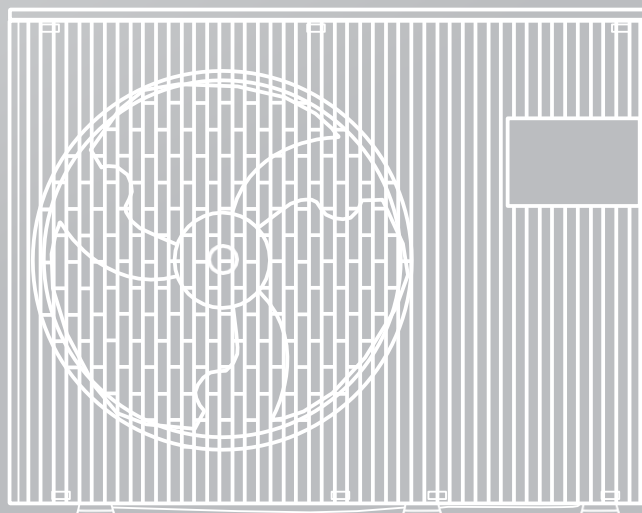


TECHNICAL DATA MANUAL

Aquantia EVO Wall Outdoor units



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.

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
KHP-BI 12 DVR4	--	A+++	43	59	12.0	153.7	6 330	11.0	126.3	8 387	13.1	171.1	4 022
KHP-BI 12 DVR4	KHPM-BI 16 DVR4	A+++	43	59	12.0	153.7	6 330	11.0	126.3	8 387	13.1	171.1	4 022
KHP-BI 14 DVR4	--	A+++	43	60	13.8	152.2	7 350	12.0	128.0	9 034	14.1	171.4	4 321
KHP-BI 14 DVR4	KHPM-BI 16 DVR4	A+++	43	60	13.8	152.2	7 350	12.0	128.0	9 034	14.1	171.4	4 321
KHP-BI 16 DVR4	--	A+++	43	60	15.0	151.0	8 049	13.0	130.9	9 573	14.1	171.4	4 321
KHP-BI 16 DVR4	KHPM-BI 16 DVR4	A+++	43	60	15.0	151.0	8 049	13.0	130.9	9 573	14.1	171.4	4 321
KHP-BI 12 DTR4	--	A+++	43	59	12.0	153.7	6 330	11.0	126.3	8 387	13.1	171.1	4 022
KHP-BI 12 DTR4	KHPM-BI 16 DVR4	A+++	43	59	12.0	153.7	6 330	11.0	126.3	8 387	13.1	171.1	4 022
KHP-BI 14 DTR4	--	A+++	43	60	13.8	152.2	7 350	12.0	128.0	9 034	14.1	171.4	4 321
KHP-BI 14 DTR4	KHPM-BI 16 DVR4	A+++	43	60	13.8	152.2	7 350	12.0	128.0	9 034	14.1	171.4	4 321
KHP-BI 16 DTR4	--	A+++	43	60	15.0	151.0	8 049	13.0	130.9	9 573	14.1	171.4	4 321
KHP-BI 16 DTR4	KHPM-BI 16 DVR4	A+++	43	60	15.0	151.0	8 049	13.0	130.9	9 573	14.1	171.4	4 321

Unit type explanation:

- 1.--, without back-up heater
- 2.KHPM-BI 16 DVR4, with 3kW back-up heater and 1-Phase power source
- 3.HB-A160CDS60GN8-E, with 6kW back-up heater and 3-Phase power source
- 4.HB-A160CDS90GN8-E, with 9kW back-up heater and 3-Phase power source

Model		For low - temperature application											
Outdoor unit	Indoor unit	Energy efficiency class	Indoor unit sound power	Outdoor unit sound power	Average climate			Colder climate			Warmer climate		
					Rated heat output	Seasonal space heating energy efficiency	For space heating, annual energy consumption	Rated heat output	Seasonal space heating energy efficiency	For space heating, annual energy consumption	Rated heat output	Seasonal space heating energy efficiency	For space heating, annual energy consumption
					-	dB	dB	kW	%	kWh	kW	%	kWh
KHP-BI 12 DVR4	--	A+++	43	59	12.0	204.6	4 777	12.0	179.7	6 475	12.4	253.4	2 584
KHP-BI 12 DVR4	KHPM-BI 16 DVR4	A+++	43	59	12.0	204.6	4 777	12.0	179.7	6 475	12.4	253.4	2 584
KHP-BI 14 DVR4	--	A+++	43	60	13.8	199.4	5 633	14.0	179.4	7 570	13.2	257.4	2 709
KHP-BI 14 DVR4	KHPM-BI 16 DVR4	A+++	43	60	13.8	199.4	5 633	14.0	179.4	7 570	13.2	257.4	2 709
KHP-BI 16 DVR4	--	A+++	43	60	15.5	194.0	6 503	15.5	179.1	8 393	14.1	257.3	2 895
KHP-BI 16 DVR4	KHPM-BI 16 DVR4	A+++	43	60	15.5	194.0	6 503	15.5	179.1	8 393	14.1	257.3	2 895
KHP-BI 12 DTR4	--	A+++	43	59	12.0	204.6	4 777	12.0	179.7	6 475	12.4	253.4	2 584
KHP-BI 12 DTR4	KHPM-BI 16 DVR4	A+++	43	59	12.0	204.6	4 777	12.0	179.7	6 475	12.4	253.4	2 584
KHP-BI 14 DTR4	--	A+++	43	60	13.8	199.4	5 633	14.0	179.4	7 570	13.2	257.4	2 709
KHP-BI 14 DTR4	KHPM-BI 16 DVR4	A+++	43	60	13.8	199.4	5 633	14.0	179.4	7 570	13.2	257.4	2 709
KHP-BI 16 DTR4	--	A+++	43	60	15.5	194.0	6 503	15.5	179.1	8 393	14.1	257.3	2 895
KHP-BI 16 DTR4	KHPM-BI 16 DVR4	A+++	43	60	15.5	194.0	6 503	15.5	179.1	8 393	14.1	257.3	2 895

Unit type explanation:

1. --, without back-up heater
2. KHPM-BI 16 DVR4, with 3 kW back-up heater and 1-Phase power source

Product fiche 1

Heat pump space heater		Outdoor	KHP-BI 12 DVR4	KHP-BI 14 DVR4	KHP-BI 16 DVR4
		Indoor	-- KHPM-BI 16 DVR4	-- KHPM-BI 16 DVR4	-- KHPM-BI 16 DVR4
Indoor unit sound power (*)		dB	43	43	43
Outdoor unit sound power (*)	Average climate low temperature application	dB	59	60	60
	Average climate medium temperature application	dB	59	60	60
Capacity of the back-up heater integrated in the unit	Psup back-up heater (optional)	[kW]	0/3/6/9	0/3/6/9	0/3/6/9
Space heating	Energy efficiency class 35°C (Low temp. app.)	-	A+++	A+++	A+++
Space heating	Energy efficiency class 55°C (Medium temp. app.)	-	A+++	A+++	A+++
Average climate (Design temperature = -10°C)					
Space heating 35°C	Prated (declared heating capacity) @ -10°C	[kW]	12.0	13.8	15.5
	Seasonal space heating efficiency (ηs)	[%]	204.6	199.4	194.0
	Annual energy consumption	[kWh]	4 777	5 633	6 503
Space heating 55°C	Prated (declared heating capacity) @ -10°C	[kW]	12.0	13.8	15.0
	Seasonal space heating efficiency (ηs)	[%]	153.7	152.2	151.0
	Annual energy consumption	[kWh]	6 330	7 350	8 049
Part load conditions space heating average climate low temperature application					
(A) condition (-7°C)	Pdh (declared heating capacity)	[kW]	10.67	12.22	13.68
	COPd (declared COP)	-	3.21	3.08	2.90
	Cdh(degradation coefficient)	-	0.99	0.99	1.00
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	6.61	7.74	8.60
	COPd (declared COP)	-	5.07	4.80	4.67
	Cdh(degradation coefficient)	-	0.98	0.99	0.99
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	5.23	5.27	5.65
	COPd (declared COP)	-	6.83	7.12	7.00
	Cdh(degradation coefficient)	-	0.97	0.97	0.97
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	5.98	5.98	6.00
	COPd (declared COP)	-	8.68	8.85	8.91
	Cdh(degradation coefficient)	-	0.97	0.96	0.96
(E) Tol (temperature operating limit)	Tol (temperature operating limit)	[°C]	-10	-10	-10
	Pdh (declared heating capacity)	[kW]	11.74	13.50	15.50
	COPd (declared COP)	-	2.83	2.62	2.45
	WTOL (Heating water Operation Limit)	[°C]	65	65	65

Product fiche 1

Heat pump space heater		Outdoor Indoor	KHP-BI 12 DTR4 -- KHPM-BI 16 DVR4	KHP-BI 14 DTR4 -- KHPM-BI 16 DVR4	KHP-BI 16 DTR4 -- KHPM-BI 16 DVR4
Indoor unit sound power (*)		dB	43	43	43
Outdoor unit sound power (*)	Average climate low temperature application	dB	59	60	60
	Average climate medium temperature application	dB	59	60	60
Capacity of the back-up heater integrated in the unit	Psup back-up heater (optional)	[kW]	0/3/6/9	0/3/6/9	0/3/6/9
Space heating	Energy efficiency class 35°C (Low temp. app.)	-	A+++	A+++	A+++
Space heating	Energy efficiency class 55°C (Medium temp. app.)	-	A+++	A+++	A+++
Average climate (Design temperature = -10°C)					
Space heating 35°C	Prated (declared heating capacity) @ -10°C	[kW]	12.0	13.8	15.5
	Seasonal space heating efficiency (ηs)	[%]	204.6	199.4	194.0
	Annual energy consumption	[kWh]	4 777	5 633	6 503
Space heating 55°C	Prated (declared heating capacity) @ -10°C	[kW]	12.0	13.8	15.0
	Seasonal space heating efficiency (ηs)	[%]	153.7	152.2	151.0
	Annual energy consumption	[kWh]	6 330	7 350	8 049
Part load conditions space heating average climate low temperature application					
(A) condition (-7°C)	Pdh (declared heating capacity)	[kW]	10.67	12.22	13.68
	COPd (declared COP)	-	3.21	3.07	2.90
	Cdh(degradation coefficient)	-	0.99	0.99	1.00
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	6.61	7.74	8.60
	COPd (declared COP)	-	5.07	4.80	4.67
	Cdh(degradation coefficient)	-	0.98	0.99	0.99
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	5.23	5.27	5.65
	COPd (declared COP)	-	6.83	7.12	7.00
	Cdh(degradation coefficient)	-	0.97	0.97	0.97
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	5.98	5.98	6.00
	COPd (declared COP)	-	8.68	8.85	8.91
	Cdh(degradation coefficient)	-	0.97	0.96	0.96
(E) Tol (temperature operating limit)	Tol (temperature operating limit)	[°C]	-10	-10	-10
	Pdh (declared heating capacity)	[kW]	11.74	13.50	15.50
	COPd (declared COP)	-	2.83	2.62	2.45
	WTOL (Heating water Operation Limit)	[°C]	65	65	65

Product fiche 2

Heat pump space heater		Outdoor	KHP-BI 12 DVR4	KHP-BI 14 DVR4	KHP-BI 16 DVR4
		Indoor	-- KHPM-BI 16 DVR4	-- KHPM-BI 16 DVR4	-- KHPM-BI 16 DVR4
(F) Tbivalent temperature	Tblv	[°C]	-7	-7	-7
	Pdh (declared heating capacity)	[kW]	10.67	12.22	13.68
	COPd (declared COP)	-	3.21	3.08	2.90
Supplementary capacity at P_design	Psup (@Tdesignh: -10°C)	[kW]	0.26	0.30	0.00
Part load conditions space heating average climate medium temperature application					
(A) condition (-7°C)	Pdh (declared heating capacity)	[kW]	10.86	12.51	13.62
	COPd (declared COP)	-	2.46	2.43	2.35
	Cdh(degradation coefficient)	-	1.00	1.00	1.00
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	6.91	7.69	8.24
	COPd (declared COP)	-	3.87	3.71	3.70
	Cdh(degradation coefficient)	-	0.99	0.99	0.99
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	4.90	4.97	5.23
	COPd (declared COP)	-	4.97	5.22	5.24
	Cdh(degradation coefficient)	-	0.98	0.98	0.98
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	5.81	5.83	5.84
	COPd (declared COP)	-	6.48	6.60	6.65
	Cdh(degradation coefficient)	-	0.97	0.97	0.97
(E) Tol (temperature operating limit)	Tol (temperature operating limit)	[°C]	-10	-10	-10
	Pdh (declared heating capacity)	[kW]	12.00	13.22	13.22
	COPd (declared COP)	-	1.93	2.06	2.06
	WTOL (Heating water Operation Limit)	[°C]	65	65	65
(F) Tbivalent temperature	Tblv	[°C]	-7	-7	-7
	Pdh (declared heating capacity)	[kW]	10.86	12.51	13.62
	COPd (declared COP)	-	2.46	2.43	2.35
Supplementary capacity at P_design	Psup (@Tdesignh: -10°C)	[kW]	0.00	0.58	1.78
Colder climate (Design temperature = -22°C)					
Space heating 35°C	Prated (declared heating capacity) @ -22°C	[kW]	12.0	14.0	15.5
	Seasonal space heating efficiency (ηs)	[%]	179.7	179.4	179.1
	Annual energy consumption	[kWh]	6 475	7 570	8 393

Product fiche 2

Heat pump space heater		Outdoor	KHP-BI 12 DTR4	KHP-BI 14 DTR4	KHP-BI 16 DTR4
		Indoor	-- KHPM-BI 16 DVR4	-- KHPM-BI 16 DVR4	-- KHPM-BI 16 DVR4
(F) Tbivalent temperature	Tblv	[°C]	-7	-7	-7
	Pdh (declared heating capacity)	[kW]	10.67	12.22	13.68
	COPd (declared COP)	-	3.21	3.07	2.90
Supplementary capacity at P_design	Psup (@Tdesignh: -10°C)	[kW]	0.26	0.30	0.00
Part load conditions space heating average climate medium temperature application					
(A) condition (-7°C)	Pdh (declared heating capacity)	[kW]	10.86	12.51	13.62
	COPd (declared COP)	-	2.46	2.43	2.35
	Cdh(degradation coefficient)	-	1.00	1.00	1.00
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	6.91	7.69	8.24
	COPd (declared COP)	-	3.87	3.71	3.70
	Cdh(degradation coefficient)	-	0.99	0.99	0.99
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	4.90	4.97	5.23
	COPd (declared COP)	-	4.97	5.22	5.24
	Cdh(degradation coefficient)	-	0.98	0.98	0.98
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	5.81	5.83	5.84
	COPd (declared COP)	-	6.48	6.60	6.65
	Cdh(degradation coefficient)	-	0.97	0.97	0.97
(E) Tol (temperature operating limit)	Tol (temperature operating limit)	[°C]	-10	-10	-10
	Pdh (declared heating capacity)	[kW]	12.00	13.22	13.22
	COPd (declared COP)	-	1.93	2.06	2.06
	WTOL (Heating water Operation Limit)	[°C]	65	65	65
(F) Tbivalent temperature	Tblv	[°C]	-7	-7	-7
	Pdh (declared heating capacity)	[kW]	10.86	12.51	13.62
	COPd (declared COP)	-	2.46	2.43	2.35
Supplementary capacity at P_design	Psup (@Tdesignh: -10°C)	[kW]	0.00	0.58	1.78
Colder climate (Design temperature = -22°C)					
Space heating 35°C	Prated (declared heating capacity) @ -22°C	[kW]	12.0	14.0	15.5
	Seasonal space heating efficiency (ηs)	[%]	179.7	179.4	179.1
	Annual energy consumption	[kWh]	6 475	7 570	8 393

Product fiche 3

Heat pump space heater		Outdoor	KHP-BI 12 DVR4	KHP-BI 14 DVR4	KHP-BI 16 DVR4
		Indoor	-- KHPM-BI 16 DVR4	-- KHPM-BI 16 DVR4	-- KHPM-BI 16 DVR4
Space heating 55°C	Prated (declared heating capacity) @ -22°C	[kW]	11.0	12.0	13.0
	Seasonal space heating efficiency (ηs)	[%]	126.3	128.0	130.9
	Annual energy consumption	[kWh]	8 387	9 034	9 573
Part load conditions space heating colder climate low temperature application					
(A) condition (-7°C)	Pdh (declared heating capacity)	[kW]	7.40	8.53	9.46
	COPd (declared COP)	-	3.88	3.80	3.78
	Cdh(degradation coefficient)	-	0.90	0.90	0.90
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	4.77	5.32	5.59
	COPd (declared COP)	-	5.57	5.61	5.62
	Cdh(degradation coefficient)	-	0.90	0.90	0.90
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	5.49	5.47	5.46
	COPd (declared COP)	-	7.02	7.06	7.12
	Cdh(degradation coefficient)	-	0.90	0.90	0.90
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	5.64	5.62	5.67
	COPd (declared COP)	-	7.20	7.22	7.35
	Cdh(degradation coefficient)	-	0.90	0.90	0.90
(E) Tol (temperature operating limit)	Tol (temperature operating limit)	[°C]	-22	-22	-22
	Pdh (declared heating capacity)	[kW]	10.76	12.49	13.64
	COPd (declared COP)	-	2.23	2.21	2.12
	WTOL (Heating water Operation Limit)	[°C]	65	65	65
(F) Tbivalent temperature	Tblv	[°C]	-15	-15	-15
	Pdh (declared heating capacity)	[kW]	9.92	11.53	12.61
	COPd (declared COP)	-	2.85	2.79	2.74
Supplementary capacity at P_design	Psup (@Tdesignh: -22°C)	[kW]	1.24	1.51	1.86
Part load conditions space heating colder climate medium temperature application					
(A) condition (-7°C)	Pdh (declared heating capacity)	[kW]	6.71	7.34	8.04
	COPd (declared COP)	-	2.83	2.91	2.91
	Cdh(degradation coefficient)	-	0.99	0.90	0.90

Product fiche 3

Heat pump space heater		Outdoor	KHP-BI 12 DTR4	KHP-BI 14 DTR4	KHP-BI 16 DTR4
		Indoor	-- KHPM-BI 16 DVR4	-- KHPM-BI 16 DVR4	-- KHPM-BI 16 DVR4
Space heating 55°C	Prated (declared heating capacity) @ -22°C	[kW]	11.0	12.0	13.0
	Seasonal space heating efficiency (ηs)	[%]	126.3	128.0	130.9
	Annual energy consumption	[kWh]	8 387	9 034	9 573
Part load conditions space heating colder climate low temperature application					
(A) condition (-7°C)	Pdh (declared heating capacity)	[kW]	7.40	8.53	9.46
	COPd (declared COP)	-	3.88	3.80	3.78
	Cdh(degradation coefficient)	-	0.90	0.90	0.90
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	4.77	5.32	5.59
	COPd (declared COP)	-	5.57	5.61	5.62
	Cdh(degradation coefficient)	-	0.90	0.90	0.90
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	5.49	5.47	5.46
	COPd (declared COP)	-	7.02	7.06	7.12
	Cdh(degradation coefficient)	-	0.90	0.90	0.90
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	5.64	5.62	5.67
	COPd (declared COP)	-	7.20	7.22	7.35
	Cdh(degradation coefficient)	-	0.90	0.90	0.90
(E) Tol (temperature operating limit)	Tol (temperature operating limit)	[°C]	-22	-22	-22
	Pdh (declared heating capacity)	[kW]	10.76	12.49	13.64
	COPd (declared COP)	-	2.23	2.21	2.12
	WTOL (Heating water Operation Limit)	[°C]	65	65	65
(F) Tbivalent temperature	Tblv	[°C]	-15	-15	-15
	Pdh (declared heating capacity)	[kW]	9.92	11.53	12.61
	COPd (declared COP)	-	2.85	2.79	2.74
Supplementary capacity at P_design	Psup (@Tdesignh: -22°C)	[kW]	1.24	1.51	1.86
Part load conditions space heating colder climate medium temperature application					
(A) condition (-7°C)	Pdh (declared heating capacity)	[kW]	6.71	7.34	8.04
	COPd (declared COP)	-	2.83	2.91	2.91
	Cdh(degradation coefficient)	-	0.99	0.90	0.90

Product fiche 4

Heat pump space heater		Outdoor	KHP-BI 12 DVR4	KHP-BI 14 DVR4	KHP-BI 16 DVR4
		Indoor	-- KHPM-BI 16 DVR4	-- KHPM-BI 16 DVR4	-- KHPM-BI 16 DVR4
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	4.21	4.53	4.82
	COPd (declared COP)	-	3.73	3.87	3.99
	Cdh(degradation coefficient)	-	0.98	0.90	0.90
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	5.03	5.07	5.09
	COPd (declared COP)	-	5.03	5.11	5.18
	Cdh(degradation coefficient)	-	0.98	0.90	0.90
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	6.05	6.07	6.08
	COPd (declared COP)	-	6.59	6.66	6.68
	Cdh(degradation coefficient)	-	0.97	0.90	0.90
(E) Tol (temperature operating limit)	Tol (temperature operating limit)	[°C]	-22	-22	-22
	Pdh (declared heating capacity)	[kW]	8.48	10.13	11.12
	COPd (declared COP)	-	1.28	1.37	1.43
	WTOL (Heating water Operation Limit)	[°C]	65	65	65
(F) Tbivalent temperature	Tblv	[°C]	-15	-15	-15
	Pdh (declared heating capacity)	[kW]	9.11	9.95	10.80
	COPd (declared COP)	-	1.98	1.90	1.98
Supplementary capacity at P_design	Psup (@Tdesignh: -22°C)	[kW]	2.52	1.87	1.89
Warmer climate (Design temperature = 2°C)					
Space heating 35°C	Prated (declared heating capacity) @ 2°C	[kW]	12.4	13.2	14.1
	Seasonal space heating efficiency (ηs)	[%]	253.4	257.4	257.3
	Annual energy consumption	[kWh]	2 584	2 709	2 895
Space heating 55°C	Prated (declared heating capacity) @ 2°C	[kW]	13.1	14.1	14.1
	Seasonal space heating efficiency (ηs)	[%]	171.1	171.4	171.4
	Annual energy consumption	[kWh]	4 022	4 321	4 321
Part load conditions space heating warmer climate low temperature application					
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	12.40	13.20	14.10
	COPd (declared COP)	-	3.36	3.34	3.28
	Cdh(degradation coefficient)	-	0.99	0.99	0.99
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	7.82	8.42	8.91
	COPd (declared COP)	-	5.75	5.89	5.81
	Cdh(degradation coefficient)	-	0.98	0.98	0.98

Product fiche 4

Heat pump space heater		Outdoor	KHP-BI 12 DTR4	KHP-BI 14 DTR4	KHP-BI 16 DTR4
		Indoor	-- KHPM-BI 16 DVR4	-- KHPM-BI 16 DVR4	-- KHPM-BI 16 DVR4
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	4.21	4.53	4.82
	COPd (declared COP)	-	3.73	3.87	3.99
	Cdh(degradation coefficient)	-	0.98	0.90	0.90
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	5.03	5.07	5.09
	COPd (declared COP)	-	5.03	5.11	5.18
	Cdh(degradation coefficient)	-	0.98	0.90	0.90
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	6.05	6.07	6.08
	COPd (declared COP)	-	6.59	6.66	6.68
	Cdh(degradation coefficient)	-	0.97	0.90	0.90
(E) Tol (temperature operating limit)	Tol (temperature operating limit)	[°C]	-22	-22	-22
	Pdh (declared heating capacity)	[kW]	8.48	10.13	11.12
	COPd (declared COP)	-	1.28	1.37	1.43
	WTOL (Heating water Operation Limit)	[°C]	65	65	65
(F) Tbilv temperature	Tbilv	[°C]	-15	-15	-15
	Pdh (declared heating capacity)	[kW]	9.11	9.95	10.80
	COPd (declared COP)	-	1.98	1.90	1.98
Supplementary capacity at P_design	Psup (@Tdesignh: -22°C)	[kW]	2.52	1.87	1.89
Warmer climate (Design temperature = 2°C)					
Space heating 35°C	Prated (declared heating capacity) @ 2°C	[kW]	12.4	13.2	14.1
	Seasonal space heating efficiency (ηs)	[%]	253.4	257.4	257.3
	Annual energy consumption	[kWh]	2 584	2 709	2 895
Space heating 55°C	Prated (declared heating capacity) @ 2°C	[kW]	13.1	14.1	14.1
	Seasonal space heating efficiency (ηs)	[%]	171.1	171.4	171.4
	Annual energy consumption	[kWh]	4 022	4 321	4 321
Part load conditions space heating warmer climate low temperature application					
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	12.40	13.20	14.10
	COPd (declared COP)	-	3.36	3.34	3.28
	Cdh(degradation coefficient)	-	0.99	0.99	0.99
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	7.82	8.42	8.91
	COPd (declared COP)	-	5.75	5.89	5.81
	Cdh(degradation coefficient)	-	0.98	0.98	0.98

Product fiche 5

Heat pump space heater		Outdoor	KHP-BI 12 DVR4	KHP-BI 14 DVR4	KHP-BI 16 DVR4
		Indoor	-- KHPM-BI 16 DVR4	-- KHPM-BI 16 DVR4	-- KHPM-BI 16 DVR4
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	5.62	5.63	5.64
	COPd (declared COP)	-	7.98	8.04	8.14
	Cdh(degradation coefficient)	-	0.97	0.97	0.97
(E) Tol (temperature operating limit)	Tol (temperature operating limit)	[°C]	2	2	2
	Pdh (declared heating capacity)	[kW]	12.40	13.20	14.10
	COPd (declared COP)	-	3.36	3.34	3.28
	WTOL (Heating water Operation Limit)	[°C]	65	65	65
(F) Tbivalent temperature	Tblv	[°C]	2	2	2
	Pdh (declared heating capacity)	[kW]	12.40	13.20	14.10
	COPd (declared COP)	-	3.36	3.34	3.28
Supplementary capacity at P_design	Psup (@Tdesignh: 2°C)	[kW]	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]	13.10	14.07	14.07
	COPd (declared COP)	-	2.35	2.23	2.23
	Cdh(degradation coefficient)	-	1.00	1.00	1.00
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	8.20	8.91	8.91
	COPd (declared COP)	-	3.80	3.79	3.79
	Cdh(degradation coefficient)	-	0.99	0.99	0.99
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	5.12	5.14	5.14
	COPd (declared COP)	-	5.48	5.55	5.55
	Cdh(degradation coefficient)	-	0.97	0.97	0.97
(E) Tol (temperature operating limit)	Tol (temperature operating limit)	[°C]	2	2	2
	Pdh (declared heating capacity)	[kW]	13.10	14.07	14.07
	COPd (declared COP)	-	2.35	2.23	2.23
	WTOL (Heating water Operation Limit)	[°C]	65	65	65
(F) Tbivalent temperature	Tblv	[°C]	2	2	2
	Pdh (declared heating capacity)	[kW]	13.10	14.07	14.07
	COPd (declared COP)	-	2.35	2.23	2.23
Supplementary capacity at P_design	Psup (@Tdesignh: 2°C)	[kW]	0.00	0.03	0.03

Product fiche 5

Heat pump space heater		Outdoor	KHP-BI 12 DTR4	KHP-BI 14 DTR4	KHP-BI 16 DTR4
		Indoor	-- KHPM-BI 16 DVR4	-- KHPM-BI 16 DVR4	-- KHPM-BI 16 DVR4
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	5.62	5.63	5.64
	COPd (declared COP)	-	7.98	8.04	8.14
	Cdh(degradation coefficient)	-	0.97	0.97	0.97
(E) Tol (temperature operating limit)	Tol (temperature operating limit)	[°C]	2	2	2
	Pdh (declared heating capacity)	[kW]	12.40	13.20	14.10
	COPd (declared COP)	-	3.36	3.34	3.28
	WTOL (Heating water Operation Limit)	[°C]	65	65	65
(F) Tbivalent temperature	Tblv	[°C]	2	2	2
	Pdh (declared heating capacity)	[kW]	12.40	13.20	14.10
	COPd (declared COP)	-	3.36	3.34	3.28
Supplementary capacity at P_design	Psup (@Tdesignh: 2°C)	[kW]	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]	13.10	14.07	14.07
	COPd (declared COP)	-	2.35	2.23	2.23
	Cdh(degradation coefficient)	-	1.00	1.00	1.00
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	8.20	8.91	8.91
	COPd (declared COP)	-	3.80	3.79	3.79
	Cdh(degradation coefficient)	-	0.99	0.99	0.99
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	5.12	5.14	5.14
	COPd (declared COP)	-	5.48	5.55	5.55
	Cdh(degradation coefficient)	-	0.97	0.97	0.97
(E) Tol (temperature operating limit)	Tol (temperature operating limit)	[°C]	2	2	2
	Pdh (declared heating capacity)	[kW]	13.10	14.07	14.07
	COPd (declared COP)	-	2.35	2.23	2.23
	WTOL (Heating water Operation Limit)	[°C]	65	65	65
(F) Tbivalent temperature	Tblv	[°C]	2	2	2
	Pdh (declared heating capacity)	[kW]	13.10	14.07	14.07
	COPd (declared COP)	-	2.35	2.23	2.23
Supplementary capacity at P_design	Psup (@Tdesignh: 2°C)	[kW]	0.00	0.03	0.03

Product fiche 6

Heat pump space heater		Outdoor	KHP-BI 12 DVR4	KHP-BI 14 DVR4	KHP-BI 16 DVR4
		Indoor	-- KHPM-BI 16 DVR4	-- KHPM-BI 16 DVR4	-- KHPM-BI 16 DVR4
Product description	Air-to-water heat pump	Y/N	Y	Y	Y
	Water-to-water heat pump	Y/N	N	N	N
	Brine-to-water heat pump	Y/N	N	N	N
	Low-temperature heat pump	Y/N	N	N	N
	Equipped with a supplementary heater	Y/N	Y	Y	Y
	Heat pump combination heater	Y/N	Y	Y	Y
Air to water unit	Rated airflow (outdoor)	[m ³ /h]	4780	4780	4780
Brine/water to water unit	Rated water/brine flow (outdoor H/E)		/	/	/
Other	Capacity control	-	inverter	inverter	inverter
	Poff (Power consumption Off mode)	[kW]	0.014	0.014	0.014
	Pto (Power consumption Thermostat off mode)	[kW]	0.024	0.024	0.024
	Psb (Power consumption Standby mode)	[kW]	0.014	0.014	0.014
	PCK (Power crankcase heater model)	[kW]	0.000	0.000	0.000
	Qelec (Daily electricity consumption)	[kWh]	/	/	/
	Qfuel (Daily fuel consumption)	[kWh]	/	/	/
<p>Note :</p> <p>Product fiche data according to energy label directive 2010/30/EC regulation (EU) 811/2013.</p> <p>(*)Sound power measured according to the EN12102 under conditions of the EN14825.</p> <p>Details and precautions on installation, maintenance and assembly can be found in the installation and or operation manuals.</p>					

Product fiche 6

Heat pump space heater		Outdoor	KHP-BI 12 DTR4	KHP-BI 14 DTR4	KHP-BI 16 DTR4
		Indoor	-- KHPM-BI 16 DVR4	-- KHPM-BI 16 DVR4	-- KHPM-BI 16 DVR4
Product description	Air-to-water heat pump	Y/N	Y	Y	Y
	Water-to-water heat pump	Y/N	N	N	N
	Brine-to-water heat pump	Y/N	N	N	N
	Low-temperature heat pump	Y/N	N	N	N
	Equipped with a supplementary heater	Y/N	Y	Y	Y
	Heat pump combination heater	Y/N	Y	Y	Y
Air to water unit	Rated airflow (outdoor)	[m³/h]	4780	4780	4780
Brine/water to water unit	Rated water/brine flow (outdoor H/E)		/	/	/
Other	Capacity control	-	inverter	inverter	inverter
	Poff (Power consumption Off mode)	[kW]	0.014	0.014	0.014
	Pto (Power consumption Thermostat off mode)	[kW]	0.024	0.024	0.024
	Psb (Power consumption Standby mode)	[kW]	0.014	0.014	0.014
	PCK (Power crankcase heater model)	[kW]	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 7

Heat pump space cooling		Outdoor	KHP-BI 12 DVR4	KHP-BI 14 DVR4	KHP-BI 16 DVR4
		Indoor	-- KHPM-BI 16 DVR4	-- KHPM-BI 16 DVR4	-- KHPM-BI 16 DVR4
Indoor unit sound power (*)		dB	43	43	43
Outdoor unit sound power (*)	Average climate low temperature application	dB	59	60	60
	Average climate medium temperature application	dB	59	60	60
Space cooling 7°C	Prated (declared cooling capacity) @ 35°C	[kW]	10.0	10.0	10.0
	Seasonal space cooling efficiency (ηs)	[%]	212.9	212.9	212.9
	Annual energy consumption	[kWh]	1 112	1 112	1 112
Space cooling 18°C	Prated (declared cooling capacity) @ 35°C	[kW]	10.0	10.0	10.0
	Seasonal space cooling efficiency (ηs)	[%]	257.2	257.2	257.2
	Annual energy consumption	[kWh]	922	922	922
Part load conditions space cooling : low temperature application@7°C					
(A) condition (35°C)	Pdc (declared cooling capacity)	[kW]	10.15	10.15	10.15
	EERd (declared EER)	-	3.07	3.07	3.07
	Cdc(degradation coefficient)	-	1.00	1.00	1.00
(B) condition (30°C)	Pdc (declared cooling capacity)	[kW]	7.38	7.38	7.38
	EERd (declared EER)	-	4.41	4.41	4.41
	Cdc(degradation coefficient)	-	1.00	1.00	1.00
(C) condition (25°C)	Pdc (declared cooling capacity)	[kW]	4.85	4.85	4.85
	EERd (declared EER)	-	6.10	6.10	6.10
	Cdc(degradation coefficient)	-	0.99	0.99	0.99
(D) condition (20°C)	Pdc (declared cooling capacity)	[kW]	4.91	4.91	4.91
	EERd (declared EER)	-	7.71	7.71	7.71
	Cdc(degradation coefficient)	-	0.99	0.99	0.99

Product fiche 7

Heat pump space cooling		Outdoor	KHP-BI 12 DTR4	KHP-BI 14 DTR4	KHP-BI 16 DTR4
		Indoor	-- KHPM-BI 16 DVR4	-- KHPM-BI 16 DVR4	-- KHPM-BI 16 DVR4
Indoor unit sound power (*)		dB	43	43	43
Outdoor unit sound power (*)	Average climate low temperature application	dB	59	60	60
	Average climate medium temperature application	dB	59	60	60
Space cooling 7°C	Prated (declared cooling capacity) @ 35°C	[kW]	10.0	10.0	10.0
	Seasonal space cooling efficiency (ηs)	[%]	212.9	212.9	212.9
	Annual energy consumption	[kWh]	1 112	1 112	1 112
Space cooling 18°C	Prated (declared cooling capacity) @ 35°C	[kW]	10.0	10.0	10.0
	Seasonal space cooling efficiency (ηs)	[%]	257.2	257.2	257.2
	Annual energy consumption	[kWh]	922	922	922
Part load conditions space cooling : low temperature application@7°C					
(A) condition (35°C)	Pdc (declared cooling capacity)	[kW]	10.15	10.15	10.15
	EERd (declared EER)	-	3.07	3.07	3.07
	Cdc(degradation coefficient)	-	1.00	1.00	1.00
(B) condition (30°C)	Pdc (declared cooling capacity)	[kW]	7.38	7.38	7.38
	EERd (declared EER)	-	4.41	4.41	4.41
	Cdc(degradation coefficient)	-	1.00	1.00	1.00
(C) condition (25°C)	Pdc (declared cooling capacity)	[kW]	4.85	4.85	4.85
	EERd (declared EER)	-	6.10	6.10	6.10
	Cdc(degradation coefficient)	-	0.99	0.99	0.99
(D) condition (20°C)	Pdc (declared cooling capacity)	[kW]	4.91	4.91	4.91
	EERd (declared EER)	-	7.71	7.71	7.71
	Cdc(degradation coefficient)	-	0.99	0.99	0.99

Product fiche 8

Heat pump space cooling		Outdoor	KHP-BI 12 DVR4	KHP-BI 14 DVR4	KHP-BI 16 DVR4
		Indoor	-- KHPM-BI 16 DVR4	-- KHPM-BI 16 DVR4	-- KHPM-BI 16 DVR4
Part load conditions space cooling : medium temperature application@18°C					
(A) condition (35°C)	Pdc (declared cooling capacity)	[kW]	10.22	10.22	10.22
	EERd (declared EER)	-	4.29	4.29	4.29
	Cdc(degradation coefficient)	-	1.00	1.00	1.00
(B) condition (30°C)	Pdc (declared cooling capacity)	[kW]	7.67	7.67	7.67
	EERd (declared EER)	-	4.50	4.50	4.50
	Cdc(degradation coefficient)	-	1.00	1.00	1.00
(C) condition (25°C)	Pdc (declared cooling capacity)	[kW]	5.88	5.88	5.88
	EERd (declared EER)	-	8.29	8.29	8.29
	Cdc(degradation coefficient)	-	0.99	0.99	0.99
(D) condition (20°C)	Pdc (declared cooling capacity)	[kW]	5.93	5.93	5.93
	EERd (declared EER)	-	8.84	8.84	8.84
	Cdc(degradation coefficient)	-	0.99	0.99	0.99
Air to water unit	Rated airflow (outdoor)	[m³/h]	3 900	3 900	3 900
Brine/water to water unit	Rated water/brine flow (outdoor H/E)		/	/	/
Other	Capacity control	-	inverter	inverter	inverter
	Poff (Power consumption Off mode)	[kW]	0.014	0.014	0.014
	Pto (Power consumption Thermostat off mode)	[kW]	0.008	0.008	0.008
	Psb (Power consumption Standby mode)	[kW]	0.014	0.014	0.014
	PCK (Power crankcase heater model)	[kW]	0.000	0.000	0.000
	Qelec (Daily electricity consumption)	[kWh]	/	/	/
	Qfuel (Daily fuel consumption)	[kWh]	/	/	/
<p>Note :</p> <p>Product fiche data according to energy label directive 2010/30/EC regulation (EU) 811/2013.</p> <p>(*)Sound power measured according to the EN12102 under conditions of the EN14825.</p> <p>Details and precautions on installation, maintenance and assembly can be found in the installation and or operation manuals.</p>					

Product fiche 8

Heat pump space cooling		Outdoor	KHP-BI 12 DTR4	KHP-BI 14 DTR4	KHP-BI 16 DTR4
		Indoor	-- KHPM-BI 16 DVR4	-- KHPM-BI 16 DVR4	-- KHPM-BI 16 DVR4
Part load conditions space cooling : medium temperature application@18°C					
(A) condition (35°C)	Pdc (declared cooling capacity)	[kW]	10.22	10.22	10.22
	EERd (declared EER)	-	4.29	4.29	4.29
	Cdc(degradation coefficient)	-	1.00	1.00	1.00
(B) condition (30°C)	Pdc (declared cooling capacity)	[kW]	7.67	7.67	7.67
	EERd (declared EER)	-	4.50	4.50	4.50
	Cdc(degradation coefficient)	-	1.00	1.00	1.00
(C) condition (25°C)	Pdc (declared cooling capacity)	[kW]	5.88	5.88	5.88
	EERd (declared EER)	-	8.29	8.29	8.29
	Cdc(degradation coefficient)	-	0.99	0.99	0.99
(D) condition (20°C)	Pdc (declared cooling capacity)	[kW]	5.93	5.93	5.93
	EERd (declared EER)	-	8.84	8.84	8.84
	Cdc(degradation coefficient)	-	0.99	0.99	0.99
Air to water unit	Rated airflow (outdoor)	[m³/h]	3 900	3 900	3 900
Brine/water to water unit	Rated water/brine flow (outdoor H/E)		/	/	/
Other	Capacity control	-	inverter	inverter	inverter
	Poff (Power consumption Off mode)	[kW]	0.014	0.014	0.014
	Pto (Power consumption Thermostat off mode)	[kW]	0.008	0.008	0.008
	Psb (Power consumption Standby mode)	[kW]	0.014	0.014	0.014
	PCK (Power crankcase heater model)	[kW]	0.000	0.000	0.000
	Qelec (Daily electricity consumption)	[kWh]	/	/	/
	Qfuel (Daily fuel consumption)	[kWh]	/	/	/
<p>Note :</p> <p>Product fiche data according to energy label directive 2010/30/EC regulation (EU) 811/2013.</p> <p>(*)Sound power measured according to the EN12102 under conditions of the EN14825.</p> <p>Details and precautions on installation, maintenance and assembly can be found in the installation and or operation manuals.</p>					

Condition(°C)	Model		Capacity (kW)	Power input (kW)	EER/COP (/)
	Outdoor unit	Indoor unit			
Ambient Temperature : 35/24 Water temperature : 12/7	KHP-BI 12 DVR4	--	10.0	3.322	3.01
	KHP-BI 14 DVR4	--	10.0	3.322	3.01
	KHP-BI 16 DVR4	--	10.0	3.322	3.01
	KHP-BI 12 DTR4	--	10.0	3.322	3.01
	KHP-BI 14 DTR4	--	10.0	3.322	3.01
	KHP-BI 16 DTR4	--	10.0	3.322	3.01
Ambient Temperature : 35/24 Water temperature : 23/18	KHP-BI 12 DVR4	--	10.0	2.353	4.25
	KHP-BI 14 DVR4	--	10.0	2.353	4.25
	KHP-BI 16 DVR4	--	10.0	2.353	4.25
	KHP-BI 12 DTR4	--	10.0	2.353	4.25
	KHP-BI 14 DTR4	--	10.0	2.353	4.25
	KHP-BI 16 DTR4	--	10.0	2.353	4.25
Ambient Temperature : 7/6 Water temperature : 30/35	KHP-BI 12 DVR4	--	12.1	2.401	5.04
	KHP-BI 14 DVR4	--	14.0	2.893	4.84
	KHP-BI 16 DVR4	--	15.5	3.362	4.61
	KHP-BI 12 DTR4	--	12.1	2.401	5.04
	KHP-BI 14 DTR4	--	14.0	2.893	4.84
	KHP-BI 16 DTR4	--	15.5	3.362	4.61
Ambient Temperature : 2/1 Water temperature : 30/35	KHP-BI 12 DVR4	--	12.1	3.227	3.75
	KHP-BI 14 DVR4	--	14.0	3.989	3.51
	KHP-BI 16 DVR4	--	15.5	4.769	3.25
	KHP-BI 12 DTR4	--	12.1	3.227	3.75
	KHP-BI 14 DTR4	--	14.0	3.989	3.51
	KHP-BI 16 DTR4	--	15.5	4.769	3.25
Ambient Temperature : -7/-8 Water temperature : 30/35	KHP-BI 12 DVR4	--	12.1	3.967	3.05
	KHP-BI 14 DVR4	--	14.0	4.930	2.84
	KHP-BI 16 DVR4	--	15.5	5.784	2.68
	KHP-BI 12 DTR4	--	12.1	3.967	3.05
	KHP-BI 14 DTR4	--	14.0	4.930	2.84
	KHP-BI 16 DTR4	--	15.5	5.784	2.68
Ambient Temperature : -15/- Water temperature : 30/35	KHP-BI 12 DVR4	--	12.1	4.821	2.51
	KHP-BI 14 DVR4	--	14.0	5.714	2.45
	KHP-BI 16 DVR4	--	15.5	6.652	2.33
	KHP-BI 12 DTR4	--	12.1	4.821	2.51
	KHP-BI 14 DTR4	--	14.0	5.714	2.45
	KHP-BI 16 DTR4	--	15.5	6.652	2.33

Condition(°C)	Model		Capacity (kW)	Power input (kW)	EER/COP (/)
	Outdoor unit	Indoor unit			
Ambient Temperature : 7/6 Water temperature : 40/45	KHP-BI 12 DVR4	--	12.1	3.176	3.81
	KHP-BI 14 DVR4	--	14.0	3.704	3.78
	KHP-BI 16 DVR4	--	15.5	4.201	3.69
	KHP-BI 12 DTR4	--	12.1	3.176	3.81
	KHP-BI 14 DTR4	--	14.0	3.704	3.78
	KHP-BI 16 DTR4	--	15.5	4.201	3.69
Ambient Temperature : 2/1 Water temperature : 40/45	KHP-BI 12 DVR4	--	10.9	3.471	3.14
	KHP-BI 14 DVR4	--	12.1	3.954	3.06
	KHP-BI 16 DVR4	--	14.0	4.828	2.90
	KHP-BI 12 DTR4	--	10.9	3.471	3.14
	KHP-BI 14 DTR4	--	12.1	3.954	3.06
	KHP-BI 16 DTR4	--	14.0	4.828	2.90
Ambient Temperature : -7/-8 Water temperature : 40/45	KHP-BI 12 DVR4	--	11.4	4.488	2.54
	KHP-BI 14 DVR4	--	11.9	4.704	2.53
	KHP-BI 16 DVR4	--	13.7	5.615	2.44
	KHP-BI 12 DTR4	--	11.4	4.488	2.54
	KHP-BI 14 DTR4	--	11.9	4.704	2.53
	KHP-BI 16 DTR4	--	13.7	5.615	2.44
Ambient Temperature : 7/6 Water temperature : 47/55	KHP-BI 12 DVR4	--	12.1	4.020	3.01
	KHP-BI 14 DVR4	--	14.0	4.667	3.00
	KHP-BI 16 DVR4	--	15.5	5.184	2.99
	KHP-BI 12 DTR4	--	12.1	4.020	3.01
	KHP-BI 14 DTR4	--	14.0	4.667	3.00
	KHP-BI 16 DTR4	--	15.5	5.184	2.99
Ambient Temperature : 2/1 Water temperature : 47/55	KHP-BI 12 DVR4	--	11.6	4.514	2.57
	KHP-BI 14 DVR4	--	12.3	4.824	2.55
	KHP-BI 16 DVR4	--	13.8	5.798	2.38
	KHP-BI 12 DTR4	--	11.6	4.514	2.57
	KHP-BI 14 DTR4	--	12.3	4.824	2.55
	KHP-BI 16 DTR4	--	13.8	5.798	2.38
Ambient Temperature : -7/-8 Water temperature : 47/55	KHP-BI 12 DVR4	--	11.4	5.377	2.12
	KHP-BI 14 DVR4	--	11.9	5.613	2.12
	KHP-BI 16 DVR4	--	13.7	6.462	2.12
	KHP-BI 12 DTR4	--	11.4	5.377	2.12
	KHP-BI 14 DTR4	--	11.9	5.613	2.12
	KHP-BI 16 DTR4	--	13.7	6.462	2.12

Unit type explanation:

- 1.--, without back-up heater
- 2.KHPM-BI 16 DVR4, with 3 kW back-up heater and 1-Phase power source
- 3.HB-A160CDS60GN8-E, with 6 kW back-up heater and 3-Phase power source
- 4.HB-A160CDS90GN8-E, with 9 kW back-up heater and 3-Phase power source

Condition(°C)	Model		Capacity (kW)	Power input (kW)	EER/COP (/)
	Outdoor unit	Indoor unit			
Ambient Temperature : 35/24 Water temperature : 12/7	KHP-BI 12 DVR4	KHPM-BI 16 DVR4	10.0	3.322	3.01
	KHP-BI 14 DVR4	KHPM-BI 16 DVR4	10.0	3.322	3.01
	KHP-BI 16 DVR4	KHPM-BI 16 DVR4	10.0	3.322	3.01
	KHP-BI 12 DTR4	KHPM-BI 16 DVR4	10.0	3.322	3.01
	KHP-BI 14 DTR4	KHPM-BI 16 DVR4	10.0	3.322	3.01
	KHP-BI 16 DTR4	KHPM-BI 16 DVR4	10.0	3.322	3.01
Ambient Temperature : 35/24 Water temperature : 23/18	KHP-BI 12 DVR4	KHPM-BI 16 DVR4	10.0	2.353	4.25
	KHP-BI 14 DVR4	KHPM-BI 16 DVR4	10.0	2.353	4.25
	KHP-BI 16 DVR4	KHPM-BI 16 DVR4	10.0	2.353	4.25
	KHP-BI 12 DTR4	KHPM-BI 16 DVR4	10.0	2.353	4.25
	KHP-BI 14 DTR4	KHPM-BI 16 DVR4	10.0	2.353	4.25
	KHP-BI 16 DTR4	KHPM-BI 16 DVR4	10.0	2.353	4.25
Ambient Temperature : 7/6 Water temperature : 30/35	KHP-BI 12 DVR4	KHPM-BI 16 DVR4	12.1	2.401	5.04
	KHP-BI 14 DVR4	KHPM-BI 16 DVR4	14.0	2.893	4.84
	KHP-BI 16 DVR4	KHPM-BI 16 DVR4	15.5	3.362	4.61
	KHP-BI 12 DTR4	KHPM-BI 16 DVR4	12.1	2.401	5.04
	KHP-BI 14 DTR4	KHPM-BI 16 DVR4	14.0	2.893	4.84
	KHP-BI 16 DTR4	KHPM-BI 16 DVR4	15.5	3.362	4.61
Ambient Temperature : 2/1 Water temperature : 30/35	KHP-BI 12 DVR4	KHPM-BI 16 DVR4	12.1	3.227	3.75
	KHP-BI 14 DVR4	KHPM-BI 16 DVR4	14.0	3.989	3.51
	KHP-BI 16 DVR4	KHPM-BI 16 DVR4	15.5	4.769	3.25
	KHP-BI 12 DTR4	KHPM-BI 16 DVR4	12.1	3.227	3.75
	KHP-BI 14 DTR4	KHPM-BI 16 DVR4	14.0	3.989	3.51
	KHP-BI 16 DTR4	KHPM-BI 16 DVR4	15.5	4.769	3.25
Ambient Temperature : -7/-8 Water temperature : 30/35	KHP-BI 12 DVR4	KHPM-BI 16 DVR4	12.1	3.967	3.05
	KHP-BI 14 DVR4	KHPM-BI 16 DVR4	14.0	4.930	2.84
	KHP-BI 16 DVR4	KHPM-BI 16 DVR4	15.5	5.784	2.68
	KHP-BI 12 DTR4	KHPM-BI 16 DVR4	12.1	3.967	3.05
	KHP-BI 14 DTR4	KHPM-BI 16 DVR4	14.0	4.930	2.84
	KHP-BI 16 DTR4	KHPM-BI 16 DVR4	15.5	5.784	2.68
Ambient Temperature : -15/- Water temperature : 30/35	KHP-BI 12 DVR4	KHPM-BI 16 DVR4	12.1	4.821	2.51
	KHP-BI 14 DVR4	KHPM-BI 16 DVR4	14.0	5.714	2.45
	KHP-BI 16 DVR4	KHPM-BI 16 DVR4	15.5	6.652	2.33
	KHP-BI 12 DTR4	KHPM-BI 16 DVR4	12.1	4.821	2.51
	KHP-BI 14 DTR4	KHPM-BI 16 DVR4	14.0	5.714	2.45
	KHP-BI 16 DTR4	KHPM-BI 16 DVR4	15.5	6.652	2.33

Condition(°C)	Model		Capacity (kW)	Power input (kW)	EER/COP (/)
	Outdoor unit	Indoor unit			
Ambient Temperature : 7/6 Water temperature : 40/45	KHP-BI 12 DVR4	KHPM-BI 16 DVR4	12.1	3.176	3.81
	KHP-BI 14 DVR4	KHPM-BI 16 DVR4	14.0	3.704	3.78
	KHP-BI 16 DVR4	KHPM-BI 16 DVR4	15.5	4.201	3.69
	KHP-BI 12 DTR4	KHPM-BI 16 DVR4	12.1	3.176	3.81
	KHP-BI 14 DTR4	KHPM-BI 16 DVR4	14.0	3.704	3.78
	KHP-BI 16 DTR4	KHPM-BI 16 DVR4	15.5	4.201	3.69
Ambient Temperature : 2/1 Water temperature : 40/45	KHP-BI 12 DVR4	KHPM-BI 16 DVR4	10.9	3.471	3.14
	KHP-BI 14 DVR4	KHPM-BI 16 DVR4	12.1	3.954	3.06
	KHP-BI 16 DVR4	KHPM-BI 16 DVR4	14.0	4.828	2.90
	KHP-BI 12 DTR4	KHPM-BI 16 DVR4	10.9	3.471	3.14
	KHP-BI 14 DTR4	KHPM-BI 16 DVR4	12.1	3.954	3.06
	KHP-BI 16 DTR4	KHPM-BI 16 DVR4	14.0	4.828	2.90
Ambient Temperature : -7/-8 Water temperature : 40/45	KHP-BI 12 DVR4	KHPM-BI 16 DVR4	11.4	4.488	2.54
	KHP-BI 14 DVR4	KHPM-BI 16 DVR4	11.9	4.704	2.53
	KHP-BI 16 DVR4	KHPM-BI 16 DVR4	13.7	5.615	2.44
	KHP-BI 12 DTR4	KHPM-BI 16 DVR4	11.4	4.488	2.54
	KHP-BI 14 DTR4	KHPM-BI 16 DVR4	11.9	4.704	2.53
	KHP-BI 16 DTR4	KHPM-BI 16 DVR4	13.7	5.615	2.44
Ambient Temperature : 7/6 Water temperature : 47/55	KHP-BI 12 DVR4	KHPM-BI 16 DVR4	12.1	4.020	3.01
	KHP-BI 14 DVR4	KHPM-BI 16 DVR4	14.0	4.667	3.00
	KHP-BI 16 DVR4	KHPM-BI 16 DVR4	15.5	5.184	2.99
	KHP-BI 12 DTR4	KHPM-BI 16 DVR4	12.1	4.020	3.01
	KHP-BI 14 DTR4	KHPM-BI 16 DVR4	14.0	4.667	3.00
	KHP-BI 16 DTR4	KHPM-BI 16 DVR4	15.5	5.184	2.99
Ambient Temperature : 2/1 Water temperature : 47/55	KHP-BI 12 DVR4	KHPM-BI 16 DVR4	11.6	4.514	2.57
	KHP-BI 14 DVR4	KHPM-BI 16 DVR4	12.3	4.824	2.55
	KHP-BI 16 DVR4	KHPM-BI 16 DVR4	13.8	5.798	2.38
	KHP-BI 12 DTR4	KHPM-BI 16 DVR4	11.6	4.514	2.57
	KHP-BI 14 DTR4	KHPM-BI 16 DVR4	12.3	4.824	2.55
	KHP-BI 16 DTR4	KHPM-BI 16 DVR4	13.8	5.798	2.38
Ambient Temperature : -7/-8 Water temperature : 47/55	KHP-BI 12 DVR4	KHPM-BI 16 DVR4	11.4	5.377	2.12
	KHP-BI 14 DVR4	KHPM-BI 16 DVR4	11.9	5.613	2.12
	KHP-BI 16 DVR4	KHPM-BI 16 DVR4	13.7	6.462	2.12
	KHP-BI 12 DTR4	KHPM-BI 16 DVR4	11.4	5.377	2.12
	KHP-BI 14 DTR4	KHPM-BI 16 DVR4	11.9	5.613	2.12
	KHP-BI 16 DTR4	KHPM-BI 16 DVR4	13.7	6.462	2.12

Unit type explanation:

1. --, without back-up heater ·
2. KHPM-BI 16 DVR4, with 3 kW back-up heater and 1-Phase power source
3. HB-A160CDS60GN8-E, with 6 kW back-up heater and 3-Phase power source
4. HB-A160CDS90GN8-E, with 9 kW back-up heater and 3-Phase power source

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