ENERG Y IJA IE IA
енергия · ενεργεια

Midea

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 Y IJA IE IA
енергия · ενεργεια

Midea

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

XL

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

A++

A+
A
B
C
D
E
F

A+

44 dB

68 dB

12 kW
13 kW
14 kW

2019

811/2013

Model		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	3159	5.0	162.4	1621
	HBT-A100/190CD***GN8-B	A++	38	56	4.4	129.5	2744	3.4	102.1	3159	5.0	162.4	1621
	HBT-A100/240CD***GN8-B	A++	38	56	4.4	129.5	2744	3.4	102.1	3159	5.0	162.4	1621
MHA-V6W/D2N8-B	HB-A60/C***GN8-B	A++	38	58	5.7	137.9	3345	4.3	111.1	3681	5.1	164.7	1640
	HBT-A100/190CD***GN8-B	A++	38	58	5.7	137.9	3345	4.3	111.1	3681	5.1	164.7	1640
	HBT-A100/240CD***GN8-B	A++	38	58	5.7	137.9	3345	4.3	111.1	3681	5.1	164.7	1640
MHA-V8W/D2N8-B	HB-A100/C***GN8-B	A++	42	59	6.6	131.5	4056	5.8	112.0	4950	7.6	175.8	2259
	HBT-A100/190CD***GN8-B	A++	40	59	6.6	131.5	4056	5.8	112.0	4950	7.6	175.8	2259
	HBT-A100/240CD***GN8-B	A++	40	59	6.6	131.5	4056	5.8	112.0	4950	7.6	175.8	2259
MHA-V10W/D2N8-B	HB-A100/C***GN8-B	A++	42	60	7.7	136.6	4539	6.7	116.4	5540	8.6	180.3	2516
	HBT-A100/190CD***GN8-B	A++	40	60	7.7	136.6	4539	6.7	116.4	5540	8.6	180.3	2516
	HBT-A100/240CD***GN8-B	A++	40	60	7.7	136.6	4539	6.7	116.4	5540	8.6	180.3	2516
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
MHA-V12W/D2RN8-B	HB-A160/C***GN8-B	A++	43	64	11.6	135.1	6928	10.3	117.7	8420	12.5	173.8	3780
	HBT-A160/240CD***GN8-B	A++	42	64	11.6	135.1	6928	10.3	117.7	8420	12.5	173.8	3780
MHA-V14W/D2N8-B	HB-A160/C***GN8-B	A++	43	65	12.1	135.6	7202	11.0	118.9	8866	13.7	176.5	4088
	HBT-A160/240CD***GN8-B	A++	44	65	12.1	135.6	7202	11.0	118.9	8866	13.7	176.5	4088
MHA-V14W/D2RN8-B	HB-A160/C***GN8-B	A++	43	65	12.1	135.6	7203	11.0	118.9	8867	13.7	176.4	4092
	HBT-A160/240CD***GN8-B	A++	44	65	12.1	135.6	7203	11.0	118.9	8867	13.7	176.4	4092
MHA-V16W/D2N8-B	HB-A160/C***GN8-B	A++	43	68	13.0	133.3	7895	11.8	121.8	9309	13.8	176.1	4112
	HBT-A160/240CD***GN8-B	A++	44	68	13.0	133.3	7895	11.8	121.8	9309	13.8	176.1	4112
MHA-V16W/D2RN8-B	HB-A160/C***GN8-B	A++	43	68	13.0	133.2	7896	11.8	121.8	9310	13.8	175.9	4116
	HBT-A160/240CD***GN8-B	A++	44	68	13.0	133.2	7896	11.8	121.8	9310	13.8	175.9	4116

Model		For low - temperature appl ication											
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	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
MHA-V12W/D2RN8-B	HB-A160/C***GN8-B	A+++	43	64	12.0	189.3	5153	11.4	160.2	6871	11.1	255.6	2296
	HBT-A160/240CD***GN8-B	A+++	42	64	12.0	189.3	5153	11.4	160.2	6871	11.1	255.6	2296
MHA-V14W/D2N8-B	HB-A160/C***GN8-B	A+++	43	65	13.7	185.7	6012	12.6	159.6	7667	12.1	260.3	2457
	HBT-A160/240CD***GN8-B	A+++	44	65	13.7	185.7	6012	12.6	159.6	7667	12.1	260.3	2457
MHA-V14W/D2RN8-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
MHA-V16W/D2N8-B	HB-A160/C***GN8-B	A+++	43	68	15.2	181.7	6804	13.7	157.8	8431	13.1	248.5	2781
	HBT-A160/240CD***GN8-B	A+++	44	68	15.2	181.7	6804	13.7	157.8	8431	13.1	248.5	2781
MHA-V16W/D2RN8-B	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 heater		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
Indoor unit sound power (*)		dB	43[a)] /44[b)]	43[a)] /44[b)]	43[a)] /42[b)]	43[a)] /44[b)]	43[a)] /44[b)]
Outdoor unit sound power (*)	Average climate low temperature application	dB	65	68	64	65	68
	Average climate medium temperature application	dB	65	68	64	65	68
Capicity 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]	13.7	15.2	12.0	13.7	15.2
	Seasonal space heating efficiency (ηs)	[%]	185.7	181.7	189.3	185.6	181.6
	Annual energy consumption	[kWh]	6,012	6,804	5,153	6,013	6,805
Space heating 55°C	Prated (declared heating capacity) @ –10°C	[kW]	12.1	13.0	11.6	12.1	13.0
	Seasonal space heating efficiency (ηs)	[%]	135.6	133.3	135.1	135.6	133.2
	Annual energy consumption	[kWh]	7,202	7,895	6,928	7,203	7,896
Part load conditions space heating average climate low temperature application							
(A) condition (-7°C)	Pdh (declared heating capacity)	[kW]	12.14	13.45	10.61	12.14	13.45
	COPd (declared COP)	-	2.79	2.72	2.88	2.79	2.72
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	7.94	8.56	6.69	7.94	8.56
	COPd (declared COP)	-	4.52	4.41	4.65	4.52	4.41
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	5.20	5.70	4.44	5.20	5.70
	COPd (declared COP)	-	6.68	6.56	6.62	6.68	6.56
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	3.75	3.78	3.74	3.75	3.78
	COPd (declared COP)	-	8.52	8.51	8.47	8.52	8.51
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(E) Tol (temperature operating limit)	Tol (temperature operating limit)	[°C]	-10.00	-10.00	-10.00	-10.00	-10.00
	Pdh (declared heating capacity)	[kW]	11.47	12.52	10.74	11.47	12.52
	COPd (declared COP)	-	2.59	2.48	2.77	2.59	2.48
	WTOL (Heating water Operation Limit)	[°C]	65	65	65	65	65

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

Product fiche 2

Heat pump space heater		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
(F) Tbivalent temperature	Tbiv	[°C]	-7.00	-7.00	-7.00	-7.00	-7.00
	Pdh (declared heating capacity)	[kW]	12.14	13.45	10.61	12.14	13.45
	COPd (declared COP)	-	2.79	2.72	2.88	2.79	2.72
Supplementary capacity at P_design	Psup (@Tdesignh: –10°C)	[kW]	2.23	2.68	1.26	2.23	2.68
Part load conditions space heating average climate medium temperature application							
(A) condition (-7°C)	Pdh (declared heating capacity)	[kW]	10.68	11.52	10.24	10.68	11.52
	COPd (declared COP)	-	2.01	1.99	2.01	2.01	1.99
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	6.86	7.18	6.52	6.86	7.18
	COPd (declared COP)	-	3.43	3.34	3.44	3.43	3.34
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	4.63	4.67	4.36	4.63	4.67
	COPd (declared COP)	-	4.66	4.61	4.59	4.66	4.61
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	3.31	3.31	3.29	3.31	3.31
	COPd (declared COP)	-	6.13	6.07	6.05	6.13	6.07
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(E) Tol (temperature operating limit)	Tol (temperature operating limit)	[°C]	-10.00	-10.00	-10.00	-10.00	-10.00
	Pdh (declared heating capacity)	[kW]	9.19	10.33	9.10	9.19	10.33
	COPd (declared COP)	-	1.76	1.80	1.79	1.76	1.80
	WTOL (Heating water Operation Limit)	[°C]	65	65	65	65	65
(F) Tbivalent temperature	Tbiv	[°C]	-7.00	-7.00	-7.00	-7.00	-7.00
	Pdh (declared heating capacity)	[kW]	10.68	11.52	10.24	10.68	11.52
	COPd (declared COP)	-	2.01	1.99	2.01	2.01	1.99
Supplementary capacity at P_design	Psup (@Tdesignh: –10°C)	[kW]	2.91	2.67	2.50	2.91	2.67
Colder climate (Design temperature = –22°C)							
Space heating 35°C	Prated (declared heating capacity) @ –22°C	[kW]	12.6	13.7	11.4	12.6	13.7
	Seasonal space heating efficiency (ηs)	[%]	159.6	157.8	160.2	159.6	157.8
	Annual energy consumption	[kWh]	7,667	8,431	6,871	7,667	8,431

Product fiche 3

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

Product fiche 4

Heat pump space heater		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
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	4.32	4.42	4.06	4.32	4.42
	COPd (declared COP)	-	3.66	3.79	3.60	3.66	3.79
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	3.06	2.97	2.78	3.06	2.97
	COPd (declared COP)	-	4.72	4.81	4.54	4.72	4.81
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	3.33	3.43	3.33	3.33	3.43
	COPd (declared COP)	-	6.25	6.29	6.25	6.25	6.29
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(E) Tol (temperature operating limit)	Tol (temperature operating limit)	[°C]	-22.00	-22.00	-22.00	-22.00	-22.00
	Pdh (declared heating capacity)	[kW]	4.20	5.21	4.19	4.20	5.21
	COPd (declared COP)	-	1.13	1.23	1.13	1.13	1.23
	WTOL (Heating water Operation Limit)	[°C]	65	65	65	65	65
(F) Tbivalent temperature	Tblv	[°C]	-15.00	-15.00	-15.00	-15.00	-15.00
	Pdh (declared heating capacity)	[kW]	8.94	9.61	8.41	8.94	9.61
	COPd (declared COP)	-	1.79	1.86	1.84	1.79	1.86
Supplementary capacity at P_design	Psup (@Tdesignh: –22°C)	[kW]	6.76	6.59	6.12	6.76	6.59
Warmer climate (Design temperature = 2°C)							
Space heating 35°C	Prated (declared heating capacity) @ 2°C	[kW]	12.1	13.1	11.1	12.1	13.1
	Seasonal space heating efficiency (ηs)	[%]	260.3	248.5	255.6	259.8	248.1
	Annual energy consumption	[kWh]	2,457	2,781	2,296	2,462	2,786
Space heating 55°C	Prated (declared heating capacity) @ 2°C	[kW]	13.7	13.8	12.5	13.7	13.8
	Seasonal space heating efficiency (ηs)	[%]	176.5	176.1	173.8	176.4	175.9
	Annual energy consumption	[kWh]	4,088	4,112	3,780	4,092	4,116
Part load conditions space heating warmer climate low temperature application							
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	12.04	13.10	11.26	12.04	13.10
	COPd (declared COP)	-	3.44	3.35	3.59	3.44	3.35
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	7.78	8.41	7.14	7.78	8.41
	COPd (declared COP)	-	5.84	5.36	5.87	5.84	5.36
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90

Product fiche 5

Heat pump space heater		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
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	3.75	3.87	3.55	3.75	3.87
	COPd (declared COP)	-	8.25	8.11	7.94	8.25	8.11
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(E) Tol (temperature operating limit)	Tol (temperature operating limit)	[°C]	2.00	2.00	2.00	2.00	2.00
	Pdh (declared heating capacity)	[kW]	12.04	13.10	11.26	12.04	13.10
	COPd (declared COP)	-	3.44	3.35	3.59	3.44	3.35
	WTOL (Heating water Operation Limit)	[°C]	65	65	65	65	65
(F) Tbivalent temperature	Tblv	[°C]	7.00	7.00	7.00	7.00	7.00
	Pdh (declared heating capacity)	[kW]	7.78	8.41	7.14	7.78	8.41
	COPd (declared COP)	-	5.84	5.36	5.87	5.84	5.36
Supplementary capacity at P_design	Psup (@Tdesignh: 2°C)	[kW]	0.00	0.00	0.00	0.00	0.00
Part load conditions space heating warmer climate medium temperature application							
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	13.04	13.38	12.07	13.04	13.38
	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
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	8.83	8.86	8.04	8.83	8.86
	COPd (declared COP)	-	3.91	3.84	3.86	3.91	3.84
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	4.08	4.06	3.75	4.08	4.06
	COPd (declared COP)	-	5.90	5.86	5.70	5.90	5.86
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(E) Tol (temperature operating limit)	Tol (temperature operating limit)	[°C]	2.00	2.00	2.00	2.00	2.00
	Pdh (declared heating capacity)	[kW]	13.04	13.38	12.07	13.04	13.38
	COPd (declared COP)	-	2.20	2.29	2.31	2.20	2.29
	WTOL (Heating water Operation Limit)	[°C]	65	65	65	65	65
(F) Tbivalent temperature	Tblv	[°C]	7.00	7.00	7.00	7.00	7.00
	Pdh (declared heating capacity)	[kW]	8.83	8.86	8.04	8.83	8.86
	COPd (declared COP)	-	3.91	3.84	3.86	3.91	3.84
Supplementary capacity at P_design	Psup (@Tdesignh: 2°C)	[kW]	0.66	0.42	0.43	0.66	0.42

Product fiche 6

Heat pump space heater		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
Product description	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
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]	0.024	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 model)	[kW]	0.000	0.000	0.000	0.000	0.000
	Qelec (Daily electricity consumption)	[kWh]	/	/	/	/	/
	Qfuel (Daily fuel consumption)	[kWh]	/	/	/	/	/

Note:
Indoor unit type explanation:
Hydraulic module series
1).HB-A60/C***GN8-B includes the following type:
HB-A60/CGN8-B: without back-up heater.
HB-A60/CD30GN8-B: with 3kW back-up heater and 1-Phase Source.
2).HB-A100/C***GN8-B includes the following type:
HB-A100/CGN8-B: without back-up heater.
HB-A100/CD30GN8-B: with 3kW back-up heater and 1-Phase Source.
HB-A100/CDS90GN8-B: with 9kW back-up heater and 3-Phase Source.
3).HB-A160/C***GN8-B includes the following type:
HB-A160/CGN8-B: without back-up heater.
HB-A160/CD30GN8-B: with 3kW back-up heater and 1-Phase Source.
HB-A160/CDS90GN8-B: with 9kW back-up heater and 3-Phase Source.

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

Technical parameters

Model(s):	Outdoor unit: MHA-V16W/D2RN8-B Indoor unit: HB-A160/C***GN8-B, HBT-A160/240CD***GN8-B
Air-to-water heat pump:	YES
Water-to-water heat pump:	NO
Brine-to-water heat pump:	NO
Low-temperature heat pump:	NO
Equipped with a supplementary heater:	YES
Heat pump combination heater:	YES
Declared climate condition:	AVERAGE

Parameters are declared for medium-temperature application.

Item	Symbol	Value	Unit
Rated heat output (*)	Prated	13.0	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7℃	Pdh	11.52	kW
Tj = 2℃	Pdh	7.18	kW
Tj = 7℃	Pdh	4.67	kW
Tj = 12℃	Pdh	3.31	kW
Tj = bivalent temperature	Pdh	11.52	kW
Tj = operating limit	Pdh	10.33	kW
For air-to-water heat pumps: Tj = -15℃	Pdh	-	kW
Bivalent temperature	T_{biv}	-7	°C
Cycling interval capacity for heating	P_{cych}	-	kW
Degradation co-efficient (**)	C_{dh}	0.9	--
Power consumption in modes other than active mode			
Off mode	P_{off}	0.020	kW
Standby mode	P_{sb}	0.020	kW
Thermostat-off mode	P_{to}	0.030	kW
Crankcase heater mode	P_{ck}	0.000	kW

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	ηs	133.2	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7℃	COPd	1.99	-
Tj = 2℃	COPd	3.34	-
Tj = 7℃	COPd	4.61	-
Tj = 12℃	COPd	6.07	-
Tj = bivalent temperature	COPd	1.99	-
Tj = operating limit	COPd	1.80	-
For air-to-water heat pumps: Tj = -15℃	COPd	-	-
For air-to-water heat pumps: Operation limit temperature	TOL	-10	°C
Cycling interval efficiency	COP_{cyc}	-	-
Heating water operating limit temperature	W_{TOL}	65	°C
Supplementary heater			
Rated heat output (**)	P_{sup}	2.67	kW
Type of energy input	Electrical		

Other items			
Capacity control	variable		
Sound power level, indoors/outdoors	L_{WA}	43[a)] /68 44[b)] /68	dB
Annual energy consumption	Q_{HE}	7896	kWh

For air-to-water heat pumps: Rated air flow rate, outdoors	-	4650	m^3/h
For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	-	m^3/h

For heat pump combination heater:			
Declared load profile	XL		
Daily electricity consumption	Q_{clec}	6.35	kWh
Annual electricity consumption	AEC	1360	kWh

Water heating energy efficiency	η_{wh}	123	%
Daily fuel consumption	Q_{fuel}	-	kWh
Annual fuel consumption	AFC	-	GJ

Contact details	GD Midea Heating & Ventilating Equipment Co. Ltd (Penglai industry road, Beijiao, Shunde, Foshan, Guangdong, P.R China)

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).

(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

a) Represents : HB-A160/C***GN8-B

b) Represents : HBT-A160/240CD***GN8-B

Technical parameters

Model(s):	Outdoor unit: MHA-V16W/D2RN8-B Indoor unit: HB-A160/C***GN8-B, HBT-A160/240CD***GN8-B
Air-to-water heat pump:	YES
Water-to-water heat pump:	NO
Brine-to-water heat pump:	NO
Low-temperature heat pump:	NO
Equipped with a supplementary heater:	YES
Heat pump combination heater:	YES
Declared climate condition:	COLDER
Parameters are declared for medium-temperature application.	

Item	Symbol	Value	Unit
Rated heat output (*)	Prated	11.8	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7℃	Pdh	7.64	kW
Tj = 2℃	Pdh	4.42	kW
Tj = 7℃	Pdh	2.97	kW
Tj = 12℃	Pdh	3.43	kW
Tj = bivalent temperature	Pdh	9.61	kW
Tj = operating limit	Pdh	5.21	kW
For air-to-water heat pumps: Tj = -15℃	Pdh	-	kW
Bivalent temperature	T_{biv}	-15	°C
Cycling interval capacity for heating	P_{cych}	-	kW
Degradation co-efficient (**)	C_{dh}	0.9	--
Power consumption in modes other than active mode			
Off mode	P_{off}	0.020	kW
Standby mode	P_{sb}	0.020	kW
Thermostat-off mode	P_{to}	0.030	kW
Crankcase heater mode	P_{ck}	0.000	kW

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	ηs	121.8	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7℃	COPd	2.65	-
Tj = 2℃	COPd	3.79	-
Tj = 7℃	COPd	4.81	-
Tj = 12℃	COPd	6.29	-
Tj = bivalent temperature	COPd	1.86	-
Tj = operating limit	COPd	1.23	-
For air-to-water heat pumps: Tj = -15℃	COPd	-	-
For air-to-water heat pumps: Operation limit temperature	TOL	-22	°C
Cycling interval efficiency	COP_{cyc}	-	-
Heating water operating limit temperature	W_{TOL}	65	°C
Supplementary heater			
Rated heat output (**)	P_{sup}	6.59	kW
Type of energy input	Electrical		

Other items			
Capacity control	variable		
Sound power level, indoors/outdoors	L_{WA}	-	dB
Annual energy consumption	Q_{HE}	9310	kWh

For air-to-water heat pumps: Rated air flow rate, outdoors	-	4650	m^3/h
For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	-	m^3/h

For heat pump combination heater:							
Declared load profile	XL			**Water heating energy efficiency**	η_{wh}	92	%
Daily electricity consumption	Q_{clec}	8.49	kWh	Daily fuel consumption	Q_{fuel}	-	kWh
Annual electricity consumption	AEC	1834	kWh	Annual fuel consumption	AFC	-	GJ

Contact details	GD Midea Heating & Ventilating Equipment Co. Ltd (Penglai industry road, Beijiao, Shunde, Foshan, Guangdong, P.R China)

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).

(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

Technical parameters

Model(s):	Outdoor unit: MHA-V16W/D2RN8-B Indoor unit: HB-A160/C***GN8-B, HBT-A160/240CD***GN8-B
Air-to-water heat pump:	YES
Water-to-water heat pump:	NO
Brine-to-water heat pump:	NO
Low-temperature heat pump:	NO
Equipped with a supplementary heater:	YES
Heat pump combination heater:	YES
Declared climate condition:	WARMER

Parameters are declared for medium-temperature application.

Item	Symbol	Value	Unit
Rated heat output (*)	Prated	13.8	kW
Declared capacity for heating for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7℃	Pdh	-	kW
Tj = 2℃	Pdh	13.38	kW
Tj = 7℃	Pdh	8.86	kW
Tj = 12℃	Pdh	4.06	kW
Tj = bivalent temperature	Pdh	8.86	kW
Tj = operating limit	Pdh	13.38	kW
For air-to-water heat pumps: Tj = -15℃	Pdh	-	kW
Bivalent temperature	T_{biv}	7	°C
Cycling interval capacity for heating	P_{cych}	-	kW
Degradation co-efficient (**)	C_{dh}	0.9	--
Power consumption in modes other than active mode			
Off mode	P_{off}	0.020	kW
Standby mode	P_{sb}	0.020	kW
Thermostat-off mode	P_{to}	0.030	kW
Crankcase heater mode	P_{ck}	0.000	kW

Item	Symbol	Value	Unit
Seasonal space heating energy efficiency	ηs	175.9	%
Declared coefficient of performance or primary energy ratio for part load at indoor temperature 20 °C and outdoor temperature Tj			
Tj = -7℃	COPd	-	-
Tj = 2℃	COPd	2.29	-
Tj = 7℃	COPd	3.84	-
Tj = 12℃	COPd	5.86	-
Tj = bivalent temperature	COPd	3.84	-
Tj = operating limit	COPd	2.29	-
For air-to-water heat pumps: Tj = -15℃	COPd	-	-
For air-to-water heat pumps: Operation limit temperature	TOL	2	°C
Cycling interval efficiency	COP_{cyc}	-	-
Heating water operating limit temperature	W_{TOL}	65	°C
Supplementary heater			
Rated heat output (**)	P_{sup}	0.42	kW
Type of energy input	Electrical		

Other items			
Capacity control	variable		
Sound power level, indoors/outdoors	L_{WA}	-	dB
Annual energy consumption	Q_{HE}	4116	kWh

For air-to-water heat pumps: Rated air flow rate, outdoors	-	4650	m^3/h
For water-or brine-to-water heat pumps: Rated brine or water flow rate, outdoor heat exchanger	-	-	m^3/h

For heat pump combination heater:			
Declared load profile	XL		
Daily electricity consumption	Q_{clec}	5.12	kWh
Annual electricity consumption	AEC	1088	kWh

Water heating energy efficiency	η_{wh}	153	%
Daily fuel consumption	Q_{fuel}	-	kWh
Annual fuel consumption	AFC	-	GJ

Contact details	GD Midea Heating & Ventilating Equipment Co. Ltd (Penglai industry road, Beijiao, Shunde, Foshan, Guangdong, P.R China)

(*) For heat pump space heaters and heat pump combination heaters, the rated heat output Prated is equal to the design load for heating Pdesignh, and the rated heat output of a supplementary heater Psup is equal to the supplementary capacity for heating sup(Tj).

(**) If Cdh is not determined by measurement then the default degradation coefficient is Cdh = 0,9.

Information requirements for comfort chillers

Model(s):	Outdoor unit: MHA-V16W/D2RN8-B Indoor unit: HB-A160/C***GN8-B, HBT-A160/240CD***GN8-B
Outdoor side heat exchanger of chiller:	Air to water
Indoor side heat exchanger chiller:	Water
Type:	Compressor driven vapour compression
Driver of compressor:	Electric motor

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity	$P_{rated,c}$	14.3	kW	Seasonal space cooling energy efficiency	$\eta_{s,c}$	183.6	%
Declared cooling capacity for part load at given outdoor temperature Tj				Declared energy efficiency ratio for part load at given outdoor temperature Tj			
Tj=+35°C	P_{dc}	14.31	kW	Tj=+35°C	EER_d	2.47	-
Tj=+30°C	P_{dc}	10.68	kW	Tj=+30°C	EER_d	3.63	-
Tj=+25°C	P_{dc}	6.76	kW	Tj=+25°C	EER_d	5.27	-
Tj=+20°C	P_{dc}	3.41	kW	Tj=+20°C	EER_d	7.29	-
Degradation co-efficient for chillers (*)	C_{dc}	0.9	-				
Power consumption in modes other than "active mode"							
Off mode	P_{OFF}	0.020	kW	Crankcase heater mode	P_{CK}	0.000	kW
Thermosat-off mode	P_{TO}	0.010	kW	Standby mode	P_{SB}	0.020	kW
Other items							
Capacity control	variable			For air-to-water comfort chillers: air flow rate, outdoor measured	-	4650	m^3/h
Sound power level, indoors / outdoors	L_{WA}	44/68	dB				
Emissions of nitrogen oxides (if applicable)	NO_x (**)	-	mg/kWh input GCV	For water / brine-to-water chillers: Rated brine or water flow rate, outdoor side heat exchanger	-	-	m^3/h
GWP of the refrigerant	-	675	kg CO_2 eq (100years)				

Standard rating conditions used	Low temperature application
Contact details	GD Midea Heating & Ventilating Equipment Co. , Ltd. Penglai industry Road, Beijiao, Shunde, Foshan, Guangdong, 528311 P.R. China

(*) If C_{dc} is not determined by measurement then the default degradation coefficient of chillers shall be 0,9.
(**) From 26 September 2018.

Information requirements for comfort chillers

Model(s):	Outdoor unit: MHA-V16W/D2RN8-B Indoor unit: HB-A160/C***GN8-B, HBT-A160/240CD***GN8-B
Outdoor side heat exchanger of chiller:	Air to water
Indoor side heat exchanger chiller:	Water
Type:	Compressor driven vapour compression
Driver of compressor:	Electric motor

Item	Symbol	Value	Unit	Item	Symbol	Value	Unit
Rated cooling capacity	$P_{rated,c}$	15.4	kW	Seasonal space cooling energy efficiency	$\eta_{s,c}$	265.3	%
Declared cooling capacity for part load at given outdoor temperature Tj				Declared energy efficiency ratio for part load at given outdoor temperature Tj			
Tj=+35°C	P_{dc}	15.40	kW	Tj=+35°C	EER_d	3.50	-
Tj=+30°C	P_{dc}	11.42	kW	Tj=+30°C	EER_d	5.14	-
Tj=+25°C	P_{dc}	7.27	kW	Tj=+25°C	EER_d	7.83	-
Tj=+20°C	P_{dc}	3.40	kW	Tj=+20°C	EER_d	10.35	-
Degradation co-efficient for chillers (*)	C_{dc}	0.9	-				
Power consumption in modes other than "active mode"							
Off mode	P_{OFF}	0.020	kW	Crankcase heater mode	P_{CK}	0.000	kW
Thermosat-off mode	P_{TO}	0.010	kW	Standby mode	P_{SB}	0.020	kW
Other items							
Capacity control	variable			For air-to-water comfort chillers: air flow rate, outdoor measured	-	4650	m^3/h
Sound power level, indoors / outdoors	L_{WA}	44/67	dB				
Emissions of nitrogen oxides (if applicable)	NO_x (**)	-	mg/kWh input GCV	For water / brine-to-water chillers: Rated brine or water flow rate, outdoor side heat exchanger	-	-	m^3/h
GWP of the refrigerant	-	675	kg $CO_{2\ eq}$ (100years)				
Standard rating conditions used	Medium temperature application						
Contact details	GD Midea Heating & Ventilating Equipment Co. , Ltd. Penglai industry Road, Beijiao, Shunde, Foshan, Guangdong, 528311 P.R. China						

(*) If C_{dc} is not determined by measurement then the default degradation coefficient of chillers shall be 0,9.
(**) From 26 September 2018.

Condition(°C)	Outdoor unit	Indoor unit	Capacity (kW)	Power input (kW)	EER/COP (/)
Ambient Temperature：35/24 Water temperature：12/7	MHA-V4W/D2N8-B	HB-A60/C***GN8-B HBTA100/190**GN8-B HBT-A100/240CD***GN8-B	4.70	1.36	3.45
	MHA-V6W/D2N8-B	HB-A60/C***GN8-B HBTA100/190**GN8-B HBT-A100/240CD***GN8-B	7.00	2.33	3.00
	MHA-V8W/D2N8-B	HB-A100/C***GN8-B HBTA100/190**GN8-B HBT-A100/240CD***GN8-B	7.40	2.19	3.38
	MHA-V10W/D2N8-B	HB-A100/C***GN8-B HBTA100/190**GN8-B HBT-A100/240CD***GN8-B	8.20	2.48	3.30
	MHA-V12W/D2N8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	11.60	4.22	2.75
	MHA-V14W/D2N8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	12.70	4.98	2.55
	MHA-V16W/D2N8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	14.00	5.71	2.45
	MHA-V12W/D2RN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	11.60	4.22	2.75
	MHA-V14W/D2RN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	12.70	4.98	2.55
	MHA-V16W/D2RN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	14.00	5.71	2.45
Ambient Temperature：35/24 Water temperature：23/18	MHA-V4W/D2N8-B	HB-A60/C***GN8-B HBTA100/190**GN8-B HBT-A100/240CD***GN8-B	4.50	0.81	5.55
	MHA-V6W/D2N8-B	HB-A60/C***GN8-B HBTA100/190**GN8-B HBT-A100/240CD***GN8-B	6.55	1.34	4.90
	MHA-V8W/D2N8-B	HB-A100/C***GN8-B HBTA100/190**GN8-B HBT-A100/240CD***GN8-B	8.40	1.66	5.05
	MHA-V10W/D2N8-B	HB-A100/C***GN8-B HBTA100/190**GN8-B HBT-A100/240CD***GN8-B	10.00	2.08	4.80
	MHA-V12W/D2N8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	12.00	3.00	4.00
	MHA-V14W/D2N8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	13.50	3.75	3.60
	MHA-V16W/D2N8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	14.90	4.38	3.40
	MHA-V12W/D2RN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	12.00	3.00	4.00
	MHA-V14W/D2RN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	13.50	3.75	3.60
	MHA-V16W/D2RN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	14.90	4.38	3.40
Ambient Temperature：7/6 Water temperature：30/35	MHA-V4W/D2N8-B	HB-A60/C***GN8-B HBTA100/190**GN8-B HBT-A100/240CD***GN8-B	4.25	0.82	5.20

	MHA-V6W/D2N8-B	HB-A60/C***GN8-B HBTA100/190**GN8-B HBT-A100/240CD***GN8-B	6.20	1.24	5.00
	MHA-V8W/D2N8-B	HB-A100/C***GN8-B HBTA100/190**GN8-B HBT-A100/240CD***GN8-B	8.30	1.60	5.20
	MHA-V10W/D2N8-B	HB-A100/C***GN8-B HBTA100/190**GN8-B HBT-A100/240CD***GN8-B	10.00	2.00	5.00
	MHA-V12W/D2N8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	12.10	2.44	4.95
	MHA-V14W/D2N8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	14.50	3.09	4.70
	MHA-V16W/D2N8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	16.00	3.56	4.50
	MHA-V12W/D2RN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	12.10	2.44	4.95
	MHA-V14W/D2RN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	14.50	3.09	4.70
	MHA-V16W/D2RN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	16.00	3.56	4.50
Ambient Temperature：2/1 Water temperature：30/35	MHA-V4W/D2N8-B	HB-A60/C***GN8-B HBTA100/190**GN8-B HBT-A100/240CD***GN8-B	4.45	1.10	4.05
	MHA-V6W/D2N8-B	HB-A60/C***GN8-B HBTA100/190**GN8-B HBT-A100/240CD***GN8-B	5.50	1.39	3.95
	MHA-V8W/D2N8-B	HB-A100/C***GN8-B HBTA100/190**GN8-B HBT-A100/240CD***GN8-B	7.10	1.73	4.10
	MHA-V10W/D2N8-B	HB-A100/C***GN8-B HBTA100/190**GN8-B HBT-A100/240CD***GN8-B	8.20	2.02	4.05
	MHA-V12W/D2N8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	9.30	2.35	3.95
	MHA-V14W/D2N8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	11.40	3.12	3.65
	MHA-V16W/D2N8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	13.00	3.71	3.50
	MHA-V12W/D2RN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	9.30	2.35	3.95
	MHA-V14W/D2RN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	11.40	3.12	3.65
	MHA-V16W/D2RN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	13.00	3.71	3.50
Ambient Temperature：-7/-8 Water temperature：30/35	MHA-V4W/D2N8-B	HB-A60/C***GN8-B HBTA100/190**GN8-B HBT-A100/240CD***GN8-B	4.80	1.52	3.15
	MHA-V6W/D2N8-B	HB-A60/C***GN8-B HBTA100/190**GN8-B HBT-A100/240CD***GN8-B	6.10	2.00	3.05
	MHA-V8W/D2N8-B	HB-A100/C***GN8-B HBTA100/190**GN8-B HBT-A100/240CD***GN8-B	7.10	2.18	3.25

	MHA-V10W/D2N8-B	HB-A100/C***GN8-B HBTA100/190**GN8-B HBT-A100/240CD***GN8-B	8.25	2.62	3.15
	MHA-V12W/D2N8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	10.00	3.33	3.00
	MHA-V14W/D2N8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	12.00	4.29	2.80
	MHA-V16W/D2N8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	13.30	4.93	2.70
	MHA-V12W/D2RN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	10.00	3.33	3.00
	MHA-V14W/D2RN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	12.00	4.29	2.80
	MHA-V16W/D2RN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	13.30	4.93	2.70
Ambient Temperature：7/6 Water temperature：40/45	MHA-V4W/D2N8-B	HB-A60/C***GN8-B HBTA100/190**GN8-B HBT-A100/240CD***GN8-B	4.35	1.14	3.80
	MHA-V6W/D2N8-B	HB-A60/C***GN8-B HBTA100/190**GN8-B HBT-A100/240CD***GN8-B	6.35	1.69	3.75
	MHA-V8W/D2N8-B	HB-A100/C***GN8-B HBTA100/190**GN8-B HBT-A100/240CD***GN8-B	8.20	2.08	3.95
	MHA-V10W/D2N8-B	HB-A100/C***GN8-B HBTA100/190**GN8-B HBT-A100/240CD***GN8-B	10.00	2.63	3.80
	MHA-V12W/D2N8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	12.30	3.24	3.80
	MHA-V14W/D2N8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	14.20	3.89	3.65
	MHA-V16W/D2N8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	16.00	4.44	3.60
	MHA-V12W/D2RN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	12.30	3.24	3.80
	MHA-V14W/D2RN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	14.20	3.89	3.65
	MHA-V16W/D2RN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	16.00	4.44	3.60
Ambient Temperature：2/1 Water temperature：40/45	MHA-V4W/D2N8-B	HB-A60/C***GN8-B HBTA100/190**GN8-B HBT-A100/240CD***GN8-B	5.10	1.70	3.00
	MHA-V6W/D2N8-B	HB-A60/C***GN8-B HBTA100/190**GN8-B HBT-A100/240CD***GN8-B	5.80	1.93	3.00
	MHA-V8W/D2N8-B	HB-A100/C***GN8-B HBTA100/190**GN8-B HBT-A100/240CD***GN8-B	7.40	2.28	3.25
	MHA-V10W/D2N8-B	HB-A100/C***GN8-B HBTA100/190**GN8-B HBT-A100/240CD***GN8-B	7.85	2.45	3.20
	MHA-V12W/D2N8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	10.70	3.57	3.00

	MHA-V14W/D2N8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	11.70	4.09	2.86
	MHA-V16W/D2N8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	12.80	4.49	2.85
	MHA-V12W/D2RN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	10.70	3.57	3.00
	MHA-V14W/D2RN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	11.70	4.09	2.86
	MHA-V16W/D2RN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	12.80	4.49	2.85
Ambient Temperature：-7/-8 Water temperature：40/45	MHA-V4W/D2N8-B	HB-A60/C***GN8-B HBTA100/190**GN8-B HBT-A100/240CD***GN8-B	4.30	1.83	2.35
	MHA-V6W/D2N8-B	HB-A60/C***GN8-B HBTA100/190**GN8-B HBT-A100/240CD***GN8-B	5.40	2.25	2.40
	MHA-V8W/D2N8-B	HB-A100/C***GN8-B HBTA100/190**GN8-B HBT-A100/240CD***GN8-B	6.60	2.59	2.55
	MHA-V10W/D2N8-B	HB-A100/C***GN8-B HBTA100/190**GN8-B HBT-A100/240CD***GN8-B	7.35	2.88	2.55
	MHA-V12W/D2N8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	10.20	4.25	2.40
	MHA-V14W/D2N8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	11.80	5.02	2.35
	MHA-V16W/D2N8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	12.90	5.78	2.23
	MHA-V12W/D2RN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	10.20	4.25	2.40
	MHA-V14W/D2RN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	11.80	5.02	2.35
	MHA-V16W/D2RN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	12.90	5.78	2.23
Ambient Temperature：7/6 Water temperature：47/55	MHA-V4W/D2N8-B	HB-A60/C***GN8-B HBTA100/190**GN8-B HBT-A100/240CD***GN8-B	4.40	1.49	2.95
	MHA-V6W/D2N8-B	HB-A60/C***GN8-B HBTA100/190**GN8-B HBT-A100/240CD***GN8-B	6.00	2.00	3.00
	MHA-V8W/D2N8-B	HB-A100/C***GN8-B HBTA100/190**GN8-B HBT-A100/240CD***GN8-B	7.50	2.36	3.18
	MHA-V10W/D2N8-B	HB-A100/C***GN8-B HBTA100/190**GN8-B HBT-A100/240CD***GN8-B	9.50	3.06	3.10
	MHA-V12W/D2N8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	12.00	3.87	3.10
	MHA-V14W/D2N8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	13.80	4.60	3.00
	MHA-V16W/D2N8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	16.00	5.52	2.90

	MHA-V12W/D2RN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	12.00	3.87	3.10
	MHA-V14W/D2RN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	13.80	4.60	3.00
	MHA-V16W/D2RN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	16.00	5.52	2.90
Ambient Temperature：2/1 Water temperature：47/55	MHA-V4W/D2N8-B	HB-A60/C***GN8-B HBTA100/190**GN8-B HBT-A100/240CD***GN8-B	5.10	2.08	2.45
	MHA-V6W/D2N8-B	HB-A60/C***GN8-B HBTA100/190**GN8-B HBT-A100/240CD***GN8-B	5.65	2.31	2.45
	MHA-V8W/D2N8-B	HB-A100/C***GN8-B HBTA100/190**GN8-B HBT-A100/240CD***GN8-B	7.10	2.73	2.60
	MHA-V10W/D2N8-B	HB-A100/C***GN8-B HBTA100/190**GN8-B HBT-A100/240CD***GN8-B	8.10	3.16	2.56
	MHA-V12W/D2N8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	11.40	4.47	2.55
	MHA-V14W/D2N8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	12.40	5.06	2.45
	MHA-V16W/D2N8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	13.40	5.58	2.40
	MHA-V12W/D2RN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	11.40	4.47	2.55
	MHA-V14W/D2RN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	11.80	4.82	2.45
	MHA-V16W/D2RN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	13.40	5.58	2.40
Ambient Temperature：-7/-8 Water temperature：47/55	MHA-V4W/D2N8-B	HB-A60/C***GN8-B HBTA100/190**GN8-B HBT-A100/240CD***GN8-B	4.00	2.05	1.95
	MHA-V6W/D2N8-B	HB-A60/C***GN8-B HBTA100/190**GN8-B HBT-A100/240CD***GN8-B	5.15	2.58	2.00
	MHA-V8W/D2N8-B	HB-A100/C***GN8-B HBTA100/190**GN8-B HBT-A100/240CD***GN8-B	6.15	3.00	2.05
	MHA-V10W/D2N8-B	HB-A100/C***GN8-B HBTA100/190**GN8-B HBT-A100/240CD***GN8-B	6.85	3.43	2.00
	MHA-V12W/D2N8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	10.00	4.88	2.05
	MHA-V14W/D2N8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	11.00	5.37	2.05
	MHA-V16W/D2N8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	12.50	6.19	2.02
	MHA-V12W/D2RN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	10.00	4.88	2.05
	MHA-V14W/D2RN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	11.00	5.37	2.05
	MHA-V16W/D2RN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	12.50	6.19	2.02