat output kW	Seasonal space heating energy efficiency %	For space heating, annual energy consumption kWh
MHA-V4W/D2N8-B	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-B	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-B	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-B	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-B	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
	HB-A160/C***GN8-B	A+++	43	64	12.0	189.3	5153	11.4	160.2	6871	11.1	255.6	2296
MHA-V14W/D2N8-B	HB-A160/C***GN8-B	A+++	42	64	12.0	189.3	5153	11.4	160.2	6871	11.1	255.6	2296
	HBT-A160/240CD***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-V16W/D2N8-B	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
	HB-A160/C***GN8-B	A+++	43	68	15.2	181.7	6804	13.7	157.8	8431	13.1	248.5	2781
MHA-V16W/D2RN8-B	HBT-A160/240CD***GN8-B	A+++	44	68	15.2	181.7	6804	13.7	157.8	8431	13.1	248.5	2781
	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		Outdoor		MHA-V4W/D2N8-B	MHA-V6W/D2N8-B	MHA-V8W/D2N8-B	MHA-V10W/D2N8-B	MHA-V12W/D2N8-B
		Indoor	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
Indoor unit sound power (*)		dB	38 ^{a)} / 38 ^{b)}	38 ^{a)} / 38 ^{b)}	42 ^{a)} / 40 ^{b)}	42 ^{a)} / 40 ^{b)}	43 ^{a)} / 42 ^{b)}	
Outdoor unit sound power (*)	Average climate low temperature application	dB	56	58	59	60	64	
	Average climate medium temperature application	dB	56	58	59	60	64	
Capacity of the back-up heater integrated in the unit	Psup back-up heater (optional)	[kW]	3/6/9	3/6/9	3/6/9	3/6/9	3/6/9	
Space heating	Energy efficiency class 35°C (Low temp. app.)	-	A+++	A+++	A+++	A+++	A+++	
Space heating	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				Indoor			
		MHA-V14W/D2N8-B HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	MHA-V16W/D2N8-B HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	MHA-V12W/D2R8-B HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	MHA-V14W/D2R8-B HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	MHA-V16W/D2R8-B HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	MHA-V14W/D2R8-B HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	MHA-V16W/D2R8-B HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	
Indoor unit sound power (*)		43 ^{a)} /44 ^{b)}	43 ^{a)} /44 ^{b)}	43 ^{a)} /42 ^{b)}	43 ^{a)} /44 ^{b)}	43 ^{a)} /44 ^{b)}	43 ^{a)} /44 ^{b)}	43 ^{a)} /44 ^{b)}	43 ^{a)} /44 ^{b)}
Outdoor unit sound power (*)	Average climate low temperature application	65	68	64	68	65	65	65	68
	Average climate medium temperature application	65	68	64	68	65	65	65	68
Capacity of the back-up heater integrated in the unit	Psup back-up heater (optional)	3/6/9	3/6/9	3/6/9	3/6/9	3/6/9	3/6/9	3/6/9	3/6/9
Space heating	Energy efficiency class 35°C (Low temp. app.)	A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++
Space heating	Energy efficiency class 55°C (Medium temp. app.)	A++	A++	A++	A++	A++	A++	A++	A++
Average climate (Design temperature = -10°C)									
Space heating 35°C	Prated (declared heating capacity) @ -10°C	13.7	15.2	12.0	13.7	15.2	12.0	13.7	15.2
	Seasonal space heating efficiency (ηs)	185.7	181.7	189.3	185.7	181.7	189.3	185.7	181.6
	Annual energy consumption	6,012	6,804	5,153	6,012	6,804	5,153	6,012	6,805
Space heating 55°C	Prated (declared heating capacity) @ -10°C	12.1	13.0	11.6	12.1	13.0	11.6	12.1	13.0
	Seasonal space heating efficiency (ηs)	135.6	133.3	135.1	135.6	133.3	135.1	135.6	133.2
	Annual energy consumption	7,202	7,895	6,928	7,202	7,895	6,928	7,202	7,896
Part load conditions space heating average climate low temperature application									
(A) condition (-7°C)	Pdh (declared heating capacity)	12.14	13.45	10.61	12.14	13.45	10.61	12.14	13.45
	COPd (declared COP)	2.79	2.72	2.88	2.79	2.72	2.88	2.79	2.72
	Cdh (degradation coefficient)	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
(B) condition (2°C)	Pdh (declared heating capacity)	7.94	8.56	6.69	7.94	8.56	6.69	7.94	8.56
	COPd (declared COP)	4.52	4.41	4.65	4.52	4.41	4.65	4.52	4.41
	Cdh (degradation coefficient)	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
(C) condition (7°C)	Pdh (declared heating capacity)	5.20	5.70	4.44	5.20	5.70	4.44	5.20	5.70
	COPd (declared COP)	6.68	6.56	6.62	6.68	6.56	6.62	6.68	6.56
	Cdh (degradation coefficient)	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
(D) condition (12°C)	Pdh (declared heating capacity)	3.75	3.78	3.74	3.75	3.78	3.74	3.75	3.78
	COPd (declared COP)	8.52	8.51	8.47	8.52	8.51	8.47	8.52	8.51
	Cdh (degradation coefficient)	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
(E) Tol (temperature operating limit)	Tol (temperature operating limit)	-10.00	-10.00	-10.00	-10.00	-10.00	-10.00	-10.00	-10.00
	Pdh (declared heating capacity)	11.47	12.52	10.74	11.47	12.52	10.74	11.47	12.52
	COPd (declared COP)	2.59	2.48	2.77	2.59	2.48	2.77	2.59	2.48
	WTOL (Heating water Operation Limit)	65	65	65	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-B	MHA-V6W/D2N8-B	MHA-V8W/D2N8-B	MHA-V10W/D2N8-B	MHA-V12W/D2N8-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
Supplementary capacity at P_design		[kW]	1.11	1.45	1.68	1.76	1.26
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
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	2.38	3.12	3.75	4.28	6.52
	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
(C) condition (7°C)	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
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(D) condition (12°C)	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
(F) Tivalent 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]	3.89	5.04	5.84	6.78	10.24
Supplementary capacity at P_design		[kW]	2.17	2.17	2.16	2.24	2.01
Colder climate (Design temperature = -22°C)		[kW]	0.98	1.18	1.69	2.28	2.50
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 (ns)		[%]	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

		MHA-V14W/D2N8-B				MHA-V16W/D2N8-B				MHA-V12W/D2RN8-B				MHA-V14W/D2RN8-B				MHA-V16W/D2RN8-B			
		Outdoor		Indoor		MHA-V14W/D2N8-B		MHA-V16W/D2N8-B		MHA-V12W/D2RN8-B		MHA-V14W/D2RN8-B		MHA-V16W/D2RN8-B		MHA-V14W/D2RN8-B		MHA-V16W/D2RN8-B			
		[°C]		-7.00		-7.00		-7.00		-7.00		-7.00		-7.00		-7.00		-7.00			
(F) Tivalent temperature		[kW]		12.14		13.45		10.61		12.14		12.14		12.14		13.45		13.45			
COPd (declared COP)		-		2.79		2.72		2.88		2.79		2.79		2.79		2.72		2.72			
Supplementary capacity at P_design		[kW]		2.23		2.68		1.26		2.23		2.23		2.23		2.68		2.68			
Part load conditions space heating average climate medium temperature application																					
(A) condition (-7°C)		[kW]		10.68		11.52		10.24		10.68		10.68		10.68		11.52		11.52			
COPd (declared COP)		-		2.01		1.99		2.01		2.01		2.01		2.01		1.99		1.99			
Cdh(degradation coefficient)		-		0.90		0.90		0.90		0.90		0.90		0.90		0.90		0.90			
(B) condition (2°C)		[kW]		6.86		7.18		6.52		6.86		6.86		6.86		7.18		7.18			
COPd (declared COP)		-		3.43		3.34		3.44		3.43		3.43		3.43		3.34		3.34			
Cdh(degradation coefficient)		-		0.90		0.90		0.90		0.90		0.90		0.90		0.90		0.90			
(C) condition (7°C)		[kW]		4.63		4.67		4.36		4.63		4.63		4.63		4.67		4.67			
COPd (declared COP)		-		4.66		4.61		4.59		4.66		4.66		4.66		4.61		4.61			
Cdh(degradation coefficient)		-		0.90		0.90		0.90		0.90		0.90		0.90		0.90		0.90			
(D) condition (12°C)		[kW]		3.31		3.31		3.29		3.31		3.31		3.31		3.31		3.31			
COPd (declared COP)		-		6.13		6.07		6.05		6.13		6.13		6.13		6.07		6.07			
Cdh(degradation coefficient)		-		0.90		0.90		0.90		0.90		0.90		0.90		0.90		0.90			
(E) ToI (temperature operating limit)		[°C]		-10.00		-10.00		-10.00		-10.00		-10.00		-10.00		-10.00		-10.00			
Pdh (declared heating capacity)		[kW]		9.19		10.33		9.10		9.19		9.19		9.19		10.33		10.33			
COPd (declared COP)		-		1.76		1.80		1.79		1.76		1.76		1.76		1.80		1.80			
WTOL (Heating water Operation Limit)		[°C]		65		65		65		65		65		65		65		65			
Tbiv		[°C]		-7.00		-7.00		-7.00		-7.00		-7.00		-7.00		-7.00		-7.00			
(F) Tivalent temperature		[kW]		10.68		11.52		10.24		10.68		10.68		10.68		11.52		11.52			
COPd (declared COP)		-		2.01		1.99		2.01		2.01		2.01		2.01		1.99		1.99			
Supplementary capacity at P_design		[kW]		2.91		2.67		2.50		2.91		2.91		2.91		2.67		2.67			
Colder climate (Design temperature = -22°C)																					
Prated (declared heating capacity) @ -22°C		[kW]		12.6		13.7		11.4		12.6		12.6		12.6		13.7		13.7			
Seasonal space heating efficiency (ηs)		[%]		159.6		157.8		160.2		159.6		159.6		159.6		157.8		157.8			
Annual energy consumption		[kWh]		7,667		8,431		6,871		7,667		7,667		7,667		8,431		8,431			

Product fiche 3

Heat pump space heating

		MHA-V4W/D2N8-B	MHA-V6W/D2N8-B	MHA-V8W/D2N8-B	MHA-V10W/D2N8-B	MHA-V12W/D2N8-B
Space heating 55°C	Prated (declared heating capacity) @ -22°C	3.4	4.3	5.8	6.7	10.3
	Seasonal space heating efficiency (ηs)	102.1	111.1	112.0	116.4	117.8
	Annual energy consumption	3,159	3,681	4,950	5,540	8,419
Part load conditions space heating colder climate low temperature application						
(A) condition (-7°C)	Pdh (declared heating capacity)	2.75	3.42	4.46	4.83	7.05
	COPd (declared COP)	3.49	3.59	3.66	3.60	3.48
	Cdh(degradation coefficient)	0.90	0.90	0.90	0.90	0.90
(B) condition (2°C)	Pdh (declared heating capacity)	1.77	2.06	2.69	2.94	4.67
	COPd (declared COP)	4.95	5.21	5.20	5.26	4.96
	Cdh(degradation coefficient)	0.90	0.90	0.90	0.90	0.90
(C) condition (7°C)	Pdh (declared heating capacity)	1.17	1.46	1.65	1.92	3.14
	COPd (declared COP)	5.53	6.24	6.53	7.08	6.10
	Cdh(degradation coefficient)	0.90	0.90	0.90	0.90	0.90
(D) condition (12°C)	Pdh (declared heating capacity)	1.43	1.44	1.65	1.65	3.57
	COPd (declared COP)	7.67	7.66	7.96	7.96	7.87
	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)	2.80	3.48	4.06	4.62	7.01
	COPd (declared COP)	1.97	1.96	1.95	1.97	1.98
(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)	3.72	4.59	5.69	6.32	9.28
Supplementary capacity at P_design	COPd (declared COP)	2.57	2.53	2.83	2.64	2.59
	Psup (@Tdesign: -22°C)	1.76	2.15	2.91	3.08	4.40
	Part load conditions space heating colder climate medium temperature application					
(A) condition (-7°C)	Pdh (declared heating capacity)	2.13	2.70	3.86	4.27	6.63
	COPd (declared COP)	2.32	2.46	2.48	2.54	2.63
	Cdh(degradation coefficient)	0.90	0.90	0.90	0.90	0.90

Product fiche 3

Heat pump space heating

		Outdoor				Indoor			
		MHA-V14W/D2N8-B	MHA-V16W/D2N8-B	MHA-V12W/D2RN8-B	MHA-V14W/D2RN8-B	MHA-V16W/D2N8-B	MHA-V12W/D2RN8-B	MHA-V14W/D2RN8-B	MHA-V16W/D2RN8-B
Space heating 55°C	Prated (declared heating capacity) @ -22°C	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	8,866	9,309	8,420	8,866	9,309	8,867	9,310	
Part load conditions space heating colder climate low temperature application									
(A) condition (-7°C)	Pdh (declared heating capacity)	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)	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)	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)	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)	-22.00	-22.00	-22.00	-22.00	-22.00	-22.00	-22.00	
	Pdh (declared heating capacity)	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	
(F) Tbiivalent temperature	WTOL (Heating water Operation Limit)	65	65	65	65	65	65	65	
	Tbiv	-15.00	-15.00	-15.00	-15.00	-15.00	-15.00	-15.00	
	Pdh (declared heating capacity)	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)	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)	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					Indoor					
		MHA-V4W/D2N8-B	MHA-V6W/D2N8-B	MHA-V8W/D2N8-B	MHA-V10W/D2N8-B	MHA-V12W/D2N8-B						
(B) condition (2°C)	Pdh (declared heating capacity)	1.28	1.60	2.21	2.57	4.06						
	COPd (declared COP)	2.99	3.36	3.35	3.51	3.60						
(C) condition (7°C)	Cdh(declared coefficient)	0.90	0.90	0.90	0.90	0.90						
	Pdh (declared heating capacity)	1.01	1.02	1.44	1.65	2.78						
(D) condition (12°C)	COPd (declared COP)	3.86	3.94	4.11	4.37	4.54						
	Cdh(declared coefficient)	0.90	0.90	0.90	0.90	0.90						
(E) Tol (temperature operating limit)	Pdh (declared heating capacity)	1.36	1.37	1.46	1.47	3.33						
	COPd (declared COP)	6.28	6.35	5.92	5.96	6.25						
(F) Trivalent temperature	Cdh(declared coefficient)	0.90	0.90	0.90	0.90	0.90						
	Tol (temperature operating limit)	-22.00	-22.00	-22.00	-22.00	-22.00						
Supplementary capacity at P_design	Pdh (declared heating capacity)	1.64	2.09	2.80	2.80	4.19						
	COPd (declared COP)	1.02	1.13	1.22	1.22	1.13						
Warmer climate (Design temperature = 2°C)	WTOL (Heating water Operation Limit)	65	65	65	65	65						
	Tbiv	-15.00	-15.00	-15.00	-15.00	-15.00						
Space heating 35°C	Pdh (declared heating capacity)	2.74	3.47	4.71	5.47	8.41						
	COPd (declared COP)	1.74	1.86	1.90	2.00	1.84						
Space heating 55°C	Prated (declared heating capacity) @ 2°C	5.5	6.1	8.1	8.6	11.1						
	Seasonal space heating efficiency (ηs)	255.4	259.8	276.6	280.5	256.1						
Part load conditions space heating warmer climate low temperature application	Annual energy consumption	1,146	1,244	1,551	1,617	2,292						
	Prated (declared heating capacity) @ 2°C	5.0	5.1	8.37	8.6	12.5						
(B) condition (2°C)	Seasonal space heating efficiency (ηs)	162.4	164.7	176.9	180.3	174.0						
	Annual energy consumption	1,621	1,640	2,485	2,516	3,776						
(C) condition (7°C)	Pdh (declared heating capacity)	5.34	5.93	7.56	8.44	11.10						
	COPd (declared COP)	3.94	3.91	3.98	3.84	3.59						
(C) condition (7°C)	Cdh(declared coefficient)	0.90	0.90	0.90	0.90	0.90						
	Pdh (declared heating capacity)	3.56	3.93	5.22	5.52	7.14						
(C) condition (7°C)	COPd (declared COP)	5.92	5.89	6.26	6.18	5.87						
	Cdh(declared coefficient)	0.90	0.90	0.90	0.90	0.90						

Product fiche 4

Heat pump space heating

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

Product fiche 5

Heat pump space heating

		MHA-V4W/D2N8-B	MHA-V6W/D2N8-B	MHA-V8W/D2N8-B	MHA-V10W/D2N8-B	MHA-V12W/D2N8-B
(D) condition (12°C)	Pdh (declared heating capacity)	1.63	1.79	2.62	2.62	3.55
	COPd (declared COP)	7.91	8.20	9.23	9.04	7.94
(E) Tol (temperature operating limit)	Cdh(degradation coefficient)	0.90	0.90	0.90	0.90	0.90
	Tol (temperature operating limit)	2.00	2.00	2.00	2.00	2.00
(F) Tivalent temperature	Pdh (declared heating capacity)	5.34	5.93	7.56	8.44	11.10
	COPd (declared COP)	3.94	3.91	3.98	3.84	3.59
(D) condition (12°C)	WTOL (Heating water Operation Limit)	65	65	65	65	65
	Tbiv	7.00	7.00	7.00	7.00	7.00
(E) Tol (temperature operating limit)	Pdh (declared heating capacity)	3.56	3.93	5.22	5.52	7.14
	COPd (declared COP)	5.92	5.89	6.26	6.18	5.87
Supplementary capacity at P_design	Psup (@Tdesign: 2°C)	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)	4.83	5.02	7.55	8.06	12.07
	COPd (declared COP)	2.51	2.48	2.59	2.59	2.31
(C) condition (7°C)	Cdh(degradation coefficient)	0.90	0.90	0.90	0.90	0.90
	Pdh (declared heating capacity)	3.22	3.31	5.38	5.54	8.04
(D) condition (12°C)	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
(E) Tol (temperature operating limit)	Pdh (declared heating capacity)	1.47	1.59	2.31	2.53	3.75
	COPd (declared COP)	5.15	5.29	5.55	5.82	5.70
(F) Tivalent temperature	Cdh(degradation coefficient)	0.90	0.90	0.90	0.90	0.90
	Tol (temperature operating limit)	2.00	2.00	2.00	2.00	2.00
Supplementary capacity at P_design	Pdh (declared heating capacity)	4.83	5.02	7.55	8.06	12.07
	COPd (declared COP)	2.51	2.48	2.59	2.59	2.31
(B) condition (2°C)	WTOL (Heating water Operation Limit)	65	65	65	65	65
	Tbiv	7.00	7.00	7.00	7.00	7.00
(C) condition (7°C)	Pdh (declared heating capacity)	3.22	3.31	5.38	5.54	8.04
	COPd (declared COP)	3.68	3.67	4.01	4.10	3.86
(D) condition (12°C)	Cdh(degradation coefficient)	0.90	0.90	0.90	0.90	0.90
	Tol (temperature operating limit)	2.00	2.00	2.00	2.00	2.00
(E) Tol (temperature operating limit)	Pdh (declared heating capacity)	4.83	5.02	7.55	8.06	12.07
	COPd (declared COP)	2.51	2.48	2.59	2.59	2.31
(F) Tivalent temperature	WTOL (Heating water Operation Limit)	65	65	65	65	65
	Tbiv	7.00	7.00	7.00	7.00	7.00
Supplementary capacity at P_design	Pdh (declared heating capacity)	3.22	3.31	5.38	5.54	8.04
	COPd (declared COP)	3.68	3.67	4.01	4.10	3.86
Supplementary capacity at P_design	Psup (@Tdesign: 2°C)	0.18	0.12	0.82	0.48	0.43

Product fiche 5

Heat pump space heating		Outdoor				
		MHA-V14W/D2N8-B	MHA-V16W/D2N8-B	MHA-V12W/D2RN8-B	MHA-V14W/D2RN8-B	MHA-V16W/D2RN8-B
(D) condition (12°C)	Pdh (declared heating capacity)	3.75	3.87	3.55	3.75	3.87
	COPd (declared COP)	8.25	8.11	7.94	8.25	8.11
(E) Tol (temperature operating limit)	Cdh(degradation coefficient)	0.90	0.90	0.90	0.90	0.90
	Tol (temperature operating limit)	2.00	2.00	2.00	2.00	2.00
(F) Trivalent temperature	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
Supplementary capacity at P_design	WTOL (Heating water Operation Limit)	65	65	65	65	65
	Tbiv	7.00	7.00	7.00	7.00	7.00
Part load conditions space heating warmer climate medium temperature application	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
(B) condition (2°C)	Psup (@Tdesignh: 2°C)	0.00	0.00	0.00	0.00	0.00
	Pdh (declared heating capacity)	13.04	13.38	12.07	13.04	13.38
(C) condition (7°C)	COPd (declared COP)	2.20	2.29	2.31	2.20	2.29
	Cdh(degradation coefficient)	0.90	0.90	0.90	0.90	0.90
(D) condition (12°C)	Pdh (declared heating capacity)	9.11	9.11	8.04	9.11	9.11
	COPd (declared COP)	3.89	3.89	3.86	3.89	3.89
(E) Tol (temperature operating limit)	Cdh(degradation coefficient)	0.90	0.90	0.90	0.90	0.90
	Tol (temperature operating limit)	4.08	4.06	3.75	4.08	4.06
(F) Trivalent temperature	Pdh (declared heating capacity)	5.90	5.86	5.70	5.90	5.86
	COPd (declared COP)	0.90	0.90	0.90	0.90	0.90
Supplementary capacity at P_design	WTOL (Heating water Operation Limit)	2.00	2.00	2.00	2.00	2.00
	Tbiv	13.04	13.38	12.07	13.04	13.38
Part load conditions space heating warmer climate medium temperature application	Pdh (declared heating capacity)	2.20	2.29	2.31	2.20	2.29
	COPd (declared COP)	65	65	65	65	65
(B) condition (2°C)	Pdh (declared heating capacity)	7.00	7.00	7.00	7.00	7.00
	COPd (declared COP)	9.11	9.11	8.04	9.11	9.11
(C) condition (7°C)	Pdh (declared heating capacity)	3.89	3.89	3.86	3.89	3.89
	COPd (declared COP)	0.90	0.90	0.90	0.90	0.90
(D) condition (12°C)	Pdh (declared heating capacity)	4.08	4.06	3.75	4.08	4.06
	COPd (declared COP)	5.90	5.86	5.70	5.90	5.86
(E) Tol (temperature operating limit)	Cdh(degradation coefficient)	0.90	0.90	0.90	0.90	0.90
	Tol (temperature operating limit)	2.00	2.00	2.00	2.00	2.00
(F) Trivalent temperature	Pdh (declared heating capacity)	13.04	13.38	12.07	13.04	13.38
	COPd (declared COP)	2.20	2.29	2.31	2.20	2.29
Supplementary capacity at P_design	WTOL (Heating water Operation Limit)	65	65	65	65	65
	Tbiv	7.00	7.00	7.00	7.00	7.00
Part load conditions space heating warmer climate medium temperature application	Pdh (declared heating capacity)	9.11	9.11	8.04	9.11	9.11
	COPd (declared COP)	3.89	3.89	3.86	3.89	3.89
(B) condition (2°C)	Pdh (declared heating capacity)	1.13	0.79	0.43	1.13	0.79
	COPd (declared COP)	0.90	0.90	0.90	0.90	0.90

Product fiche 6

Heat pump space heating

Product description		Outdoor		MHA-V4W/D2N8-B	MHA-V6W/D2N8-B	MHA-V8W/D2N8-B	MHA-V10W/D2N8-B	MHA-V12W/D2N8-B
		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
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
Heat pump combination heater		Y/N		Yes	Yes	Yes	Yes	Yes
Rated airflow (outdoor)		[m³/h]		2770	2770	4030	4030	4060
Rated water/brine flow (outdoor H/E)		-		/	/	/	/	/
Capacity control		-		Inverter	Inverter	Inverter	Inverter	Inverter
Poff (Power consumption Off mode)		[kW]		0.014	0.014	0.014	0.014	0.014
Pto (Power consumption Thermostat off mode)		[kW]		0.024	0.024	0.024	0.024	0.024
Psb (Power consumption Standby mode)		[kW]		0.014	0.014	0.014	0.014	0.014
Pek (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/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 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 6

Heat pump space heating

Product description	Outdoor		MHA-V14W/D2N8-B	MHA-V16W/D2N8-B	MHA-V12W/D2RN8-B	MHA-V14W/D2RN8-B	MHA-V16W/D2RN8-B
	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
Heat pump combination heater	Y/N		Yes	Yes	Yes	Yes	Yes
Rated airflow (outdoor)	[m ³ /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
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 1-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 1-Phase Source.

HB-A160/CD30GN8-B; with 3kW back-up heater and 3-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:

HB-T-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 1-Phase Source.

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

HB-T-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 1-Phase Source.

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

HB-T-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 1-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

		MHA-V4W/D2N8-B	MHA-V6W/D2N8-B	MHA-V8W/D2N8-B	MHA-V10W/D2N8-B	MHA-V12W/D2N8-B
Indoor unit sound power (*)		38	40	42	42	43
Outdoor unit sound power (*)		56	58	60	61	65
Average climate low temperature application		55	58	60	60	64
Average climate medium temperature application		4.7	7.0	7.4	8.2	11.6
Prated (declared cooling capacity) @ 35°C		196.2	209.5	230.1	235.3	194.2
Seasonal space cooling efficiency (ηs)		566	791	762	826	1,412
Annual energy consumption		4.5	6.55	8.4	10.0	12.0
Prated (declared cooling capacity) @ 35°C		307.7	326.8	354.9	348.8	282.4
Seasonal space cooling efficiency (ηs)		348	477	563	682	1,009
Annual energy consumption						
Part load conditions space cooling : low temperature application@7°C						
(A) condition (35°C)		Pdc (declared cooling capacity)	7.00	7.40	8.20	11.60
		EERd (declared EER)	3.00	3.38	3.30	2.75
		Cdc(degradation coefficient)	0.90	0.90	0.90	0.90
(B) condition (30°C)		Pdc (declared cooling capacity)	5.13	5.72	6.68	8.76
		EERd (declared EER)	4.00	4.71	4.47	3.93
		Cdc(degradation coefficient)	0.90	0.90	0.90	0.90
(C) condition (25°C)		Pdc (declared cooling capacity)	3.48	3.62	4.26	5.81
		EERd (declared EER)	6.45	6.65	7.02	5.73
		Cdc(degradation coefficient)	0.90	0.90	0.90	0.90
(D) condition (20°C)		Pdc (declared cooling capacity)	1.53	1.64	1.94	2.63
		EERd (declared EER)	7.73	8.55	9.54	6.75
		Cdc(degradation coefficient)	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

		Outdoor	MHA-V14W/D2N8-B	MHA-V16W/D2N8-B	MHA-V12W/D2RN8-B	MHA-V14W/D2RN8-B	MHA-V16W/D2RN8-B
Indoor unit sound power (*)		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
Average climate low temperature application		dB	44	44	43	44	44
Average climate medium temperature application		dB	65	68	65	65	68
Prated (declared cooling capacity) @ 35°C		dB	64	67	64	64	67
Space cooling 7°C		[kW]	12.7	14.0	11.6	12.7	14.0
Seasonal space cooling efficiency (ns)		[%]	192.4	184.1	193.0	191.4	183.3
Annual energy consumption		[kWh]	1,560	1,796	1,420	1,568	1,804
Prated (declared cooling capacity) @ 35°C		[kW]	13.5	14.2	12.0	13.5	14.2
Seasonal space cooling efficiency (ns)		[%]	274.4	266.8	280.1	272.5	265.0
Annual energy consumption		[kWh]	1,168	1,263	1,017	1,176	1,271
Part load conditions space cooling: low temperature application@7°C							
(A) condition (35°C)		[kW]	12.70	14.00	11.60	12.70	14.00
Pdc (declared cooling capacity)		-	2.55	2.45	2.75	2.55	2.45
EERd (declared EER)		-	0.90	0.90	0.90	0.90	0.90
Cdc(degradation coefficient)		[kW]	9.41	10.68	8.76	9.41	10.68
(B) condition (30°C)		-	3.85	3.63	3.93	3.85	3.63
Pdc (declared cooling capacity)		-	0.90	0.90	0.90	0.90	0.90
EERd (declared EER)		[kW]	6.16	6.76	5.81	6.16	6.76
Cdc(degradation coefficient)		-	5.80	5.27	5.73	5.80	5.27
(C) condition (25°C)		-	0.90	0.90	0.90	0.90	0.90
Pdc (declared cooling capacity)		[kW]	2.63	3.41	2.63	2.63	3.41
EERd (declared EER)		-	6.74	7.29	6.75	6.74	7.29
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 8

Heat pump space cooling

		MHA-V4W/D2N8-B	MHA-V6W/D2N8-B	MHA-V8W/D2N8-B	MHA-V10W/D2N8-B	MHA-V12W/D2N8-B	
		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	
		Outdoor					
		Indoor					
(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
	Pdc (declared cooling capacity)	[kW]	3.44	4.84	6.47	7.71	9.21
(B) condition (30°C)	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
	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
(C) condition (25°C)	Cdc(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
	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]	/	/	/	/	/

Part load conditions space cooling: medium temperature application@18°C

Product fiche 8

Heat pump space cooling

		Part load conditions space cooling: medium temperature application@18°C					
		Outdoor	MHA-V14W/D2N8-B HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	MHA-V16W/D2N8-B HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	MHA-V12W/D2RN8-B HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	MHA-V14W/D2RN8-B HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	MHA-V16W/D2RN8-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 ³ /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]	/	/	/	/	/

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MHA-V4W/D2N8-B
HB-A60/CGN8-B

Midea

55°C 35°C

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

A+++ **A++**

38dB **56dB**

3 4 5 kW

3 4 5 kW

811/2013

38dB

56dB

2019

811/2013

ENERG
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MHA-V4W/D2N8-B
HB-A60/CD30GN8-B

Midea

55°C 35°C

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

A+++ **A++**

38dB **56dB**

3 4 5 kW

3 4 5 kW

811/2013

38dB

56dB

2019

811/2013



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



55°C

35°C



A+++

A++

A+++

A++

38dB

56dB

38dB

56dB

3 4 5 kW

5 5 5 kW

3 4 5 kW

5 5 kW



2019

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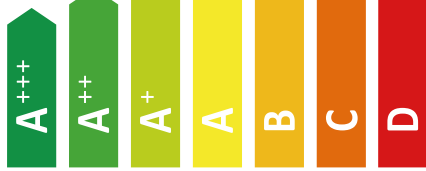


MHA-V4W/D2N8-B
HBT-A100/190CD60GN8-B



55°C

35°C



A+++

A++

A+++

A++

38dB

56dB

3 4 5 kW

5 5 5 kW

3 4 5 kW

5 5 kW



2019

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



55°C

35°C



A
+++

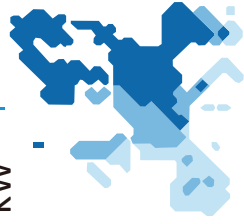
A
++

38dB

56dB

■ 3
■ 4
■ 5
kW

■ 5
■ 5
■ 5
kW



2019

811/2013



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



55°C

35°C



A
+++

A
++

38dB

56dB

■ 3
■ 4
■ 5
kW

■ 5
■ 5
■ 5
kW



2019

811/2013



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



55°C

35°C



A
+++

A
++

38dB

56dB

2019

811/2013



ENERG
енергия · ενεργεια



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



55°C

35°C



A
+++

A
++

38dB

56dB

2019

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MHA-V6W/D2N8-B
HB-A60/CGN8-B



55°C

35°C

A⁺⁺⁺

A⁺⁺

A⁺

A

B

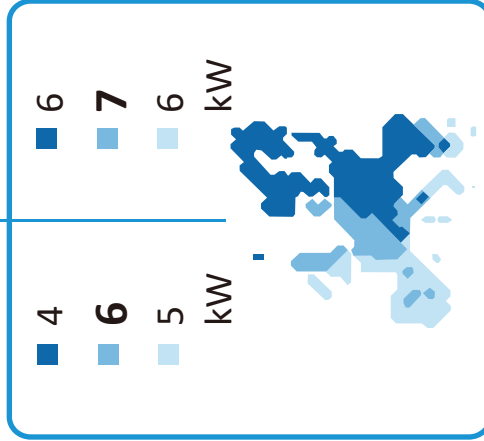
C

D

A⁺⁺⁺

A⁺⁺

38dB



58dB



2019

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MHA-V6W/D2N8-B
HB-A60/CD30GN8-B



55°C

35°C

A⁺⁺⁺

A⁺⁺

A⁺

A

B

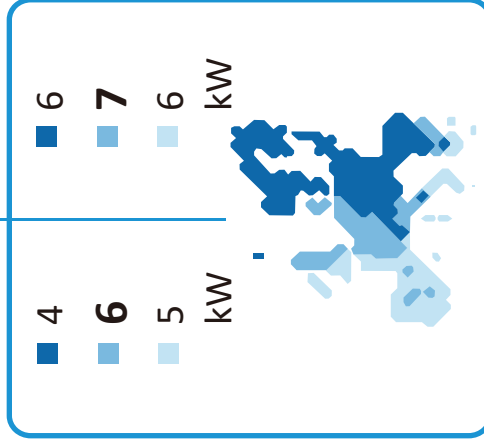
C

D

A⁺⁺⁺

A⁺⁺

38dB



58dB



2019

811/2013



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MHA-V6W/D2N8-B
HBT-A100/190CD30GN8-B



55°C

35°C



A⁺⁺

A⁺⁺⁺

38dB

58dB

4 6 5 kW

6 7 6 kW



2019

811/2013



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



55°C

35°C



A⁺⁺⁺

A⁺⁺

38dB

58dB


4 6 5 kW

6 7 6 kW





2019

811/2013




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


55°C

35°C




A⁺⁺⁺

A⁺⁺




38dB



58dB


	4
	6
	5

	6
	7
	6





2019

811/2013




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


55°C

35°C




A⁺⁺⁺

A⁺⁺




38dB



58dB

	4
	6
	5

	6
	7
	6



2019

811/2013

ENERG
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Y IJA
IE IA

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

Midea

55°C 35°C

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

A+++ A++

4 6 5 kW

6 7 6 kW

38dB 58dB

2019 811/2013

ENERG
енергия · ενεργεια

Y IJA
IE IA

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

Midea

55°C 35°C

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

A+++ A++

4 6 5 kW

6 7 6 kW

38dB 58dB

2019 811/2013



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MHA-V8W/D2N8-B
HB-A100/CGN8-B



55°C

35°C

A⁺⁺⁺

A⁺⁺

A⁺

A

B

C

D

A⁺⁺⁺

A⁺⁺

A⁺

A

B

C

D

A⁺⁺⁺

A⁺⁺

A⁺

A

B

C

D



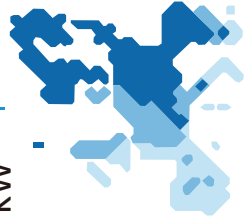
42dB



59dB

6 7 8 kW

7 8 8 kW



2019

811/2013



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MHA-V8W/D2N8-B
HB-A100/CD30GN8-B



55°C

35°C

A⁺⁺⁺

A⁺⁺

A⁺

A

B

C

D

A⁺⁺⁺

A⁺⁺

A⁺

A

B

C

D



42dB



59dB

6 7 8 kW

7 8 8 kW



2019

811/2013



ENERG
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MHA-V8W/D2N8-B
HB-A100/CDS90GN8-B



55°C

35°C

A⁺⁺⁺

A⁺⁺

A⁺

A

B

C

D



A⁺⁺⁺

A⁺⁺

A⁺

A

B

C

D



42dB



59dB

6 7 8 kW

7 8 8 kW



2019

811/2013



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



55°C

35°C

A⁺⁺⁺

A⁺⁺

A⁺

A

B

C

D



A⁺⁺⁺

A⁺⁺

A⁺

A

B

C

D



40dB



59dB

6 7 8 kW

7 8 8 kW



2019

811/2013



ENERG
енергия · ενεργεια



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



55°C

35°C



A⁺⁺

A⁺⁺⁺

40dB

59dB

6 7 8 kW

7 8 8 kW



2019

811/2013



ENERG
енергия · ενεργεια



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



55°C

35°C



A⁺⁺

A⁺⁺⁺

40dB

59dB

6 7 8 kW

7 8 8 kW



2019

811/2013



ENERG
енергия · ενεργεια



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



55°C

35°C



A⁺⁺

A⁺⁺⁺

40dB

59dB

6 7 8 kW

7 8 8 kW



2019

811/2013



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



55°C

35°C



A⁺⁺

A⁺⁺⁺

40dB

59dB

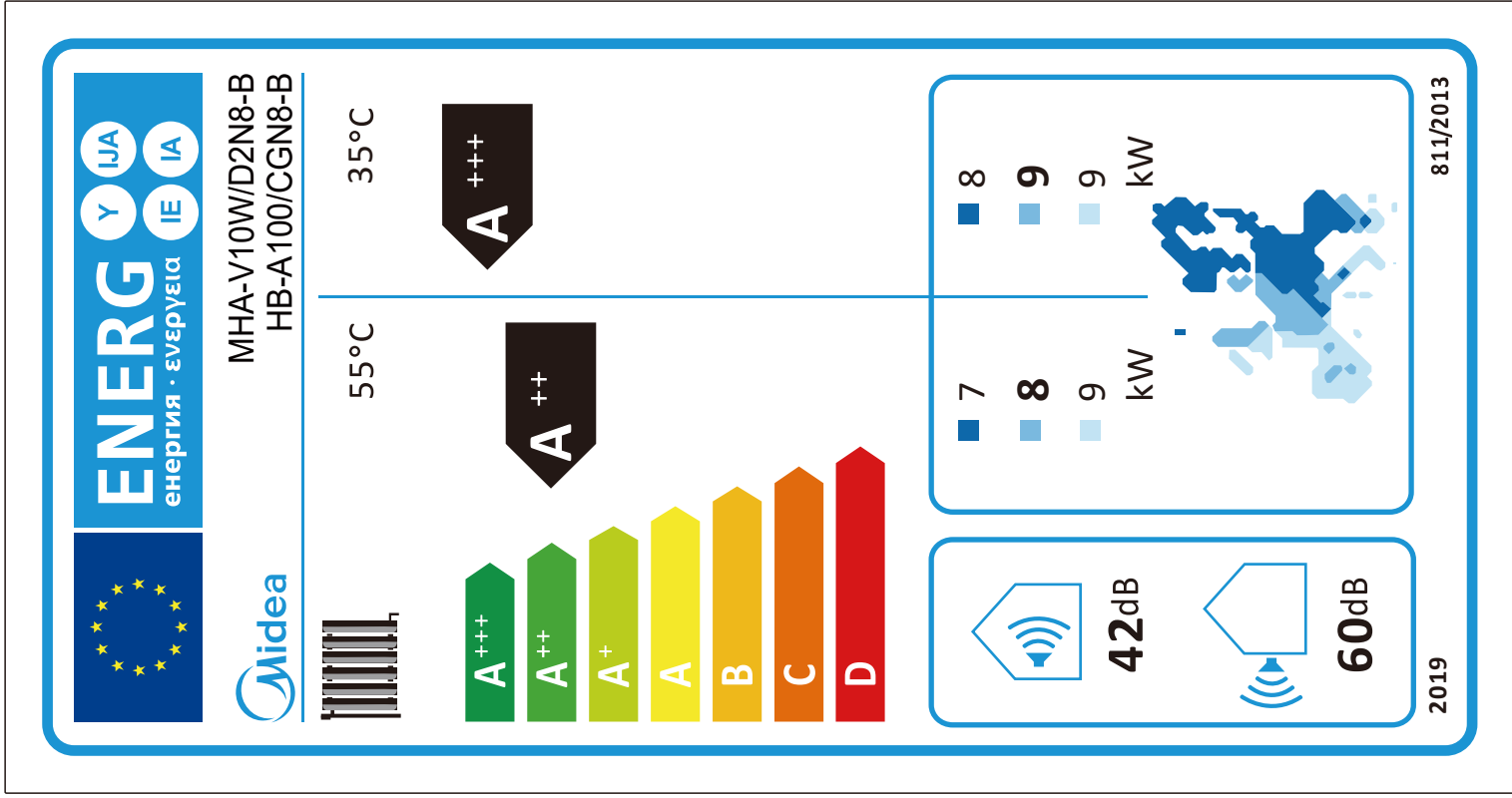
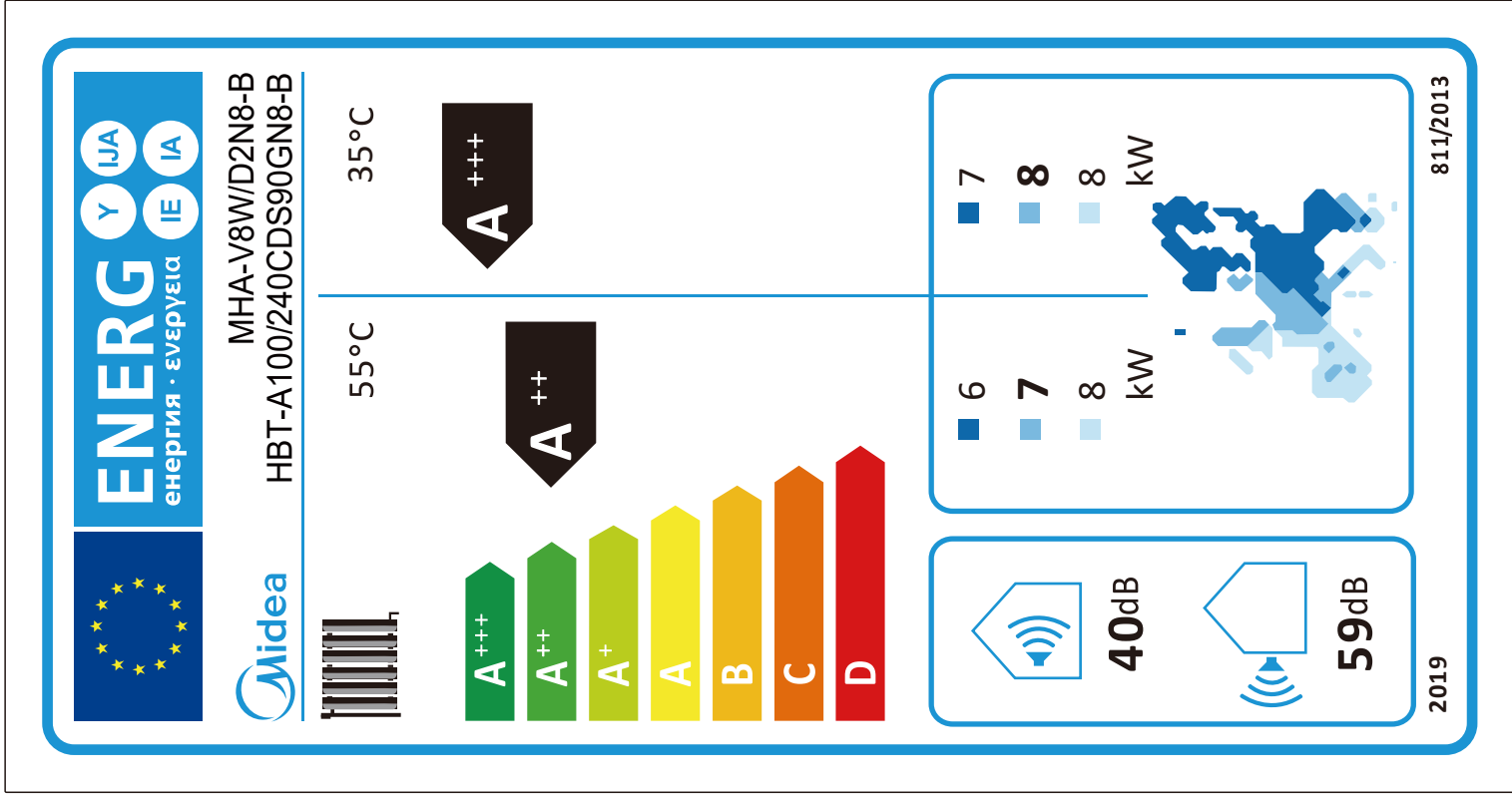
6 7 8 kW

7 8 8 kW



2019

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MHA-V10W/D2N8-B
HB-A100/CD30GN8-B



55°C

35°C

A⁺⁺⁺

A⁺⁺

A⁺

A

B

C

D

A⁺⁺⁺

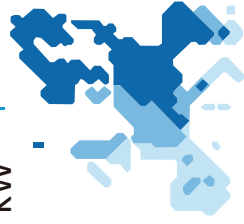
A⁺⁺

42dB

60dB

7 8 9 kW

8 9 9 kW



2019

811/2013



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MHA-V10W/D2N8-B
HB-A100/CDS90GN8-B



55°C

35°C

A⁺⁺⁺

A⁺⁺

A⁺

A

B

C

D

A⁺⁺⁺

A⁺⁺

42dB

60dB

7 8 9 kW

8 9 9 kW



2019

811/2013



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



55°C

35°C



A
+++

A
++

40dB

7 8 9 kW

8 9 kW

2019

811/2013



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



55°C

35°C



A
+++

A
++

40dB

7 8 9 kW

8 9 kW

2019

811/2013



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



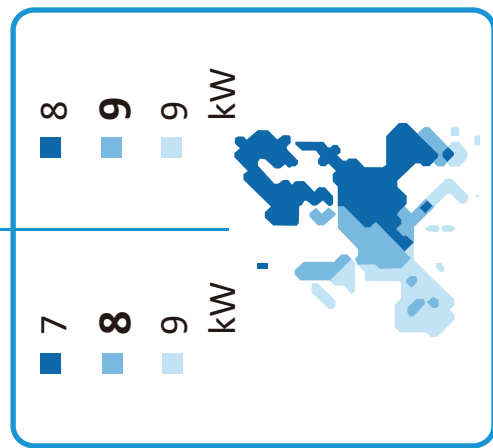
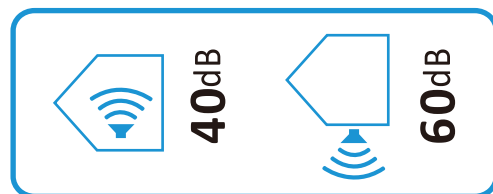
55°C

35°C



A
+++

A
++



2019

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



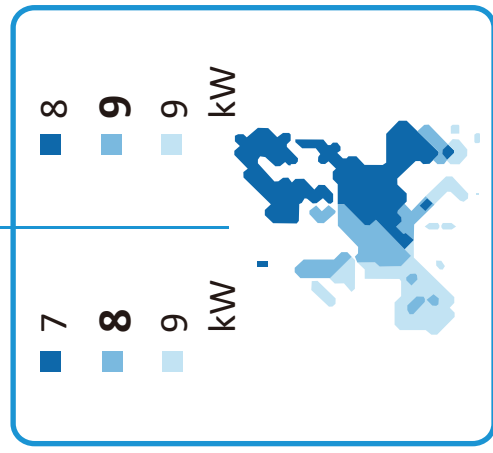
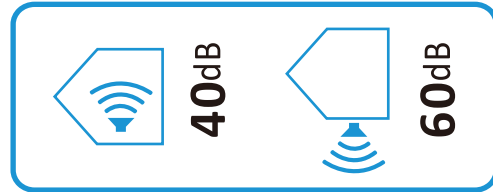
55°C

35°C



A
+++

A
++



2019

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



55°C

35°C



40dB

60dB

2019

811/2013



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



55°C

35°C



40dB

60dB

2019

811/2013



ENERG
енергия · ενεργεια



MHA-V12W/D2N8-B
HB-A160/CGN8-B



55°C

35°C



A
+++

A
++

43dB

64dB

■ 10 ■ 12 ■ 12 kW

■ 11 ■ 12 ■ 11 kW



2019

811/2013



ENERG
енергия · ενεργεια



MHA-V12W/D2N8-B
HB-A160/CD30GN8-B



55°C

35°C



A
+++

A
++

43dB

64dB

■ 10 ■ 12 ■ 12 kW

■ 11 ■ 12 ■ 11 kW



2019

811/2013



MHA-V12W/D2N8-B
HB-A160/CDS90GN8-B



55°C

35°C



A⁺⁺⁺
A⁺⁺

A⁺⁺⁺

43dB

64dB

■ 10 ■ **12** ■ 12 kW

■ 11 ■ **12** ■ 11 kW

2019

811/2013



ENERG
енергия · ενεργεια



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



55°C

35°C



A⁺⁺⁺
A⁺⁺

A⁺⁺⁺

42dB

64dB

■ 10 ■ **12** ■ 12 kW

■ 11 ■ **12** ■ 11 kW

2019

811/2013



ENERG
енергия · ενεργεια



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



55°C

35°C



42dB

64dB

2019

811/2013



ENERG
енергия · ενεργεια



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



55°C

35°C

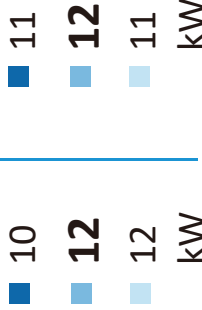


42dB

64dB

2019

811/2013





ENERG
енергия · ενεργεια



MHA-V12W/D2RN8-B
HB-A160/CGN8-B



55°C

35°C



43dB

64dB

2019

811/2013



ENERG
енергия · ενεργεια



MHA-V12W/D2RN8-B
HB-A160/CD30GN8-B



55°C

35°C



43dB

64dB

2019

811/2013



ENERG
енергия · ενεργεια



MHA-V12W/D2RN8-B
HB-A160/CDS90GN8-B



55°C 35°C

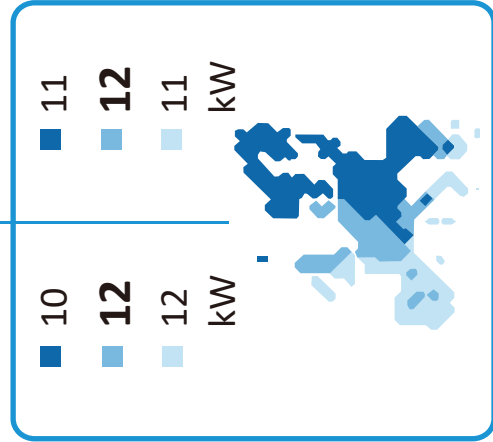
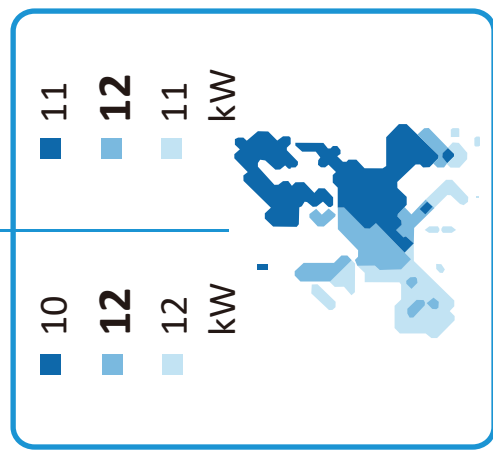


A
+++

A
++

43dB

64dB



ENERG
енергия · ενεργεια



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



55°C 35°C

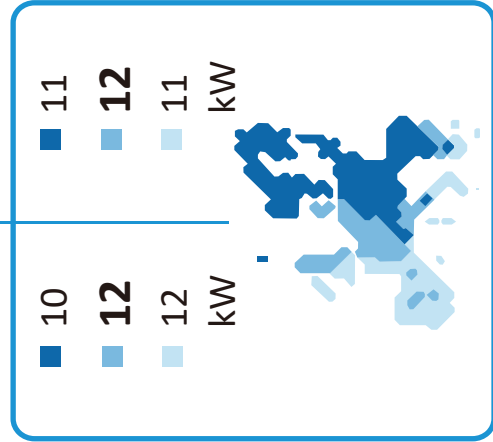
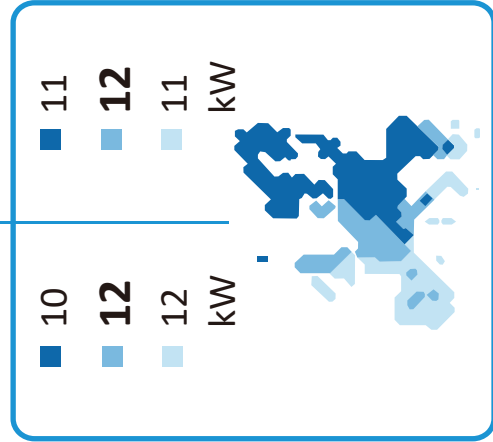


A
+++

A
++

42dB

64dB





ENERG
енергия · ενεργεια



MHA-V12W/D2RN8-B
HBT-A160/240CD60GN8-B



55°C 35°C



A
+++

A
++

42dB

64dB

2019

811/2013



ENERG
енергия · ενεργεια



MHA-V12W/D2RN8-B
HBT-A160/240CDS90GN8-B



55°C 35°C



A
+++

A
++

42dB

64dB

2019

811/2013



ENERG
енергия · ενεργεια



MHA-V14W/D2N8-B
HB-A160/CGN8-B



55°C

35°C



A⁺⁺⁺

A⁺⁺

43dB

65dB

2019

811/2013



ENERG
енергия · ενεργεια



MHA-V14W/D2N8-B
HB-A160/CD30GN8-B



55°C

35°C



A⁺⁺⁺


A⁺⁺

43dB

65dB



2019

811/2013




енергия · ενεργεια

MHA-V14W/D2N8-B
HB-A160/CDS90GN8-B


55°C

35°C




A **+++**

A **++**




43dB



65dB


11 **12** 14 kW

13 **14** 12 kW





2019

811/2013




енергия · ενεργεια

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


55°C

35°C




A **+++**

A **++**




44dB



65dB

11 **12** 14 kW

13 **14** 12 kW



2019

811/2013



ENERG
енергия · ενεργεια



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



55°C

35°C



A⁺⁺

A⁺⁺⁺

44dB

65dB

2019

811/2013



ENERG
енергия · ενεργεια



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



55°C

35°C



A⁺⁺

A⁺⁺⁺

44dB

65dB

2019

811/2013



ENERG
енергия · ενεργεια



MHA-V14W/D2RN8-B
HB-A160/CGN8-B



55°C

35°C



A
+++

A
++

43dB

65dB

■ 11
■ **12**
■ 14
kW

■ 13
■ **14**
■ 12
kW



2019

811/2013



ENERG
енергия · ενεργεια



MHA-V14W/D2RN8-B
HB-A160/CD30GN8-B



55°C

35°C



A
+++

A
++

43dB

65dB

■ 11
■ **12**
■ 14
kW

■ 13
■ **14**
■ 12
kW



2019

811/2013



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MHA-V14W/D2RN8-B
HB-A160/CDS90GN8-B



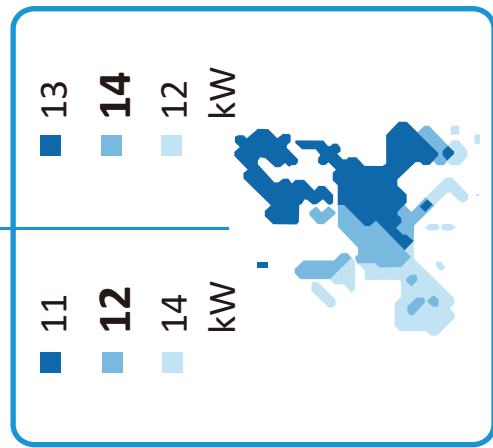
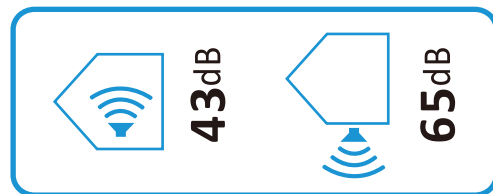
55°C

35°C



A
+++

A
++



2019

811/2013



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



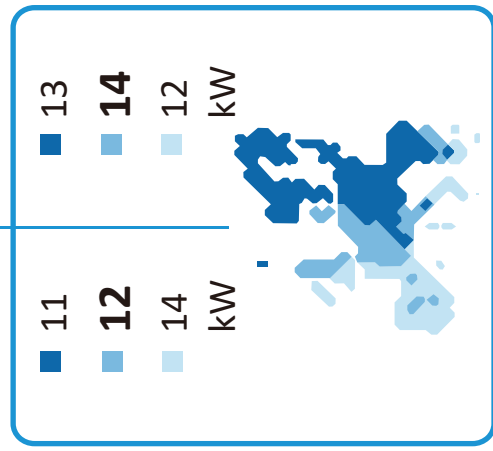
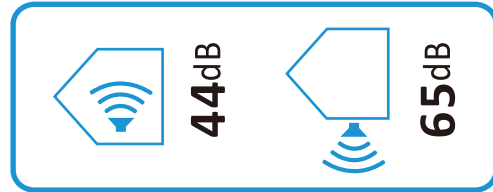
55°C

35°C



A
+++

A
++



2019

811/2013



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



55°C

35°C



A
+++

A
++

44dB

65dB

■ 11
■ 12
■ 14
kW

■ 13
■ 14
■ 12
kW



2019

811/2013



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



55°C

35°C



A
+++

A
++

44dB

65dB

■ 11
■ 12
■ 14
kW

■ 13
■ 14
■ 12
kW



2019

811/2013



ENERG
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MHA-V16W/D2N8-B
HB-A160/CGN8-B



55°C

35°C



A⁺⁺

A⁺⁺⁺

43dB

68dB

■ 12
■ **13**
■ 14
kW

■ 14
■ **15**
■ 13
kW



2019

811/2013



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MHA-V16W/D2N8-B
HB-A160/CD30GN8-B



55°C

35°C



A⁺⁺

A⁺⁺⁺

43dB

68dB


■ 12
■ **13**
■ 14
kW

■ 14
■ **15**
■ 13
kW





2019


811/2013



MHA-V16W/D2N8-B
HB-A160/CDS90GN8-B





55°C




A⁺⁺⁺


35°C



A⁺⁺⁺




43dB



68dB


■ 12 ■ **13** ■ 14 kW

■ 14 ■ **15** ■ 13 kW





2019


811/2013



MHA-V16W/D2N8-B
HB-T-A160/240CD30GN8-B





55°C




A⁺⁺⁺


35°C



A⁺⁺⁺




44dB



68dB

■ 12 ■ **13** ■ 14 kW

■ 14 ■ **15** ■ 13 kW



2019

811/2013



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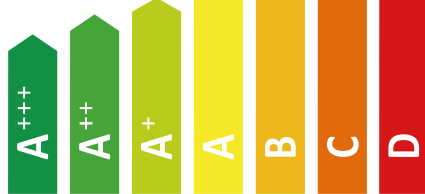


MHA-V16W/D2N8-B
HBT-A160/240CD60GN8-B



55°C

35°C



A⁺⁺

A⁺⁺⁺

44dB

68dB

■ 12
■ **13**
■ 14
kW

■ 14
■ **15**
■ 13
kW



2019

811/2013



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



55°C

35°C



A⁺⁺

A⁺⁺⁺

44dB

68dB

■ 12
■ **13**
■ 14
kW

■ 14
■ **15**
■ 13
kW



2019

811/2013



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енергия · ενεργεια



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



55°C

35°C

A⁺⁺⁺

A⁺⁺

A⁺

A

B

C

D

A⁺⁺⁺

A⁺⁺

A⁺⁺⁺

A⁺⁺



43dB



68dB

■ 12
■ 13
■ 14
kW

■ 14
■ 15
■ 13
kW



2019

811/2013



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



55°C

35°C

A⁺⁺⁺

A⁺⁺

A⁺

A

B

C

D

A⁺⁺⁺

A⁺⁺



43dB



68dB

■ 12
■ 13
■ 14
kW

■ 14
■ 15
■ 13
kW



2019

811/2013



ENERG
енергия · ενεργεια



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



55°C

35°C

A⁺⁺⁺

A⁺⁺

A⁺

A

B

C

D

A⁺⁺

A⁺⁺⁺



43dB



68dB

12
13
14
kW

14
15
13
kW



2019

811/2013



ENERG
енергия · ενεργεια



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



55°C

35°C

A⁺⁺⁺

A⁺⁺

A⁺

A

B

C

D

A⁺⁺

A⁺⁺⁺



44dB



68dB

12
13
14
kW

14
15
13
kW



2019

811/2013



ENERG
енергия · ενεργεια



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



55°C

35°C

A+++

A++

A+

A

B

C

D

A+++

A++

A+++

A++



44dB



68dB

■ 12
■ 13
■ 14
kW

■ 14
■ 15
■ 13
kW



2019

811/2013



ENERG
енергия · ενεργεια



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



55°C

35°C

A+++

A++

A+

A

B

C

D

A+++

A++

A+++

A++



44dB



68dB

■ 12
■ 13
■ 14
kW

■ 14
■ 15
■ 13
kW



2019

811/2013

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-B	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-B	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-B	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-B	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-B	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-B	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-B	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-B	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-B	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-B	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-B	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-B	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-B	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/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
MHA-V16W/D2N8-B	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/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
MHA-V16W/D2RN8-B	HB-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
	HBT-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

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-B	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-B	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-B	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-B	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-B	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-V12W/D2RN8-B	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-V14W/D2N8-B	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-V16W/D2RN8-B	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 (η_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 ³ /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 (η_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 ³ /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	$\eta_{target} =$	29.0%
2	Overall efficiency (η_e) =	34.6%
3	Pass or not (Criteria: $\eta_e \geq \eta_{target}$)	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 ³ /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)
B	黎浩标	21.9.27	修改参数	P1-4\16-17\27\37-39\ 41-44\80-82
C	赵浩伟	21.11.30	修改参数; 增加风机能效参数	P1\2\27\35-38\83-85
D	赵浩伟	22.1.20	修改参数	P41-P44\P80
E	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:

