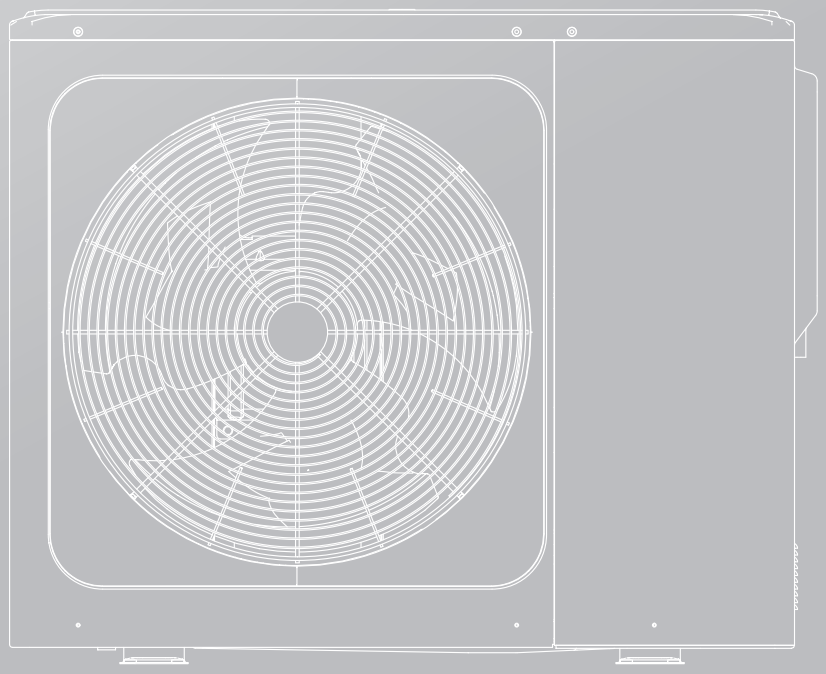
TECHNICAL DATA MANUAL

M thermal Mono

ATW Heat Pump



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.

Temperature application

Model	For medium - temperature application											
	Energy efficiency class	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	kW	%	kWh	kW	%	kWh	kW	%	kWh	
MHC-V5WD2N8-C	A++	60	6.4	140.7	3655	5.2	113.1	4428	6.2	170.9	1895	
MHC-V7WD2N8-C	A++	63	7.3	143.6	4088	6.1	117.7	4948	8.1	185.3	2303	
MHC-V9WD2N8-C	A++	65	8.2	145.5	4539	7.2	122.4	5665	9.0	193.4	2458	
MHC-V12WD2N8-C	A++	70	12.5	141.6	7148	11.3	126.0	8628	12.0	179.0	3524	
MHC-V12WD2RN8-C	A++	70	12.5	141.6	7146	11.3	126.0	8639	12.0	178.8	3527	
MHC-V14WD2N8-C	A++	72	14.2	141.8	8079	12.5	126.6	9496	14.2	184.6	4040	
MHC-V14WD2RN8-C	A++	72	14.2	141.8	8106	12.5	126.6	9508	14.2	183.1	4079	
MHC-V16WD2N8-C	A++	72	14.7	140.6	8471	13.5	124.3	10473	14.5	184.0	4154	
MHC-V16WD2RN8-C	A++	72	14.7	140.6	8457	13.5	124.3	10459	14.5	184.0	4145	

Model	For low - temperature application											
	Energy efficiency class	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	kW	%	kWh	kW	%	kWh	kW	%	kWh	
MHC-V5WD2N8-C	A+++	60	6.5	201.8	2631	6.1	173.4	3425	6.2	268.2	1229	
MHC-V7WD2N8-C	A+++	63	7.9	204.0	3155	7.5	174.6	4166	8.1	274.7	1551	
MHC-V9WD2N8-C	A+++	65	9.1	201.9	3654	8.3	174.6	4591	9.0	279.1	1714	
MHC-V12WD2N8-C	A+++	70	12.3	200.1	5004	12.5	168.8	7153	12.1	262.3	2437	
MHC-V12WD2RN8-C	A+++	70	12.3	200.1	5004	12.5	168.8	7175	12.1	262.1	2439	
MHC-V14WD2N8-C	A+++	72	14.2	192.5	5984	14.3	171.3	8095	13.2	260.5	2684	
MHC-V14WD2RN8-C	A+++	72	14.2	192.4	6005	14.3	171.3	8090	13.2	260.5	2677	
MHC-V16WD2N8-C	A+++	72	15.2	190.5	6510	15.1	170.9	8546	14.2	255.3	2937	
MHC-V16WD2RN8-C	A+++	72	15.2	190.5	6491	15.1	170.9	8563	14.2	255.2	2939	

Product fiche 1

Heat pump space heating		Outdoor	MHC-V5WD2N8-C	MHC-V7WD2N8-C	MHC-V9WD2N8-C	MHC-V12WD2N8-C	MHC-V14WD2N8-C
Outdoor unit sound power (*)	Average climate low temperature application	dB	60	63	65	70	72
	Average climate medium temperature application	dB	60	63	65	70	72
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]	6.5	7.9	9.1	12.3	14.2
	Seasonal space heating efficiency (ηs)	[%]	201.8	204.0	201.9	200.1	192.5
	Annual energy consumption	[kWh]	2,631	3,155	3,654	5,004	5,984
Space heating 55°C	Prated (declared heating capacity) @ –10°C	[kW]	6.4	7.3	8.2	12.5	14.2
	Seasonal space heating efficiency (ηs)	[%]	140.7	143.6	145.5	141.6	141.8
	Annual energy consumption	[kWh]	3,655	4,088	4,539	7,148	8,079
Part load conditions space heating average climate low temperature application							
(A) condition (-7°C)	Pdh (declared heating capacity)	[kW]	5.77	6.99	8.02	10.85	12.52
	COPd (declared COP)	-	3.43	3.29	3.09	3.11	2.97
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	3.74	4.51	5.06	6.79	7.98
	COPd (declared COP)	-	5.04	4.99	4.92	4.86	4.56
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	2.32	2.81	3.22	4.79	5.04
	COPd (declared COP)	-	6.06	6.72	7.03	6.98	7.01
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	1.87	1.87	1.87	3.73	3.73
	COPd (declared COP)	-	9.12	9.12	9.12	9.02	9.02
	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]	6.52	7.46	7.88	12.30	13.41
	COPd (declared COP)	-	3.00	2.87	2.87	2.80	2.66
	WTOL (Heating water Operation Limit)	[°C]	65	65	65	65	65

Product fiche 1

Heat pump space heating		Outdoor	MHC-V16WD2N8-C	MHC-V12WD2RN8-C	MHC-V14WD2RN8-C	MHC-V16WD2RN8-C
Outdoor unit sound power (*)	Average climate low temperature application	dB	72	70	72	72
	Average climate medium temperature application	dB	72	70	72	72
Space heating	Energy efficiency class 35°C (Low temp. app.)	-	A+++	A+++	A+++	A+++
Space heating	Energy efficiency class 55°C (Medium temp. app.)	-	A++	A++	A++	A++
Average climate (Design temperature = –10°C)						
Space heating 35°C	Prated (declared heating capacity) @ –10°C	[kW]	15.2	12.3	14.2	15.2
	Seasonal space heating efficiency (ηs)	[%]	190.5	200.1	192.4	190.5
	Annual energy consumption	[kWh]	6,510	5,004	6,005	6,491
Space heating 55°C	Prated (declared heating capacity) @ –10°C	[kW]	14.7	12.5	14.2	14.7
	Seasonal space heating efficiency (ηs)	[%]	140.6	141.6	141.8	140.7
	Annual energy consumption	[kWh]	8,471	7,146	8,106	8,457
Part load conditions space heating average climate low temperature application						
(A) condition (-7°C)	Pdh (declared heating capacity)	[kW]	13.49	10.85	12.52	13.49
	COPd (declared COP)	-	2.87	3.11	2.97	2.87
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	8.59	6.79	7.98	8.59
	COPd (declared COP)	-	4.53	4.86	4.56	4.53
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	5.55	4.79	5.04	5.55
	COPd (declared COP)	-	7.01	6.98	7.01	7.01
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	3.73	3.73	3.73	3.73
	COPd (declared COP)	-	9.02	9.02	9.02	9.02
	Cdh(degradation coefficient)	-	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
	Pdh (declared heating capacity)	[kW]	14.05	12.30	13.41	14.05
	COPd (declared COP)	-	2.65	2.80	2.66	2.65
	WTOL (Heating water Operation Limit)	[°C]	65	65	65	65

Product fiche 2

Heat pump space heating		Outdoor	MHC-V5WD2N8-C	MHC-V7WD2N8-C	MHC-V9WD2N8-C	MHC-V12WD2N8-C	MHC-V14WD2N8-C
(F) Tbivalent temperature	Tbiv	[°C]	-7.00	-7.00	-7.00	-7.00	-7.00
	Pdh (declared heating capacity)	[kW]	5.77	6.99	8.02	10.85	12.52
	COPd (declared COP)	-	3.43	3.29	3.09	3.11	2.97
Supplementary capacity at P_design	Psup (@Tdesignh: –10°C)	[kW]	0.00	0.44	1.18	0.00	0.75
Part load conditions space heating average climate medium temperature application							
(A) condition (-7°C)	Pdh (declared heating capacity)	[kW]	5.62	6.42	7.21	11.06	12.52
	COPd (declared COP)	-	2.36	2.31	2.24	2.15	2.20
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	3.52	4.03	4.56	6.91	7.71
	COPd (declared COP)	-	3.70	3.76	3.86	3.59	3.58
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	2.20	2.56	2.84	4.64	5.07
	COPd (declared COP)	-	4.21	4.48	4.58	5.07	5.06
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	1.31	1.31	1.31	2.15	2.15
	COPd (declared COP)	-	4.96	4.96	4.96	4.52	4.52
	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]	6.04	6.85	7.01	10.97	11.51
	COPd (declared COP)	-	2.02	1.98	1.97	1.98	1.96
	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]	5.62	6.42	7.21	11.06	12.52
	COPd (declared COP)	-	2.36	2.31	2.24	2.15	2.20
Supplementary capacity at P_design	Psup (@Tdesignh: –10°C)	[kW]	0.32	0.40	1.14	1.53	2.65
Colder climate (Design temperature = –22°C)							
Space heating 35°C	Prated (declared heating capacity) @ –22°C	[kW]	6.1	7.5	8.3	12.5	14.3
	Seasonal space heating efficiency (ηs)	[%]	173.4	174.6	174.6	168.8	171.3
	Annual energy consumption	[kWh]	3,425	4,166	4,591	7,153	8,095

Product fiche 2

Heat pump space heating		Outdoor	MHC-V16WD2N8-C	MHC-V12WD2RN8-C	MHC-V14WD2RN8-C	MHC-V16WD2RN8-C
(F) Tbivalent temperature	Tbiv	[°C]	-7.00	-7.00	-7.00	-7.00
	Pdh (declared heating capacity)	[kW]	13.49	10.85	12.52	13.49
	COPd (declared COP)	-	2.87	3.11	2.97	2.87
Supplementary capacity at P_design	Psup (@Tdesignh: –10°C)	[kW]	1.18	0.00	0.75	1.18
Part load conditions space heating average climate medium temperature application						
(A) condition (-7°C)	Pdh (declared heating capacity)	[kW]	13.03	11.06	12.52	13.03
	COPd (declared COP)	-	2.16	2.15	2.20	2.16
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	8.50	6.91	7.71	8.50
	COPd (declared COP)	-	3.55	3.59	3.58	3.55
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	5.27	4.64	5.07	5.27
	COPd (declared COP)	-	5.05	5.07	5.06	5.05
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	2.15	2.15	2.15	2.15
	COPd (declared COP)	-	4.52	4.52	4.52	4.52
	Cdh(degradation coefficient)	-	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
	Pdh (declared heating capacity)	[kW]	12.07	10.97	11.51	12.07
	COPd (declared COP)	-	1.94	1.98	1.96	1.94
	WTOL (Heating water Operation Limit)	[°C]	65	65	65	65
(F) Tbivalent temperature	Tbiv	[°C]	-7.00	-7.00	-7.00	-7.00
	Pdh (declared heating capacity)	[kW]	13.03	11.06	12.52	13.03
	COPd (declared COP)	-	2.16	2.15	2.20	2.16
Supplementary capacity at P_design	Psup (@Tdesignh: –10°C)	[kW]	2.63	1.53	2.65	2.63
Colder climate (Design temperature = –22°C)						
Space heating 35°C	Prated (declared heating capacity) @ –22°C	[kW]	15.1	12.5	14.3	15.1
	Seasonal space heating efficiency (ηs)	[%]	170.9	168.8	171.3	170.9
	Annual energy consumption	[kWh]	8,546	7,175	8,090	8,563

Product fiche 3

Heat pump space heating		Outdoor	MHC-V5WD2N8-C	MHC-V7WD2N8-C	MHC-V9WD2N8-C	MHC-V12WD2N8-C	MHC-V14WD2N8-C
Space heating 55°C	Prated (declared heating capacity) @ –22°C	[kW]	5.2	6.1	7.2	11.3	12.5
	Seasonal space heating efficiency (ηs)	[%]	113.1	117.7	122.4	126.0	126.6
	Annual energy consumption	[kWh]	4,428	4,948	5,665	8,628	9,496
Part load conditions space heating colder climate low temperature application							
(A) condition (-7°C)	Pdh (declared heating capacity)	[kW]	4.11	4.42	5.42	8.08	8.74
	COPd (declared COP)	-	3.76	3.67	3.72	3.64	3.59
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	2.38	2.99	3.14	4.93	5.52
	COPd (declared COP)	-	5.33	5.50	5.56	5.34	5.35
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	1.66	2.03	2.16	3.17	3.70
	COPd (declared COP)	-	5.78	6.69	6.55	5.28	7.06
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	1.87	1.87	1.87	3.69	3.69
	COPd (declared COP)	-	9.12	9.12	9.12	9.34	9.34
	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]	4.21	4.78	5.08	8.72	9.14
	COPd (declared COP)	-	2.12	2.16	2.01	2.08	2.02
	WTOL (Heating water Operation Limit)	[°C]	65	65	65	65	65
(F) Tbivalent temperature	Tbiv	[°C]	-15.00	-15.00	-15.00	-15.00	-15.00
	Pdh (declared heating capacity)	[kW]	5.00	6.12	6.75	10.17	11.67
	COPd (declared COP)	-	3.02	2.70	2.59	2.66	2.58
Supplementary capacity at P_design	Psup (@Tdesignh: –22°C)	[kW]	1.92	2.72	3.19	3.78	5.17
Part load conditions space heating colder climate medium temperature application							
(A) condition (-7°C)	Pdh (declared heating capacity)	[kW]	3.21	3.95	4.59	7.09	7.80
	COPd (declared COP)	-	2.60	2.75	2.72	2.75	2.77
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90

Product fiche 3

Heat pump space heating		Outdoor	MHC-V16WD2N8-C	MHC-V12WD2RN8-C	MHC-V14WD2RN8-C	MHC-V16WD2RN8-C
Space heating 55°C	Prated (declared heating capacity) @ –22°C	[kW]	13.5	11.3	12.5	13.5
	Seasonal space heating efficiency (ηs)	[%]	124.3	126.0	126.6	124.3
	Annual energy consumption	[kWh]	10,473	8,639	9,508	10,459
Part load conditions space heating colder climate low temperature application						
(A) condition (-7°C)	Pdh (declared heating capacity)	[kW]	9.26	8.08	8.74	9.26
	COPd (declared COP)	-	3.59	3.64	3.59	3.59
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	5.76	4.93	5.52	5.76
	COPd (declared COP)	-	5.35	5.34	5.35	5.35
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	3.76	3.17	3.70	3.76
	COPd (declared COP)	-	7.04	5.28	7.06	7.04
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	3.72	3.69	3.69	3.72
	COPd (declared COP)	-	8.78	9.34	9.34	8.78
	Cdh(degradation coefficient)	-	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
	Pdh (declared heating capacity)	[kW]	9.43	8.72	9.14	9.43
	COPd (declared COP)	-	2.00	2.08	2.02	2.00
	WTOL (Heating water Operation Limit)	[°C]	65	65	65	65
(F) Tbivalent temperature	Tbiv	[°C]	-15.00	-15.00	-15.00	-15.00
	Pdh (declared heating capacity)	[kW]	12.30	10.17	11.67	12.30
	COPd (declared COP)	-	2.58	2.66	2.58	2.58
Supplementary capacity at P_design	Psup (@Tdesignh: –22°C)	[kW]	5.67	3.78	5.17	5.67
Part load conditions space heating colder climate medium temperature application						
(A) condition (-7°C)	Pdh (declared heating capacity)	[kW]	8.43	7.09	7.80	8.43
	COPd (declared COP)	-	2.77	2.75	2.77	2.77
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90

Product fiche 4

Heat pump space heating		Outdoor	MHC-V5WD2N8-C	MHC-V7WD2N8-C	MHC-V9WD2N8-C	MHC-V12WD2N8-C	MHC-V14WD2N8-C
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	2.03	2.25	2.82	4.44	4.64
	COPd (declared COP)	-	3.18	3.30	3.60	3.88	3.91
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	1.56	1.56	1.76	3.00	3.00
	COPd (declared COP)	-	4.50	4.50	4.84	4.88	4.88
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	1.44	1.44	1.44	3.60	3.61
	COPd (declared COP)	-	5.83	5.83	5.83	6.61	6.61
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(E) Tol (temperature operating lir	Tol (temperature operating limit)	[°C]	-22.00	-22.00	-22.00	-22.00	-22.00
	Pdh (declared heating capacity)	[kW]	3.24	3.24	3.24	7.00	7.28
	COPd (declared COP)	-	1.32	1.32	1.32	1.38	1.35
	WTOL (Heating water Operation Limit)	[°C]	65	65	65	65	65
(F) Tbivalent temperature	Tbiv	[°C]	-15.00	-15.00	-15.00	-15.00	-15.00
	Pdh (declared heating capacity)	[kW]	4.25	4.94	5.88	9.21	10.19
	COPd (declared COP)	-	2.00	2.08	2.10	1.92	1.91
Supplementary capacity at P_design	Psup (@Tdesignh: –22°C)	[kW]	1.98	2.82	3.97	4.30	5.21
Warmer climate (Design temperature = 2°C)							
Space heating 35°C	Prated (declared heating capacity) @ 2°C	[kW]	6.2	8.1	9.0	12.1	13.2
	Seasonal space heating efficiency (ηs)	[%]	268.2	274.7	279.1	262.3	260.5
	Annual energy consumption	[kWh]	1,229	1,551	1,714	2,437	2,684
Space heating 55°C	Prated (declared heating capacity) @ 2°C	[kW]	6.2	8.1	9.0	12.0	14.2
	Seasonal space heating efficiency (ηs)	[%]	170.9	185.3	193.4	179.0	184.6
	Annual energy consumption	[kWh]	1,895	2,303	2,458	3,524	4,040
Part load conditions space heating warmer climate low temperature application							
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	5.69	7.23	8.29	12.10	12.94
	COPd (declared COP)	-	4.31	4.04	3.85	3.53	3.51
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	4.01	5.18	5.81	7.78	8.51
	COPd (declared COP)	-	6.39	6.35	6.24	5.82	5.72
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90

Product fiche 4

Heat pump space heating		Outdoor	MHC-V16WD2N8-C	MHC-V12WD2RN8-C	MHC-V14WD2RN8-C	MHC-V16WD2RN8-C
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	5.20	4.44	4.64	5.20
	COPd (declared COP)	-	3.74	3.88	3.91	3.74
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	3.53	3.00	3.00	3.53
	COPd (declared COP)	-	5.19	4.88	4.88	5.19
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	3.61	3.60	3.61	3.61
	COPd (declared COP)	-	6.61	6.61	6.61	6.61
	Cdh(degradation coefficient)	-	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
	Pdh (declared heating capacity)	[kW]	7.52	7.00	7.28	7.52
	COPd (declared COP)	-	1.30	1.38	1.35	1.30
	WTOL (Heating water Operation Limit)	[°C]	65	65	65	65
(F) Tbivalent temperature	Tbiv	[°C]	-15.00	-15.00	-15.00	-15.00
	Pdh (declared heating capacity)	[kW]	11.03	9.21	10.19	11.03
	COPd (declared COP)	-	1.85	1.92	1.91	1.85
Supplementary capacity at P_design	Psup (@Tdesignh: –22°C)	[kW]	6.00	4.30	5.21	6.00
Warmer climate (Design temperature = 2°C)						
Space heating 35°C	Prated (declared heating capacity) @ 2°C	[kW]	14.2	12.1	13.2	14.2
	Seasonal space heating efficiency (ηs)	[%]	255.3	262.1	260.5	255.2
	Annual energy consumption	[kWh]	2,937	2,439	2,677	2,939
Space heating 55°C	Prated (declared heating capacity) @ 2°C	[kW]	14.5	12.0	14.2	14.5
	Seasonal space heating efficiency (ηs)	[%]	184.0	178.8	183.1	184.0
	Annual energy consumption	[kWh]	4,154	3,527	4,079	4,145
Part load conditions space heating warmer climate low temperature application						
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	14.20	12.10	12.94	14.20
	COPd (declared COP)	-	3.22	3.53	3.51	3.22
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	9.15	7.78	8.51	9.15
	COPd (declared COP)	-	5.41	5.82	5.72	5.41
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90

Product fiche 5

Heat pump space heating		Outdoor	MHC-V5WD2N8-C	MHC-V7WD2N8-C	MHC-V9WD2N8-C	MHC-V12WD2N8-C	MHC-V14WD2N8-C
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	2.07	2.46	2.67	3.64	3.96
	COPd (declared COP)	-	8.71	9.30	9.63	8.31	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]	2.00	2.00	2.00	2.00	2.00
	Pdh (declared heating capacity)	[kW]	5.69	7.23	8.29	12.10	12.94
	COPd (declared COP)	-	4.31	4.04	3.85	3.53	3.51
	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]	4.01	5.18	5.81	7.78	8.51
	COPd (declared COP)	-	6.39	6.35	6.24	5.82	5.72
Supplementary capacity at P_design	Psup (@Tdesignh: 2°C)	[kW]	0.55	0.84	0.75	0.00	0.26
Part load conditions space heating warmer climate medium temperature application							
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	6.17	7.80	8.42	12.00	13.01
	COPd (declared COP)	-	2.77	2.68	2.68	2.39	2.37
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	3.97	5.22	5.81	7.73	9.12
	COPd (declared COP)	-	3.90	4.07	4.16	3.86	3.95
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	2.06	2.36	2.74	3.59	4.26
	COPd (declared COP)	-	5.28	6.07	6.64	5.88	6.37
	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]	6.17	7.80	8.42	12.00	13.01
	COPd (declared COP)	-	2.77	2.68	2.68	2.39	2.37
	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]	3.97	5.22	5.81	7.73	9.12
	COPd (declared COP)	-	3.90	4.07	4.16	3.86	3.95
Supplementary capacity at P_design	Psup (@Tdesignh: 2°C)	[kW]	0.00	0.32	0.61	0.00	1.18

Product fiche 5

Heat pump space heating		Outdoor	MHC-V16WD2N8-C	MHC-V12WD2RN8-C	MHC-V14WD2RN8-C	MHC-V16WD2RN8-C
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	4.24	3.64	3.96	4.24
	COPd (declared COP)	-	8.56	8.31	8.51	8.56
	Cdh(degradation coefficient)	-	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
	Pdh (declared heating capacity)	[kW]	14.20	12.10	12.94	14.20
	COPd (declared COP)	-	3.22	3.53	3.51	3.22
	WTOL (Heating water Operation Limit)	[°C]	65	65	65	65
(F) Tbivalent temperature	Tbiv	[°C]	7.00	7.00	7.00	7.00
	Pdh (declared heating capacity)	[kW]	9.15	7.78	8.51	9.15
	COPd (declared COP)	-	5.41	5.82	5.72	5.41
Supplementary capacity at P_design	Psup (@Tdesignh: 2°C)	[kW]	0.00	0.00	0.26	0.00
Part load conditions space heating warmer climate medium temperature application						
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	13.62	12.00	13.01	13.62
	COPd (declared COP)	-	2.35	2.39	2.37	2.35
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	9.35	7.73	9.12	9.35
	COPd (declared COP)	-	3.94	3.86	3.95	3.94
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	4.26	3.59	4.26	4.26
	COPd (declared COP)	-	6.37	5.88	6.37	6.37
	Cdh(degradation coefficient)	-	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
	Pdh (declared heating capacity)	[kW]	13.62	12.00	13.01	13.62
	COPd (declared COP)	-	2.35	2.39	2.37	2.35
	WTOL (Heating water Operation Limit)	[°C]	65	65	65	65
(F) Tbivalent temperature	Tbiv	[°C]	7.00	7.00	7.00	7.00
	Pdh (declared heating capacity)	[kW]	9.35	7.73	9.12	9.35
	COPd (declared COP)	-	3.94	3.86	3.95	3.94
Supplementary capacity at P_design	Psup (@Tdesignh: 2°C)	[kW]	0.91	0.00	1.18	0.91

Product fiche 6

Heat pump space heating		Outdoor	MHC-V5WD2N8-C	MHC-V7WD2N8-C	MHC-V9WD2N8-C	MHC-V12WD2N8-C	MHC-V14WD2N8-C
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]	3900	4500	4500	5200	5200
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]	0.013	0.013	0.013	0.013	0.013
	Pto (Power consumption Thermostat off mode)	[kW]	0.020	0.020	0.020	0.020	0.020
	Psb (Power consumption Standby mode)	[kW]	0.013	0.013	0.013	0.013	0.013
	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：
Product fiche data according to energy label directive 2010/30/EC regulation (EU) 811/2013.
Sound power measured according to the EN12102 under conditions of the EN14825.
Details and precautions on installation, maintenance and assembly can be found in the installation and or operation manuals.

Product fiche 6

Heat pump space heating		Outdoor	MHC-V16WD2N8-C	MHC-V12WD2RN8-C	MHC-V14WD2RN8-C	MHC-V16WD2RN8-C
Product description	Air-to-water heat pump	Y/N	Yes	Yes	Yes	Yes
	Water-to-water heat pump	Y/N	No	No	No	No
	Brine-to-water heat pump	Y/N	No	No	No	No
	Low-temperature heat pump	Y/N	No	No	No	No
	Equipped with a supplementary heater	Y/N	Yes	Yes	Yes	Yes
	Heat pump combination heater	Y/N	Yes	Yes	Yes	Yes
Air to water unit	Rated airflow (outdoor)	[m^3/h]	5200	5200	5200	5200
Brine/water to water unit	Rated water/brine flow (outdoor H/E)	-	/	/	/	/
Other	Capacity control	-	Inverter	Inverter	Inverter	Inverter
	Poff (Power consumption Off mode)	[kW]	0.013	0.015	0.015	0.015
	Pto (Power consumption Thermostat off mode)	[kW]	0.020	0.023	0.023	0.023
	Psb (Power consumption Standby mode)	[kW]	0.013	0.015	0.015	0.015
	PCK (Power crankcase heater model)	[kW]	0.000	0.000	0.000	0.000
	Qelec (Daily electricity consumption)	[kWh]	/	/	/	/
	Qfuel (Daily fuel consumption)	[kWh]	/	/	/	/

Note：
a) represents the hydraulic module series ;
b) represents the m-thermal tank series ;
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		Outdoor	MHC-V5WD2N8-C	MHC-V7WD2N8-C	MHC-V9WD2N8-C	MHC-V12WD2N8-C	MHC-V14WD2N8-C
Outdoor unit sound power (*)	Average climate low temperature application	dB	62	64	66	69	71
	Average climate medium temperature application	dB	62	64	66	69	71
Space cooling 7°C	Prated (declared cooling capacity) @ 35°C	[kW]	5.6	7.4	9.0	11.7	13.5
	Seasonal space cooling efficiency (ηs)	[%]	200.43	204.71	200.21	199.92	200.65
	Annual energy consumption	[kWh]	658	854	1,063	1,380	1,592
Space cooling 18°C	Prated (declared cooling capacity) @ 35°C	[kW]	6.9	8.6	10.2	12.1	14.0
	Seasonal space cooling efficiency (ηs)	[%]	309.5	320.48	329.48	308.53	300.52
	Annual energy consumption	[kWh]	527	635	739	932	1,109
Part load conditions space cooling :	low temperature application@7°C						
(A) condition (35°C)	Pdc (declared cooling capacity)	[kW]	5.58	7.39	9.00	11.67	13.51
	EERd (declared EER)	-	3.38	3.28	2.92	3.11	3.01
	Cdc(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(B) condition (30°C)	Pdc (declared cooling capacity)	[kW]	4.27	5.63	6.91	8.84	10.06
	EERd (declared EER)	-	4.52	4.54	4.08	4.14	4.17
	Cdc(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(C) condition (25°C)	Pdc (declared cooling capacity)	[kW]	2.90	3.60	4.58	5.64	6.49
	EERd (declared EER)	-	5.46	5.87	5.95	5.71	5.64
	Cdc(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(D) condition (20°C)	Pdc (declared cooling capacity)	[kW]	1.33	1.74	2.07	2.75	3.06
	EERd (declared EER)	-	6.91	6.51	6.74	6.76	6.95
	Cdc(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90

Product fiche 7

Heat pump space cooling		Outdoor	MHC-V16WD2N8-C	MHC-V12WD2RN8-C	MHC-V14WD2RN8-C	MHC-V16WD2RN8-C
Outdoor unit sound power (*)	Average climate low temperature application	dB	71	69	71	71
	Average climate medium temperature application	dB	71	69	71	71
Space cooling 7°C	Prated (declared cooling capacity) @ 35°C	[kW]	14.2	11.7	13.5	14.2
	Seasonal space cooling efficiency (ηs)	[%]	201.37	199.52	200.4	201.13
	Annual energy consumption	[kWh]	1,670	1,387	1,593	1,670
Space cooling 18°C	Prated (declared cooling capacity) @ 35°C	[kW]	15.3	12.1	14.0	15.3
	Seasonal space cooling efficiency (ηs)	[%]	296.54	307.86	299.88	296.03
	Annual energy consumption	[kWh]	1,229	934	1,109	1,228
Part load conditions space cooling：low temperature application@7°C						
(A) condition (35°C)	Pdc (declared cooling capacity)	[kW]	14.22	11.67	13.51	14.22
	EERd (declared EER)	-	2.96	3.11	3.01	2.96
	Cdc(degradation coefficient)	-	0.90	0.90	0.90	0.90
(B) condition (30°C)	Pdc (declared cooling capacity)	[kW]	10.62	8.84	10.06	10.62
	EERd (declared EER)	-	4.16	4.14	4.17	4.16
	Cdc(degradation coefficient)	-	0.90	0.90	0.90	0.90
(C) condition (25°C)	Pdc (declared cooling capacity)	[kW]	7.11	5.64	6.49	7.11
	EERd (declared EER)	-	5.72	5.71	5.64	5.72
	Cdc(degradation coefficient)	-	0.90	0.90	0.90	0.90
(D) condition (20°C)	Pdc (declared cooling capacity)	[kW]	3.06	2.75	3.06	3.06
	EERd (declared EER)	-	6.95	6.76	6.95	6.95
	Cdc(degradation coefficient)	-	0.90	0.90	0.90	0.90

Product fiche 8

Heat pump space cooling		Outdoor	MHC-V5WD2N8-C	MHC-V7WD2N8-C	MHC-V9WD2N8-C	MHC-V12WD2N8-C	MHC-V14WD2N8-C
Part load conditions space cooling：medium temperature application@18°C							
(A) condition (35°C)	Pdc (declared cooling capacity)	[kW]	6.86	8.55	10.24	12.10	14.03
	EERd (declared EER)	-	5.29	4.99	4.42	4.77	4.55
	Cdc(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(B) condition (30°C)	Pdc (declared cooling capacity)	[kW]	5.27	6.66	7.81	9.24	10.60
	EERd (declared EER)	-	7.03	6.56	6.34	6.67	6.43
	Cdc(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(C) condition (25°C)	Pdc (declared cooling capacity)	[kW]	3.32	4.51	5.16	5.83	7.08
	EERd (declared EER)	-	8.14	9.48	9.50	9.38	8.93
	Cdc(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(D) condition (20°C)	Pdc (declared cooling capacity)	[kW]	1.61	1.96	2.51	3.86	3.89
	EERd (declared EER)	-	11.31	11.08	13.78	9.38	9.38
	Cdc(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
Air to water unit	Rated airflow (outdoor)	[m^3/h]	3900	4500	4500	5200	5200
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]	0.013	0.013	0.013	0.013	0.013
	Pto (Power consumption Thermostat off mode)	[kW]	0.005	0.005	0.005	0.005	0.005
	Psb (Power consumption Standby mode)	[kW]	0.013	0.013	0.013	0.013	0.013
	Pck (Power crankcase heater mode)	[kW]	0.000	0.000	0.000	0.000	0.000
	Qelec (Daily electricity consumption)	[kWh]	/	/	/	/	/
	Qfuel (Daily fuel consumption)	[kWh]	/	/	/	/	/

Product fiche 8

Heat pump space cooling		Outdoor	MHC-V16WD2N8-C	MHC-V12WD2RN8-C	MHC-V14WD2RN8-C	MHC-V16WD2RN8-C
Part load conditions space cooling : medium temperature application@18°C						
(A) condition (35°C)	Pdc (declared cooling capacity)	[kW]	15.34	12.10	14.03	15.34
	EERd (declared EER)	-	4.33	4.77	4.55	4.33
	Cdc(degradation coefficient)	-	0.90	0.90	0.90	0.90
(B) condition (30°C)	Pdc (declared cooling capacity)	[kW]	11.44	9.24	10.60	11.44
	EERd (declared EER)	-	6.14	6.67	6.43	6.14
	Cdc(degradation coefficient)	-	0.90	0.90	0.90	0.90
(C) condition (25°C)	Pdc (declared cooling capacity)	[kW]	7.93	5.83	7.08	7.93
	EERd (declared EER)	-	8.95	9.38	8.93	8.95
	Cdc(degradation coefficient)	-	0.90	0.90	0.90	0.90
(D) condition (20°C)	Pdc (declared cooling capacity)	[kW]	3.89	3.86	3.89	3.89
	EERd (declared EER)	-	9.38	9.38	9.38	9.38
	Cdc(degradation coefficient)	-	0.90	0.90	0.90	0.90
Air to water unit	Rated airflow (outdoor)	[m^3/h]	5200	5200	5200	5200
Brine/water to water unit	Rated water/brine flow (outdoor H/E)	-	/	/	/	/
Other	Capacity control	-	Inverter	Inverter	Inverter	Inverter
	Poff (Power consumption Off mode)	[kW]	0.013	0.013	0.013	0.013
	Pto (Power consumption Thermostat off mode)	[kW]	0.005	0.008	0.008	0.008
	Psb (Power consumption Standby mode)	[kW]	0.013	0.013	0.013	0.013
	Pck (Power crankcase heater mode)	[kW]	0.000	0.000	0.000	0.000
	Qelec (Daily electricity consumption)	[kWh]	/	/	/	/
	Qfuel (Daily fuel consumption)	[kWh]	/	/	/	/

Product fiche 8

Outdoor 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
MHC-V5WD2N8-C	6.50	1.275	5.10	5.50	1.692	3.25	6.50	1.226	5.30	5.60	1.333	4.20
MHC-V7WD2N8-C	8.30	1.711	4.85	7.40	2.349	3.15	8.40	1.663	5.05	7.10	1.797	3.95
MHC-V9WD2N8-C	10.00	2.326	4.30	9.00	3.103	2.90	10.00	2.128	4.70	8.20	2.158	3.80
MHC-V12WD2N8-C	12.20	2.652	4.60	11.60	3.742	3.10	12.20	2.490	4.90	12.30	3.417	3.60
MHC-V12WD2RN8-C	12.20	2.652	4.60	11.60	3.742	3.10	12.20	2.490	4.90	12.30	3.417	3.60
MHC-V14WD2N8-C	13.90	3.159	4.40	13.40	4.573	2.93	14.10	3.000	4.70	13.00	3.714	3.50
MHC-V14WD2RN8-C	13.90	3.159	4.40	13.40	4.573	2.93	14.10	3.000	4.70	13.00	3.714	3.50
MHC-V16WD2N8-C	15.40	3.667	4.20	14.00	4.828	2.90	16.00	3.556	4.50	14.50	4.462	3.25
MHC-V16WD2RN8-C	15.40	3.667	4.20	14.00	4.828	2.90	16.00	3.556	4.50	14.50	4.462	3.25

Outdoor 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
MHC-V5WD2N8-C	6.20	1.938	3.20	6.60	1.650	4.00	6.50	2.063	3.15	6.10	2.346	2.60
MHC-V7WD2N8-C	7.10	2.254	3.15	8.50	2.237	3.80	7.50	2.459	3.05	6.80	2.720	2.50
MHC-V9WD2N8-C	8.00	2.667	3.00	10.20	2.795	3.65	8.50	2.881	2.95	7.40	3.083	2.40
MHC-V12WD2N8-C	11.60	4.070	2.85	12.50	3.378	3.70	12.00	4.138	2.90	11.50	4.792	2.40
MHC-V12WD2RN8-C	11.60	4.070	2.85	12.50	3.378	3.70	12.00	4.138	2.90	11.50	4.792	2.40
MHC-V14WD2N8-C	12.50	4.464	2.80	14.50	4.085	3.55	13.00	4.643	2.80	12.50	5.435	2.30
MHC-V14WD2RN8-C	12.50	4.464	2.80	14.50	4.085	3.55	13.00	4.643	2.80	12.50	5.435	2.30
MHC-V16WD2N8-C	13.50	5.000	2.70	16.20	4.696	3.45	14.30	5.296	2.70	13.50	6.000	2.25
MHC-V16WD2RN8-C	13.50	5.000	2.70	16.20	4.696	3.45	14.30	5.296	2.70	13.50	6.000	2.25

Outdoor 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
MHC-V5WD2N8-C	6.30	1.969	3.20	6.30	2.250	2.80	5.70	2.651	2.15
MHC-V7WD2N8-C	8.20	2.603	3.15	7.60	2.815	2.70	6.60	3.143	2.10
MHC-V9WD2N8-C	9.40	3.032	3.10	8.40	3.170	2.65	7.20	3.512	2.05
MHC-V12WD2N8-C	12.00	4.000	3.00	12.00	5.106	2.35	10.80	5.143	2.10
MHC-V12WD2RN8-C	12.00	4.000	3.00	12.00	5.106	2.35	10.80	5.143	2.10
MHC-V14WD2N8-C	14.00	4.746	2.95	13.00	5.603	2.32	11.70	5.625	2.08
MHC-V14WD2RN8-C	14.00	4.746	2.95	13.00	5.603	2.32	11.70	5.625	2.08
MHC-V16WD2N8-C	16.00	5.614	2.85	13.50	5.870	2.30	12.80	6.244	2.05
MHC-V16WD2RN8-C	16.00	5.614	2.85	13.50	5.870	2.30	12.80	6.244	2.05

ErP Information

Fan Types	Axial fan		
Directive (or Standard) for Regulation		ErP Directive 2009/125/EC COMMISSION REGULATION (EU) No 327/2011	
Model Name	ZKSN-170-8-3L + ZL-580*190*12-3	Rev.	
Prepare by			

Specified Information of Fan:

No.	Information Item	Comment
1	η_{target} =	28.6%
2	Overall efficiency (η_e) =	34.0%
3	Pass or not (Criteria: $\eta_e \geqq \eta_{target}$)	Pass
4	Measurement category (A-D)	A
5	Efficiency category (static or total)	Static
6	Efficiency grade at optimum energy efficiency point	N =45.4
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	0.156kw
10.2	Rated motor flow rate(s) at optimum energy efficiency	1.290m^3/s
10.3	Rated motor pressure(s) at optimum energy efficiency	36Pa
11	Rotations per minute (R.P.M)at the optimum energy efficiency point	750r/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	SHISHISHI TONGDA MOTOR 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	ZKSN-170-8-3L+ ZL-580*190*12-3	Rev.	
Prepare by			

Specified Information of Fan:

No.	Information Item	Comment
1	η_{target} =	28.5%
2	Overall efficiency (η_e) =	33.9%
3	Pass or not (Criteria: $\eta_e \geqq \eta_{target}$)	Pass
4	Measurement category (A-D)	A
5	Efficiency category (static or total)	Static
6	Efficiency grade at optimum energy efficiency point	N =45.4
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	0.153kw
10.2	Rated motor flow rate(s) at optimum energy efficiency	1.248m^3/s
10.3	Rated motor pressure(s) at optimum energy efficiency	36Pa
11	Rotations per minute (R.P.M)at the optimum energy efficiency point	750r/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	ZKSN-200-10-2L+ ZL-580*190*12-3	Rev.	
Prepare by			

Specified Information of Fan:

No.	Information Item	Comment
1	ηtarget =	29.1%
2	Overall efficiency (ηe) =	33.6%
3	Pass or not (Criteria: ηe ≧ηtarget)	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	1.292m^3/s
10.3	Rated motor pressure(s) at optimum energy efficiency	43Pa
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	ZKSN-200-10-2L+ ZL-580*190*12-3	Rev.	
Prepare by			

Specified Information of Fan:

No.	Information Item	Comment
1	ηtarget =	28.9%
2	Overall efficiency (ηe) =	33.0%
3	Pass or not (Criteria: ηe ≧ηtarget)	Pass
4	Measurement category (A-D)	A
5	Efficiency category (static or total)	Static
6	Efficiency grade at optimum energy efficiency point	N =44.1
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	0.178kw
10.2	Rated motor flow rate(s) at optimum energy efficiency	1.420m^3/s
10.3	Rated motor pressure(s) at optimum energy efficiency	36Pa
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	JIANGSU SHANGQI GROUP CO., LTD.

NOTE

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此页不做菲林，仅核对使用

印刷技术要求

材质	双胶纸80g
规格	210*297(双面)
颜色	黑白
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）
C	赵浩伟	21.11.30	升级参数	P1\P5-11页
V.C-V.D	罗亮	2024.3.01	见附件修改记录表	见附件修改记录表