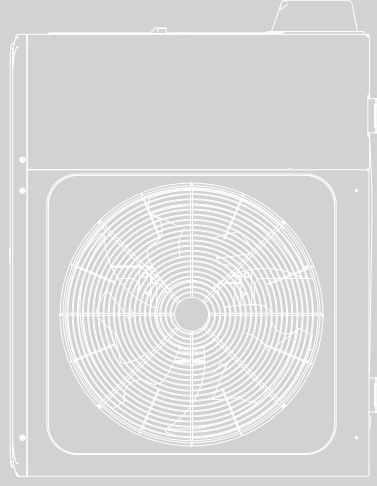


TECHNICAL DATA MANUAL AND ENERGY EFFICIENCY



OPTIMUS PRO Split Outdoor Unit



IMPORTANT NOTE:

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

Product fiche

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

Heat pump combination heater										
	Outdoor	HOPAWODU	HOP4WODU	HOP6WODU	HOP6WODU	HOP6WODU	HOP8WODU	HOP8WODU	HOP10WODU	HOP10WODU
		HOP100/190IDU**	HOP100/240IDU**	HOP100/190IDU**	HOP100/240IDU**	HOP100/190IDU**	HOP100/240IDU**	HOP100/190IDU**	HOP100/240IDU**	HOP100/190IDU**
Indoor unit sound power(*)	Indoor									
Outdoor unit sound power(*)										
Water heating										
Space heating										
Average climate										
Water heating										
Space heating										
Off-peak operation function integrated in heat pump										
Colder climate										
Water heating										
Space heating										
Warmer climate										
Water heating										
Space heating										
Ecodesign technical data										
Product description										
Air-to-water unit										
Brine/water-to-water heat pump										

Heat pump combination heater											
Indoor unit sound power(*)		Outdoor		HOP10WODU		HOP12WODU		HOP14WODU3		HOP16WODU3	
Indoor unit sound power(*)		Indoor		HOP100/240IDU***		HOP160/240IDU***		HOP160/240IDU***		HOP160/240IDU***	
Outdoor unit sound power(*)		dB		40		42		44		44	
Outdoor unit sound power(*)		dB		60		64		65		68	
Water heating		-		XL		XL		XL		XL	
Energy efficiency class		-		A+		A+		A+		A+	
Space heating		-		A++		A++		A++		A++	
Average climate											
Water heating		[%]		137		123		123		123	
Annual electricity consumption (AEC)		[kWh]		1218		1360		1360		1360	
P _{rated} (declared heating capacity)@-10°C		[kW]		7.7		11.6		12.1		13.0	
Seasonal space heating efficiency(η _s)		[%]		136.6		135.1		135.6		133.2	
Annual energy consumption		[kWh]		4539		6927		7202		7895	
Off-peak operation function integrated in heat pump		Y/N		Y		Y		Y		Y	
Colder climate											
Water heating		[%]		111		92		92		92	
Annual energy consumption		[kWh]		1508		1822		1822		1822	
P _{rated} (declared heating capacity)@-22°C		[kW]		6.71		10.31		10.96		11.8	
Seasonal space heating efficiency(η _s)		[%]		116.4		117.8		118.9		121.8	
Annual energy consumption		[kWh]		5540		8419		8866		9309	
Warmer climate											
Water heating		[%]		171		153		153		153	
Annual energy consumption		[kWh]		977		1088		1088		1088	
P _{rated} (declared heating capacity)@2°C		[kW]		8.63		12.5		14.17		14.17	
Seasonal space heating efficiency(η _s)		[%]		180.3		174.0		174.9		176.0	
Annual energy consumption		[kWh]		2516		3776		4258		4231	
Ecodesign technical data											
Air-to-water heat pump		Y/N		Y		Y		Y		Y	
Water-to-water heat pump		Y/N		N		N		N		N	
Brine-to-water heat pump		Y/N		N		N		N		N	
Low-temperature heat pump		Y/N		N		N		N		N	
Equipped with a supplementary heater		Y/N		Y		Y		Y		Y	
Heat pump combination heater		Y/N		Y		Y		Y		Y	
Rated airflow (outdoor)		[m³/h]		4030		4060		4060		4650	
Rated brine/water flow (outdoor H/E)		[m³/h]		-		-		-		-	

Heat pump combination heater		Outdoor	HOP4/WODU	HOP4/WODU	HOP6/WODU	HOP6/WODU	HOP6/WODU	HOP6/WODU	HOP8/WODU	HOP8/WODU	HOP8/WODU	HOP10/WODU
		Incbor	HOP100/190IDU**	HOP100/240IDU**	HOP100/190IDU**	HOP100/240IDU**	HOP100/190IDU**	HOP100/240IDU**	HOP100/190IDU**	HOP100/240IDU**	HOP100/190IDU**	HOP100/240IDU**
Capacity control		-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
P _{off} (Power consumption Off mode)		[kW]	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014
P _b (Power consumption Thermostat off mode)		[kW]	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024
P _{sb} (Power consumption standby mode)		[kW]	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014
P _{ck} (Power crankcase heater model)		[kW]	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
O _{elec} (Daily electricity consumption)		[kWh]	3.66	5.71	3.66	5.71	3.66	5.71	3.66	5.71	3.66	5.71
O _{fuel} (Daily fuel consumption)		[kWh]	-	-	-	-	-	-	-	-	-	-
Part load conditions space heating average climate												
P _{ah} (declared heating capacity)		[kW]	3.89	3.89	5.04	5.04	5.04	5.04	5.84	5.84	5.84	6.78
COP _d (declared COP)		-	2.17	2.17	2.17	2.17	2.17	2.17	2.16	2.16	2.16	2.24
Cdh (degradation coefficient)		-	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
P _{ah} (declared heating capacity)		[kW]	2.38	2.38	3.12	3.12	3.12	3.12	3.76	3.76	3.76	4.28
COP _d (declared COP)		-	3.30	3.30	3.51	3.51	3.51	3.51	3.30	3.30	3.30	3.42
Cdh (degradation coefficient)		-	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
P _{ah} (declared heating capacity)		[kW]	2.94	2.94	2.08	2.08	2.08	2.08	2.43	2.43	2.43	2.77
COP _d (declared COP)		-	4.41	4.41	4.54	4.54	4.54	4.54	4.34	4.34	4.34	4.52
Cdh (degradation coefficient)		-	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
P _{ah} (declared heating capacity)		[kW]	1.32	1.32	1.28	1.28	1.28	1.28	1.39	1.39	1.39	1.58
COP _d (declared COP)		-	5.66	5.66	5.66	5.66	5.66	5.66	5.33	5.33	5.33	5.68
Cdh (degradation coefficient)		-	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Tol (Temperature Operating Limit)		[°C]	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10
P _{ah} (declared heating capacity)		[kW]	3.42	3.42	4.52	4.52	4.52	4.52	4.91	4.91	4.91	5.38
COP _d (declared COP)		-	1.91	1.91	1.91	1.91	1.91	1.91	1.84	1.84	1.84	1.83
WTOL (Heating water Operation Limit)		[°C]	65	65	65	65	65	65	65	65	65	65
T _{bw}		[°C]	-7	-7	-7	-7	-7	-7	-7	-7	-7	-7
P _{ah} (declared heating capacity)		[kW]	3.89	3.89	5.04	5.04	5.04	5.04	5.84	5.84	5.84	6.78
COP _d (declared COP)		-	2.17	2.17	2.17	2.17	2.17	2.17	2.16	2.16	2.16	2.24
P _{sup} back-up heater (@ Tdesignh: -10°C)		[kW]	3/6/9	3/6/9	3/6/9	3/6/9	3/6/9	3/6/9	3/6/9	3/6/9	3/6/9	3/6/9
P _{sup} (@ Tdesignh: -10°C)		[kW]	0.98	0.98	1.18	1.18	1.18	1.18	1.69	1.69	1.69	2.28

Heat pump combination heater									
	Outdoor	HOP10WODU HOP100/240IDU***	HOP12WODU HOP160/240IDU***	HOP12WODU3 HOP160/240IDU***	HOP14WODU HOP160/240IDU***	HOP14WODU3 HOP160/240IDU***	HOP16WODU HOP160/240IDU***	HOP16WODU3 HOP160/240IDU***	
Capacity control	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
P_{off} (Power consumption Off mode)	[kW]	0.014	0.014	0.020	0.014	0.020	0.014	0.020	Yes
P_b (Power consumption Thermostat off mode)	[kW]	0.024	0.024	0.030	0.024	0.030	0.024	0.030	0.020
P_{sb} (Power consumption standby mode)	[kW]	0.014	0.014	0.020	0.014	0.020	0.014	0.020	0.030
P_{CK} (Power crankcase heater model)	[kW]	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.020
Q_{elec} (Daily electricity consumption)	[kWh]	5.67	6.35	6.35	6.35	6.35	6.35	6.35	0.000
Q_{fuel} (Daily fuel consumption)	[kWh]	-	-	-	-	-	-	-	6.35
Part load conditions space heating average climate									
P_{th} (declared heating capacity)	[kW]	6.78	10.24	10.24	10.68	10.68	11.52	11.52	11.52
COP_d (declared COP)	-	2.24	2.01	2.01	2.01	2.01	1.99	1.99	1.99
C_{dh} (deklaration coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
P_{th} (declared heating capacity)	[kW]	4.28	6.52	6.52	6.86	6.86	7.18	7.18	7.18
COP_d (declared COP)	-	3.42	3.44	3.44	3.43	3.43	3.34	3.34	3.34
C_{dh} (deklaration coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
P_{th} (declared heating capacity)	[kW]	2.77	4.36	4.36	4.63	4.63	4.67	4.67	4.67
COP_d (declared COP)	-	4.52	4.59	4.59	4.66	4.66	4.61	4.61	4.61
C_{dh} (deklaration coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
P_{th} (declared heating capacity)	[kW]	1.58	3.29	3.29	3.31	3.31	3.32	3.32	3.32
COP_d (declared COP)	-	5.68	6.05	6.05	6.13	6.13	6.07	6.07	6.07
C_{dh} (deklaration coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
T_{ol} (Temperature Operating Limit)	[°C]	-10	-10	-10	-10	-10	-10	-10	-10
P_{th} (declared heating capacity)	[kW]	5.38	9.1	9.1	9.19	9.19	10.33	10.33	10.33
COP_d (declared COP)	-	1.83	1.79	1.79	1.76	1.76	1.80	1.80	1.80
WTOL(Heating water Operation Limit)	[°C]	65	65	65	65	65	65	65	65
T_{bw}	[°C]	-7	-7	-7	-7	-7	-7	-7	-7
P_{th} (declared heating capacity)	[kW]	6.78	10.27	10.27	10.68	10.68	11.52	11.52	11.52
COP_d (declared COP)	-	2.24	2.01	2.01	2.01	2.01	1.99	1.99	1.99
Capacity of the back-up heater integrated in the unit	[kW]	3/6/9	3/6/9	3/6/9	3/6/9	3/6/9	3/6/9	3/6/9	3/6/9
Supplementary capacity at P_{design}	[kW]	2.28	2.5	2.5	2.91	2.91	2.67	2.67	2.67

Indoor unit type explanation:

- 1.HOP100/190IDU*** includes the following type:
HOP100/190IDU: 190L tank with 3kW back-up heater and 1-Phase Source.
HOP100/190IDU3: 190L tank with 9kW back-up heater and 3-Phase Source.
- 2.HOP100/240IDU*** includes the following type:
HOP100/240IDU: 240L tank with 3kW back-up heater and 1-Phase Source.
HOP100/240IDU3: 240L tank with 9kW back-up heater and 3-Phase Source.
- 3.HOP160/240IDU*** includes the following type:
HOP160/240IDU3: 240L tank with 9kW back-up heater and 3-Phase Source.

Note:

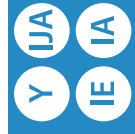
Details and precautions on installation, maintenance and assembly can be found in the installation and or operation manuals.

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

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

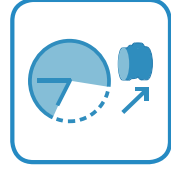
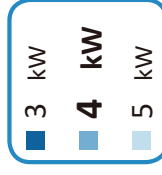
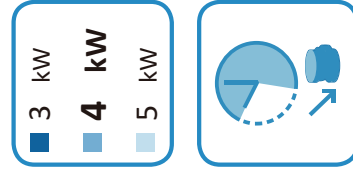
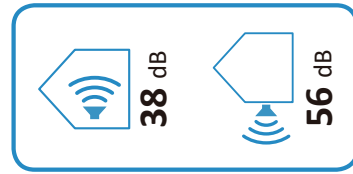


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HOP4WODU
HOP100/190IDU

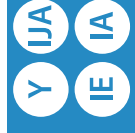


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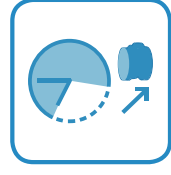
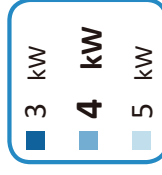
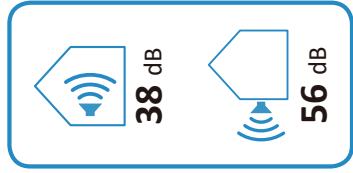


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NØRDIS

HOP4WODU
HOP100/190IDU3



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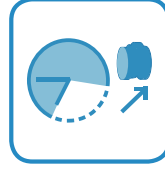
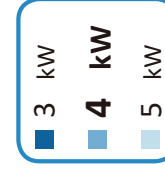
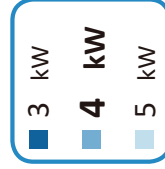
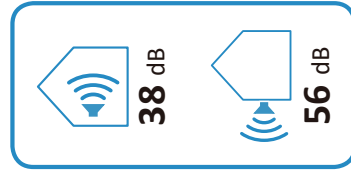
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HOP4WODU
HOP100/240IDU



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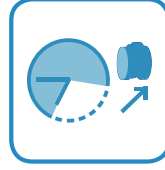
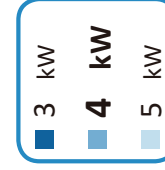
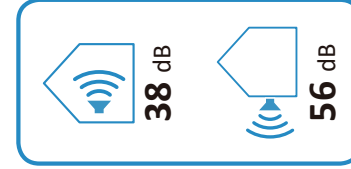
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HOP4WODU
HOP100/240IDU3



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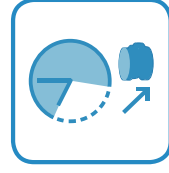
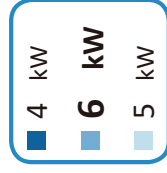
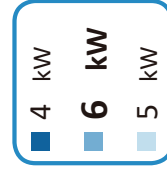
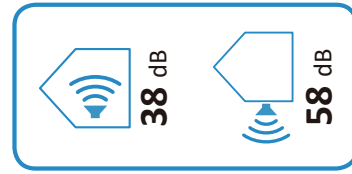


HOP6WODU
HOP100/190IDU



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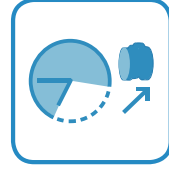
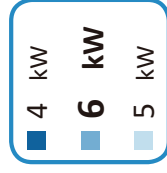
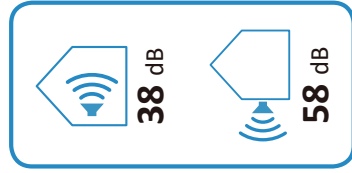


HOP6WODU
HOP100/190IDU3



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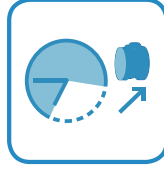
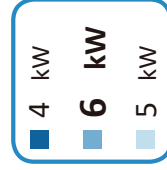
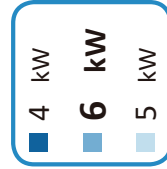
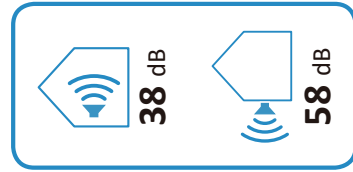
HOP6WODU
HOP100/240IDU



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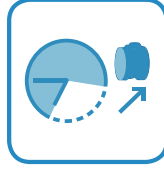
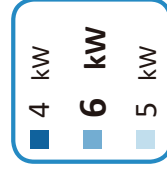
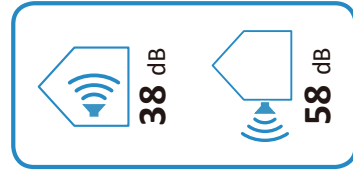
HOP6WODU
HOP100/240IDU3



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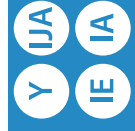


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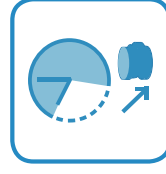
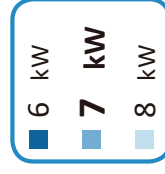
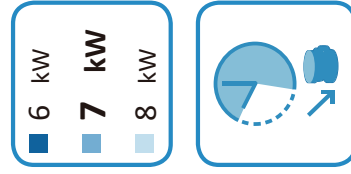
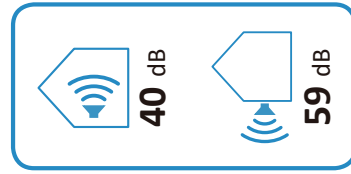
NØRDIS

HOP8WODU
HOP100/190IDU



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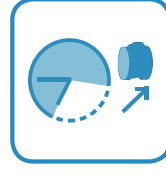
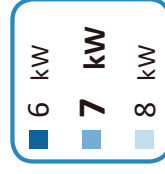
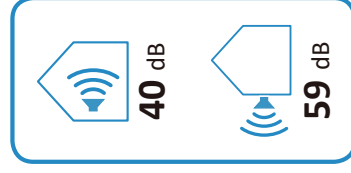
NØRDIS

HOP8WODU
HOP100/190IDU3



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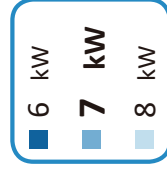
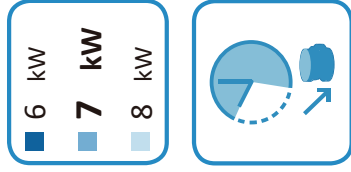
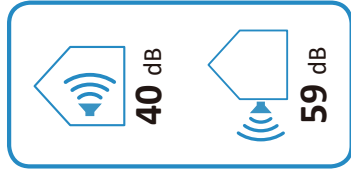
NØRDIS

HOP8WODU
HOP100/240IDU



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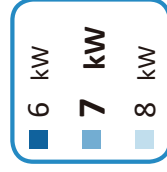
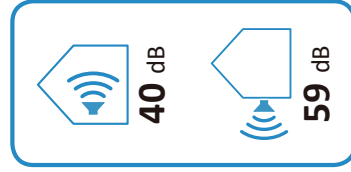
NØRDIS

HOP8WODU
HOP100/240IDU3



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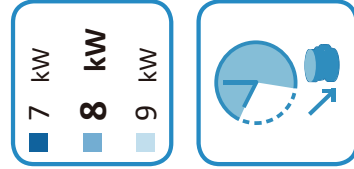
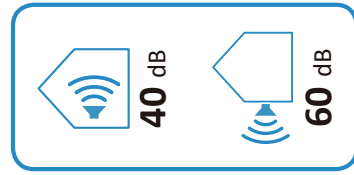
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HOP10WODU
HOP100/190IDU



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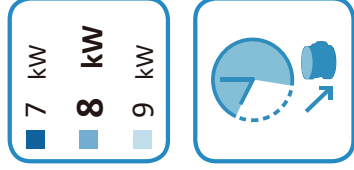
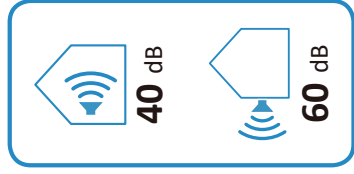
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HOP10WODU
HOP100/190IDU3



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811/2013



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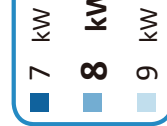
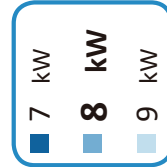
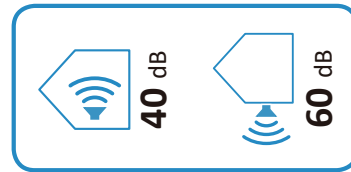
HOP10WODU
HOP100/240IDU



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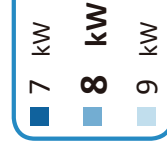
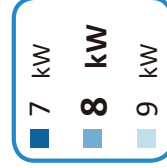
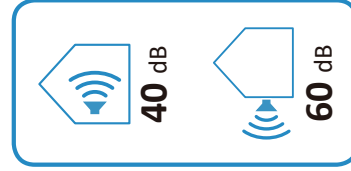
HOP10WODU
HOP100/240IDU3



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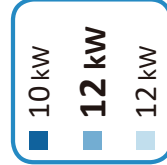
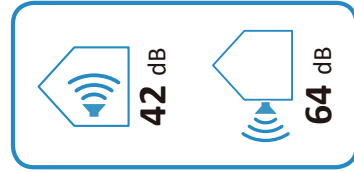
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HOP12WODU
HOP160/240IDU3



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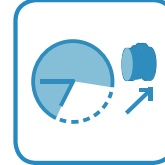
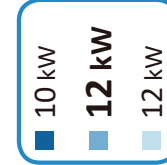
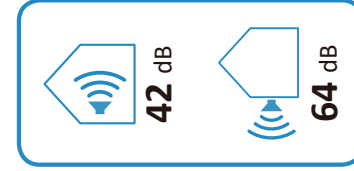
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HOP12WODU3
HOP160/240IDU3



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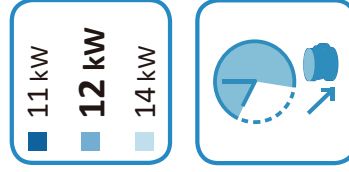
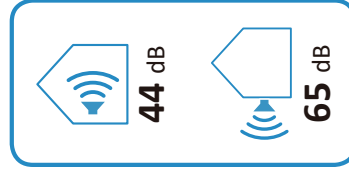
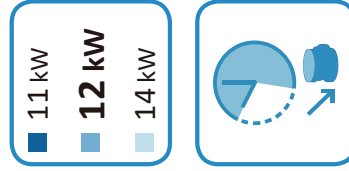
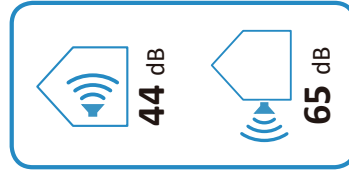
HOP14WODU
HOP160/240IDU3



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811/2013

2019

811/2013



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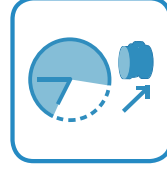
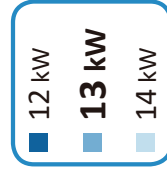
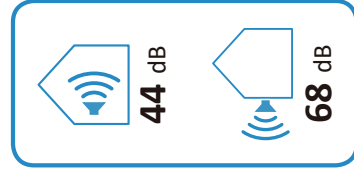
NØRDIS

HOP16WODU3
HOP160/240IDU3



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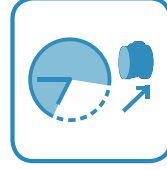
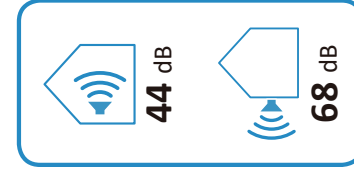
NØRDIS

HOP16WODU3
HOP160/240IDU3



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2019

811/2013

Heat pump space heating		For medium - temperature application											
Outdoor unit	Indoor unit	Energy efficiency class	Indoor unit sound power	Outdoor unit sound power	average climate			colder climate			warmer climate		
					Rated heat output	Seasonal space heating energy efficiency	For space heating, annual energy consumption	Rated heat output	Seasonal space heating energy efficiency	For space heating, annual energy consumption	Rated heat output	Seasonal space heating energy efficiency	For space heating, annual energy consumption
		-	dB	dB	kW	%	kWh	kW	%	kWh	kW	%	kWh
	HOP60WIDU***	A++	38	56	4.4	129.5	2744	3.4	102.1	3158	5.0	163.1	1614
HOP4WODU	HOP100/190IDU***	A++	38	56	4.4	129.5	2744	3.4	102.1	3158	5.0	163.1	1614
	HOP100/240IDU***	A++	38	56	4.4	129.5	2744	3.4	102.1	3158	5.0	163.1	1614
HOP6WODU	HOP60WIDU***	A++	38	58	5.7	137.9	3345	4.3	111.1	3680	5.1	165.4	1634
	HOP100/190IDU***	A++	38	58	5.7	137.9	3345	4.3	111.1	3680	5.1	165.4	1634
	HOP100/240IDU***	A++	38	58	5.7	137.9	3345	4.3	111.1	3680	5.1	165.4	1634
	HOP100WIDU***	A++	42	59	6.6	131.5	4056	5.8	112.1	4948	8.37	176.9	2485
HOP8WODU	HOP100/190IDU***	A++	40	59	6.6	131.5	4056	5.8	112.1	4948	8.37	176.9	2485
	HOP100/240IDU***	A++	40	59	6.6	131.5	4056	5.8	112.1	4948	8.37	176.9	2485
	HOP100WIDU***	A++	42	60	7.7	136.6	4539	6.7	116.5	5539	8.6	180.3	2496
HOP10WODU	HOP100/190IDU***	A++	40	60	7.7	136.6	4539	6.7	116.5	5539	8.6	180.3	2496
	HOP100/240IDU***	A++	40	60	7.7	136.6	4539	6.7	116.5	5539	8.6	180.3	2496
	HOP160WIDU***	A++	43	64	11.6	135.1	6927	10.3	117.8	8419	12.5	174.0	3776
HOP12WODU	HOP160/240IDU***	A++	42	64	11.6	135.1	6927	10.3	117.8	8419	12.5	174.0	3776
	HOP160WIDU***	A++	43	64	11.6	135.1	6928	10.3	117.7	8420	12.5	173.8	3780
HOP12WODU3	HOP160/240IDU***	A++	42	64	11.6	135.1	6928	10.3	117.7	8420	12.5	173.8	3780
	HOP160WIDU***	A++	43	65	12.1	135.6	7202	11.0	118.9	8866	14.17	174.9	4258
HOP14WODU	HOP160/240IDU***	A++	44	65	12.1	135.6	7202	11.0	118.9	8866	14.17	174.9	4258
	HOP160WIDU***	A++	43	65	12.1	135.6	7203	11.0	118.9	8867	14.17	174.7	4262
HOP14WODU3	HOP160/240IDU***	A++	44	65	12.1	135.6	7203	11.0	118.9	8867	14.17	174.7	4262
	HOP160WIDU***	A++	43	68	13.0	133.3	7895	11.8	121.8	9309	14.17	176.0	4231
HOP16WODU	HOP160/240IDU***	A++	44	68	13.0	133.3	7895	11.8	121.8	9309	14.17	176.0	4231
	HOP160WIDU***	A++	43	68	13.0	133.2	7896	11.8	121.8	9310	14.17	175.8	4236
HOP16WODU3	HOP160/240IDU***	A++	44	68	13.0	133.2	7896	11.8	121.8	9310	14.17	175.8	4236

Heat pump space heating		For low - temperature application																
Outdoor unit	Indoor unit	Energy efficiency class	Indoor unit sound power dB	Outdoor unit sound power dB	average climate			colder climate			warmer climate							
					Rated heat output kW	Seasonal space heating energy efficiency %	For space heating, annual energy consumption kWh	Rated heat output kW	Seasonal space heating energy efficiency %	For space heating, annual energy consumption kWh	Rated heat output kW	Seasonal space heating energy efficiency %	For space heating, annual energy consumption kWh					
		-																
	HOP60WIDU***	A+++	38	56	5.5	191.0	2351	4.6	159.5	2769	5.5	255.4	1146					
HOP4WODU	HOP100/190IDU***	A+++	38	56	5.5	191.0	2351	4.6	159.5	2769	5.5	255.4	1146					
	HOP100/240IDU***	A+++	38	56	5.5	191.0	2351	4.6	159.5	2769	5.5	255.4	1146					
	HOP60WIDU***	A+++	38	58	6.8	195.0	2845	5.6	165.3	3300	6.1	259.8	1244					
HOP6WODU	HOP100/190IDU***	A+++	38	58	6.8	195.0	2845	5.6	165.3	3300	6.1	259.8	1244					
	HOP100/240IDU***	A+++	38	58	6.8	195.0	2845	5.6	165.3	3300	6.1	259.8	1244					
	HOP100WIDU***	A+++	42	59	8.1	205.6	3218	7.0	170.0	3976	8.1	276.6	1551					
HOP8WODU	HOP100/190IDU***	A+++	40	59	8.1	205.6	3218	7.0	170.0	3976	8.1	276.6	1551					
	HOP100/240IDU***	A+++	40	59	8.1	205.6	3218	7.0	170.0	3976	8.1	276.6	1551					
	HOP100WIDU***	A+++	42	60	9.2	204.8	3644	7.7	169.8	4423	8.6	280.5	1617					
HOP10WODU	HOP100/190IDU***	A+++	40	60	9.2	204.8	3644	7.7	169.8	4423	8.6	280.5	1617					
	HOP100/240IDU***	A+++	40	60	9.2	204.8	3644	7.7	169.8	4423	8.6	280.5	1617					
	HOP160WIDU***	A+++	43	64	12.0	189.4	5152	11.4	160.2	6870	11.1	256.1	2292					
HOP12WODU	HOP160/240IDU***	A+++	42	64	12.0	189.4	5152	11.4	160.2	6870	11.1	256.1	2292					
	HOP160WIDU***	A+++	43	64	12.0	189.3	5153	11.4	160.2	6871	11.1	255.6	2296					
HOP12WODU3	HOP160/240IDU***	A+++	42	64	12.0	189.3	5153	11.4	160.2	6871	11.1	255.6	2296					
	HOP160WIDU***	A+++	43	65	13.7	185.7	6012	12.6	159.6	7667	12.1	260.3	2457					
HOP14WODU	HOP160/240IDU***	A+++	44	65	13.7	185.7	6012	12.6	159.6	7667	12.1	260.3	2457					
	HOP160WIDU***	A+++	43	65	13.7	185.6	6013	12.6	159.6	7667	12.1	259.8	2462					
HOP14WODU3	HOP160/240IDU***	A+++	44	65	13.7	185.6	6013	12.6	159.6	7667	12.1	259.8	2462					
	HOP160WIDU***	A+++	43	68	15.2	181.7	6804	13.7	157.8	8431	13.1	248.5	2781					
HOP16WODU	HOP160/240IDU***	A+++	44	68	15.2	181.7	6804	13.7	157.8	8431	13.1	248.5	2781					
	HOP160WIDU***	A+++	43	68	15.2	181.6	6805	13.7	157.8	8431	13.1	248.1	2786					
HOP16WODU3	HOP160/240IDU***	A+++	44	68	15.2	181.6	6805	13.7	157.8	8431	13.1	248.1	2786					

Product fiche 1

Heat pump space heating

		Outdoor	HOP4WODU	HOP6WODU	HOP8WODU	HOP10WODU	HOP12WODU
Indoor unit sound power (*)		Indoor	HOP60WIDU*** HOP100/190IDU*** HOP100/240IDU***	HOP60WIDU*** HOP100/190IDU*** HOP100/240IDU***	HOP100WIDU*** HOP100/190IDU*** HOP100/240IDU***	HOP100WIDU*** HOP100/190IDU*** HOP100/240IDU***	HOP160WIDU*** HOP160/240IDU***
Average climate low temperature application		dB	38 ^{a)} /38 ^{b)}	38 ^{a)} /38 ^{b)}	42 ^{a)} /40 ^{b)}	42 ^{a)} /40 ^{b)}	43 ^{a)} /42 ^{b)}
Outdoor unit sound power (*)		dB	56	58	59	60	64
Average climate medium temperature application		dB	56	58	59	60	64
Capacity of the back-up heater integrated in the unit		[kW]	3/6/9	3/6/9	3/6/9	3/6/9	3/6/9
Space heating		-	A+++	A+++	A+++	A+++	A+++
Space heating		-	A++	A++	A++	A++	A++
Average climate (Design temperature = -10°C)							
Space heating 35°C		[kW]	5.5	6.8	8.1	9.2	12.0
Seasonal space heating efficiency (ηs)		[%]	191.0	195.0	205.6	204.8	189.4
Annual energy consumption		[kWh]	2,351	2,845	3,218	3,644	5,152
Space heating 55°C		[kW]	4.4	5.7	6.6	7.7	11.6
Seasonal space heating efficiency (ηs)		[%]	129.5	137.9	131.5	136.6	135.1
Annual energy consumption		[kWh]	2,744	3,345	4,056	4,539	6,927
Part load conditions space heating average climate low temperature application							
(A) condition (-7°C)		[kW]	4.88	6.03	7.18	8.10	10.61
COPd (declared COP)		-	3.19	3.09	3.35	3.23	2.88
Cdh(degradation coefficient)		-	0.90	0.90	0.90	0.90	0.90
(B) condition (2°C)		[kW]	3.05	3.88	4.65	5.18	6.69
COPd (declared COP)		-	4.78	4.85	5.09	5.01	4.65
Cdh(degradation coefficient)		-	0.90	0.90	0.90	0.90	0.90
(C) condition (7°C)		[kW]	1.93	2.39	2.90	3.32	4.44
COPd (declared COP)		-	6.13	6.63	6.82	7.08	6.62
Cdh(degradation coefficient)		-	0.90	0.90	0.90	0.90	0.90
(D) condition (12°C)		[kW]	1.48	1.39	1.63	1.65	3.74
COPd (declared COP)		-	8.05	7.93	8.35	8.58	8.47
Cdh(degradation coefficient)		-	0.90	0.90	0.90	0.90	0.90
(E) Tol (temperature operating limit)		[°C]	-10.00	-10.00	-10.00	-10.00	-10.00
Pdh (declared heating capacity)		[kW]	4.41	5.36	6.44	7.40	10.74
COPd (declared COP)		-	2.86	2.76	3.04	2.96	2.77
WTOL (Heating water Operation Limit)		[°C]	65	65	65	65	65

Note :
a) represents the hydraulic module series ;
b) represents the OPTIMUS PRO tank series ;

Product fiche 1

Heat pump space heating

		Outdoor	HOP14WODU	HOP16WODU	HOP12WODU3	HOP14WODU3	HOP16WODU3
		Indoor	HOP160WIDU*** HOP160/240IDU***	HOP160WIDU*** HOP160/240IDU***	HOP160WIDU*** HOP160/240IDU***	HOP160WIDU*** HOP160/240IDU***	HOP160WIDU*** HOP160/240IDU***
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
Capacity of the back-up heater integrated in the unit	Psup back-up heater (optional)	[kW]	3/6/9	3/6/9	3/6/9	3/6/9	3/6/9
Space heating	Energy efficiency class 35°C (Low temp. app.)	-	A+++	A+++	A+++	A+++	A+++
Space heating	Energy efficiency class 55°C (Medium temp. app.)	-	A++	A++	A++	A++	A++
Average climate (Design temperature = -10°C)							
Space heating 35°C	Prated (declared heating capacity) @ -10°C	[kW]	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 OPTIMUS PRO tank series ;

Product fiche 2

Heat pump space heating

		Outdoor	HOP4WODU	HOP6WODU	HOP8WODU	HOP10WODU	HOP12WODU
(F) Tivalenttemperature	Tbiv	[°C]	-7.00	-7.00	-7.00	-7.00	-7.00
	Pdh (declared heating capacity)	[kW]	4.88	6.03	7.18	8.10	10.61
	COPd (declared COP)	-	3.19	3.09	3.35	3.23	2.88
	Psup (@Tdesign: -10°C)	[kW]	1.11	1.45	1.68	1.76	1.26
Part load conditions space heating average climate medium temperature application							
(A) condition (-7°C)	Pdh (declared heating capacity)	[kW]	3.89	5.04	5.84	6.78	10.24
	COPd (declared COP)	-	2.17	2.17	2.16	2.24	2.01
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
	Pdh (declared heating capacity)	[kW]	2.38	3.12	3.75	4.28	6.52
(B) condition (2°C)	COPd (declared COP)	-	3.30	3.51	3.30	3.42	3.44
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
	Pdh (declared heating capacity)	[kW]	2.94	2.08	2.42	2.77	4.36
	COPd (declared COP)	-	4.41	4.54	4.34	4.52	4.59
(C) condition (7°C)	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
	Pdh (declared heating capacity)	[kW]	1.32	1.28	1.39	1.58	3.29
	COPd (declared COP)	-	5.66	5.59	5.33	5.68	6.05
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(E) Tol (temperature operating limit)	Tol (temperature operating limit)	[°C]	-10.00	-10.00	-10.00	-10.00	-10.00
	Pdh (declared heating capacity)	[kW]	3.42	4.52	4.90	5.38	9.10
	COPd (declared COP)	-	1.91	1.91	1.84	1.83	1.79
	WTOL (Heating water Operation Limit)	[°C]	65	65	65	65	65
(F) Tivalenttemperature	Tbiv	[°C]	-7.00	-7.00	-7.00	-7.00	-7.00
	Pdh (declared heating capacity)	[kW]	3.89	5.04	5.84	6.78	10.24
	COPd (declared COP)	-	2.17	2.17	2.16	2.24	2.01
	Psup (@Tdesign: -10°C)	[kW]	0.98	1.18	1.69	2.28	2.50
Colder climate (Design temperature = -22°C)							
Space heating 35°C	Prated (declared heating capacity) @ -22°C	[kW]	4.6	5.6	7.0	7.7	11.4
	Seasonal space heating efficiency (ns)	[%]	159.5	165.3	170.0	169.8	160.2
	Annual energy consumption	[kWh]	2,769	3,300	3,976	4,423	6,870

Product fiche 2

Heat pump space heating		Outdoor		HOP14WODU		HOP16WODU		HOP12WODU3		HOP14WODU3		HOP16WODU3	
		Inoor		HOP160WIDU*** HOP160/240IDU***	HOP160WIDU*** HOP160/240IDU***	HOP160WIDU*** HOP160/240IDU***	HOP160WIDU*** HOP160/240IDU***	HOP160WIDU*** HOP160/240IDU***	HOP160WIDU*** HOP160/240IDU***	HOP160WIDU*** HOP160/240IDU***	HOP160WIDU*** HOP160/240IDU***	HOP160WIDU*** HOP160/240IDU***	
(F) Tivalent temperature	Tbiv	[°C]	-7.00	-7.00	-7.00	-7.00	-7.00	-7.00	-7.00	-7.00	-7.00	-7.00	-7.00
	Pdh (declared heating capacity)	[kW]	12.14	12.14	13.45	10.61	13.45	10.61	12.14	12.14	13.45	10.61	13.45
	COPd (declared COP)	-	2.79	2.79	2.72	2.88	2.72	2.88	2.79	2.79	2.72	2.88	2.72
Supplementary capacity at P_design	Psup (@Tdesignh: -10°C)	[kW]	2.23	2.23	2.68	1.26	2.68	1.26	2.23	2.23	2.68	1.26	2.68
Part load conditions space heating average climate medium temperature application													
(A) condition (-7°C)	Pdh (declared heating capacity)	[kW]	10.68	10.68	11.52	10.24	11.52	10.24	10.68	10.68	11.52	10.24	11.52
	COPd (declared COP)	-	2.01	2.01	1.99	2.01	1.99	2.01	2.01	2.01	1.99	2.01	1.99
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	6.86	6.86	7.18	6.52	7.18	6.52	6.86	6.86	7.18	6.52	7.18
	COPd (declared COP)	-	3.43	3.43	3.34	3.44	3.34	3.44	3.43	3.43	3.34	3.44	3.34
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	4.63	4.63	4.67	4.36	4.67	4.36	4.63	4.63	4.67	4.36	4.67
	COPd (declared COP)	-	4.66	4.66	4.61	4.59	4.61	4.59	4.66	4.66	4.61	4.59	4.61
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	3.31	3.31	3.31	3.29	3.31	3.29	3.31	3.31	3.31	3.29	3.31
	COPd (declared COP)	-	6.13	6.13	6.07	6.05	6.07	6.05	6.13	6.13	6.07	6.05	6.07
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
(E) ToI (temperature operating limit)	ToI (temperature operating limit)	[°C]	-10.00	-10.00	-10.00	-10.00	-10.00	-10.00	-10.00	-10.00	-10.00	-10.00	-10.00
	Pdh (declared heating capacity)	[kW]	9.19	9.19	10.33	9.10	10.33	9.10	9.19	9.19	10.33	9.10	10.33
	COPd (declared COP)	-	1.76	1.76	1.80	1.79	1.80	1.79	1.76	1.76	1.80	1.79	1.80
(F) Tivalent temperature	WTOL (Heating water Operation Limit)	[°C]	65	65	65	65	65	65	65	65	65	65	65
	Tbiv	[°C]	-7.00	-7.00	-7.00	-7.00	-7.00	-7.00	-7.00	-7.00	-7.00	-7.00	-7.00
	Pdh (declared heating capacity)	[kW]	10.68	10.68	11.52	10.24	11.52	10.24	10.68	10.68	11.52	10.24	11.52
Supplementary capacity at P_design	Psup (@Tdesignh: -10°C)	[kW]	2.91	2.91	2.67	2.50	2.67	2.50	2.91	2.91	2.67	2.50	2.67
Colder climate (Design temperature = -22°C)													
Space heating 35°C	Prated (declared heating capacity) @ -22°C	[kW]	12.6	12.6	13.7	11.4	13.7	11.4	12.6	12.6	13.7	11.4	13.7
	Seasonal space heating efficiency (ηs)	[%]	159.6	159.6	157.8	160.2	157.8	160.2	159.6	159.6	157.8	160.2	157.8
	Annual energy consumption	[kWh]	7,667	7,667	8,431	6,871	8,431	6,871	7,667	7,667	8,431	6,871	8,431

Product fiche 3

Heat pump space heating

		Outdoor	HOP4WODU	HOP6WODU	HOP8WODU	HOP10WODU	HOP12WODU
Space heating 55°C		Indoor	HOP60WIDU*** HOP100/190IDU*** HOP100/240IDU***	HOP60WIDU*** HOP100/190IDU*** HOP100/240IDU***	HOP100WIDU*** HOP100/190IDU*** HOP100/240IDU***	HOP100WIDU*** HOP100/190IDU*** HOP100/240IDU***	HOP160WIDU*** HOP160/240IDU***
	Rated (declared heating capacity) @ -22°C	[kW]	3.4	4.3	5.8	6.7	10.3
	Seasonal space heating efficiency (ηs)	[%]	102.1	111.1	112.0	116.4	117.8
	Annual energy consumption	[kWh]	3,159	3,681	4,950	5,540	8,419
Part load conditions space heating colder climate low temperature application							
(A) condition (-7°C)	Pdh (declared heating capacity)	[kW]	2.75	3.42	4.46	4.83	7.05
	COPd (declared COP)	-	3.49	3.59	3.66	3.60	3.48
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	1.77	2.06	2.69	2.94	4.67
	COPd (declared COP)	-	4.95	5.21	5.20	5.26	4.96
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	1.17	1.46	1.65	1.92	3.14
	COPd (declared COP)	-	5.53	6.24	6.53	7.08	6.10
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	1.43	1.44	1.65	1.65	3.57
	COPd (declared COP)	-	7.67	7.66	7.96	7.96	7.87
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(E) Tol (temperature operating limit)	Tol (temperature operating limit)	[°C]	-22.00	-22.00	-22.00	-22.00	-22.00
	Pdh (declared heating capacity)	[kW]	2.80	3.48	4.06	4.62	7.01
	COPd (declared COP)	-	1.97	1.96	1.95	1.97	1.98
(F) TbiValent temperature	WTOL (Heating water Operation Limit)	[°C]	65	65	65	65	65
	Tbiv	[°C]	-15.00	-15.00	-15.00	-15.00	-15.00
	Pdh (declared heating capacity)	[kW]	3.72	4.59	5.69	6.32	9.28
Supplementary capacity at P_design	COPd (declared COP)	-	2.57	2.53	2.83	2.64	2.59
Supplementary capacity at P_design	Psup (@Tdesign: -22°C)	[kW]	1.76	2.15	2.91	3.08	4.40
Part load conditions space heating colder climate medium temperature application							
(A) condition (-7°C)	Pdh (declared heating capacity)	[kW]	2.13	2.70	3.86	4.27	6.63
	COPd (declared COP)	-	2.32	2.46	2.48	2.54	2.63
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90

Product fiche 3

Heat pump space heating						
	Outdoor	HOP14WODU	HOP16WODU	HOP12WODU3	HOP14WODU3	HOP16WODU3
	Indoor	HOP160WIDU*** HOP160/240IDU***	HOP160WIDU*** HOP160/240IDU***	HOP160WIDU*** HOP160/240IDU***	HOP160WIDU*** HOP160/240IDU***	HOP160WIDU*** HOP160/240IDU***
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						
Tbiv	[°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	[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 heating

		Outdoor	HOP4WODU HOP60WIDU*** HOP100/190IDU*** HOP100/240IDU***	HOP6WODU HOP60WIDU*** HOP100/190IDU*** HOP100/240IDU***	HOP8WODU HOP100WIDU*** HOP100/190IDU*** HOP100/240IDU***	HOP10WODU HOP100WIDU*** HOP100/190IDU*** HOP100/240IDU***	HOP12WODU HOP160WIDU*** HOP100/240IDU***	
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	1.28	1.60	2.21	2.57	4.06	
	COPd (declared COP)	-	2.99	3.36	3.35	3.51	3.60	
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	
	Pdh (declared heating capacity)	[kW]	1.01	1.02	1.44	1.65	2.78	
	COPd (declared COP)	-	3.86	3.94	4.11	4.37	4.54	
(C) condition (7°C)	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	
	Pdh (declared heating capacity)	[kW]	1.36	1.37	1.46	1.47	3.33	
	COPd (declared COP)	-	6.28	6.35	5.92	5.96	6.25	
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	
	Toi (temperature operating limit)	[°C]	-22.00	-22.00	-22.00	-22.00	-22.00	
(E) Toi (temperature operating limit)	Pdh (declared heating capacity)	[kW]	1.64	2.09	2.80	2.80	4.19	
	COPd (declared COP)	-	1.02	1.13	1.22	1.22	1.13	
	WTOL (Heating water Operation Limit)	[°C]	65	65	65	65	65	
	Tbiv	[°C]	-15.00	-15.00	-15.00	-15.00	-15.00	
	Pdh (declared heating capacity)	[kW]	2.74	3.47	4.71	5.47	8.41	
(F) Trivalent temperature	COPd (declared COP)	-	1.74	1.86	1.90	2.00	1.84	
	Psup (@Tdesign: -22°C)	[kW]	1.72	2.17	2.97	3.91	6.12	
	Warmer climate (Design temperature = 2°C)							
	Space heating 35°C	Prated (declared heating capacity) @ 2°C	[kW]	5.5	6.1	8.1	8.6	11.1
		Seasonal space heating efficiency (ηs)	[%]	255.4	259.8	276.6	280.5	256.1
Annual energy consumption		[kWh]	1,146	1,244	1,551	1,617	2,292	
Space heating 55°C	Prated (declared heating capacity) @ 2°C	[kW]	5.0	5.1	8.37	8.6	12.5	
	Seasonal space heating efficiency (ηs)	[%]	162.4	164.7	176.9	180.3	174.0	
	Annual energy consumption	[kWh]	1,621	1,640	2,485	2,516	3,776	
Part load conditions space heating warmer climate low temperature application								
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	5.34	5.93	7.56	8.44	11.10	
	COPd (declared COP)	-	3.94	3.91	3.98	3.84	3.59	
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	
	Pdh (declared heating capacity)	[kW]	3.56	3.93	5.22	5.52	7.14	
(C) condition (7°C)	COPd (declared COP)	-	5.92	5.89	6.26	6.18	5.87	
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	

Product fiche 4

Heat pump space heating

		Outdoor					Indoor				
		HOP14WODU	HOP16WODU	HOP12WODU3	HOP14WODU3	HOP16WODU3	HOP160WIDU*** HOP160/240IDU***	HOP160WIDU*** HOP160/240IDU***	HOP160WIDU*** HOP160/240IDU***	HOP160WIDU*** HOP160/240IDU***	HOP160WIDU*** HOP160/240IDU***
(B) condition (2°C)	Pdh (declared heating capacity)	4.32	4.42	4.06	4.32	4.42	4.06	4.32	4.42	4.42	
	COPd (declared COP)	3.66	3.79	3.60	3.66	3.79	3.60	3.66	3.79	3.79	
	Cdh(degradation coefficient)	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	
	Pdh (declared heating capacity)	3.06	2.97	2.78	3.06	2.97	2.78	3.06	2.97	2.97	
	COPd (declared COP)	4.72	4.81	4.54	4.72	4.81	4.54	4.72	4.81	4.81	
(C) condition (7°C)	Pdh (declared heating capacity)	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	
	Cdh(degradation coefficient)	3.33	3.43	3.33	3.33	3.43	3.33	3.33	3.43	3.43	
	Pdh (declared heating capacity)	6.25	6.29	6.25	6.25	6.29	6.25	6.25	6.29	6.29	
	COPd (declared COP)	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	
	Tol (temperature operating limit)	-22.00	-22.00	-22.00	-22.00	-22.00	-22.00	-22.00	-22.00	-22.00	
(E) ToI (temperature operating limit)	Pdh (declared heating capacity)	4.20	5.21	4.19	4.20	5.21	4.19	4.20	5.21	5.21	
	COPd (declared COP)	1.13	1.23	1.13	1.13	1.23	1.13	1.13	1.23	1.23	
	WTOL (Heating water Operation Limit)	65	65	65	65	65	65	65	65	65	
	Tbiv	-15.00	-15.00	-15.00	-15.00	-15.00	-15.00	-15.00	-15.00	-15.00	
	Pdh (declared heating capacity)	8.94	9.61	8.41	8.94	9.61	8.41	8.94	9.61	9.61	
Supplementary capacity at P_design	COPd (declared COP)	1.79	1.86	1.84	1.79	1.86	1.84	1.79	1.86	1.86	
	Psup (@Tdesignhi: -22°C)	6.76	6.59	6.12	6.76	6.59	6.12	6.76	6.59	6.59	
	Warmer climate (Design temperature = 2°C)										
	Space heating 35°C	Prated (declared heating capacity) @ 2°C	12.1	13.1	11.1	12.1	13.1	11.1	12.1	13.1	13.1
		Seasonal space heating efficiency (ns)	260.3	248.5	255.6	260.3	248.5	255.6	259.8	248.1	248.1
Annual energy consumption		2,457	2,781	2,296	2,457	2,781	2,296	2,462	2,786	2,786	
Prated (declared heating capacity) @ 2°C		14.17	14.17	12.5	14.17	14.17	12.5	14.17	14.17	14.17	
Seasonal space heating efficiency (ns)		174.9	176.0	173.8	174.9	176.0	173.8	174.7	175.8	175.8	
Space heating 55°C	Annual energy consumption	4,258	4,231	3,780	4,258	4,231	3,780	4,231	4,236	4,236	
	Part load conditions space heating warmer climate low temperature application										
	(B) condition (2°C)	Pdh (declared heating capacity)	12.04	13.10	11.10	12.04	13.10	11.10	12.04	13.10	13.10
		COPd (declared COP)	3.44	3.35	3.59	3.44	3.35	3.59	3.44	3.35	3.35
		Cdh(degradation coefficient)	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Pdh (declared heating capacity)		7.78	8.41	7.14	7.78	8.41	7.14	7.78	8.41	8.41	
COPd (declared COP)		5.84	5.36	5.87	5.84	5.36	5.87	5.84	5.36	5.36	
(C) condition (7°C)	Cdh(degradation coefficient)	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	

Product fiche 5

Heat pump space heating

		Outdoor	HOP4WODU	HOP6WODU	HOP8WODU	HOP10WODU	HOP12WODU
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	HOP60WIDU*** HOP100/190IDU*** HOP100/240IDU***	HOP60WIDU*** HOP100/190IDU*** HOP100/240IDU***	HOP100WIDU*** HOP100/190IDU*** HOP100/240IDU***	HOP100WIDU*** HOP100/190IDU*** HOP100/240IDU***	HOP160WIDU*** HOP160/240IDU***
	COPd (declared COP)	-	1.63	1.79	2.62	2.62	3.55
	Cdh(degradation coefficient)	-	7.91	8.20	9.23	9.04	7.94
	Tol (temperature operating limit)	[°C]	0.90	0.90	0.90	0.90	0.90
(E) Tol (temperature operating limit)	Pdh (declared heating capacity)	[kW]	2.00	2.00	2.00	2.00	2.00
	COPd (declared COP)	-	5.34	5.93	7.56	8.44	11.10
	WTOL (Heating water Operation Limit)	[°C]	3.94	3.91	3.98	3.84	3.59
	Tbiv	[°C]	65	65	65	65	65
(F) Tivalent temperature	Pdh (declared heating capacity)	[kW]	7.00	7.00	7.00	7.00	7.00
	COPd (declared COP)	-	3.56	3.93	5.22	5.52	7.14
	WTOL (Heating water Operation Limit)	[°C]	5.92	5.89	6.26	6.18	5.87
	Tbiv	[°C]	0.18	0.18	0.55	0.14	0.00
Supplementary capacity at P_design							
Part load conditions space heating warmer climate medium temperature application							
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	4.83	5.02	7.55	8.06	12.07
	COPd (declared COP)	-	2.51	2.48	2.59	2.59	2.31
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
	Pdh (declared heating capacity)	[kW]	3.22	3.31	5.38	5.54	8.04
(C) condition (7°C)	COPd (declared COP)	-	3.68	3.67	4.01	4.10	3.86
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
	Pdh (declared heating capacity)	[kW]	1.47	1.59	2.31	2.53	3.75
	COPd (declared COP)	-	5.15	5.29	5.55	5.82	5.70
(D) condition (12°C)	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
	Pdh (declared heating capacity)	[kW]	2.00	2.00	2.00	2.00	2.00
	COPd (declared COP)	[°C]	4.83	5.02	7.55	8.06	12.07
	Cdh(degradation coefficient)	-	2.51	2.48	2.59	2.59	2.31
(E) Tol (temperature operating limit)	WTOL (Heating water Operation Limit)	[°C]	65	65	65	65	65
	Tbiv	[°C]	7.00	7.00	7.00	7.00	7.00
	Pdh (declared heating capacity)	[kW]	3.22	3.31	5.38	5.54	8.04
	COPd (declared COP)	-	3.68	3.67	4.01	4.10	3.86
Supplementary capacity at P_design							

Product fiche 5

Heat pump space heating		Outdoor			HOP14WODU			HOP16WODU			HOP12WODU3			HOP14WODU3			HOP16WODU3		
		Indoor			HOP160WIDU*** HOP160/240IDU***	HOP160WIDU*** HOP160/240IDU***	HOP160WIDU*** HOP160/240IDU***	HOP160WIDU*** HOP160/240IDU***	HOP160WIDU*** HOP160/240IDU***	HOP160WIDU*** HOP160/240IDU***	HOP160WIDU*** HOP160/240IDU***	HOP160WIDU*** HOP160/240IDU***	HOP160WIDU*** HOP160/240IDU***	HOP160WIDU*** HOP160/240IDU***	HOP160WIDU*** HOP160/240IDU***	HOP160WIDU*** HOP160/240IDU***	HOP160WIDU*** HOP160/240IDU***		
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]			3.75	3.87	3.55	3.75	3.87	3.55	3.75	3.87	3.55	3.75	3.87	3.55	3.75		
	COPd (declared COP)	-			8.25	8.11	7.94	8.25	8.11	7.94	8.25	8.11	7.94	8.25	8.11	7.94	8.11		
	Cdh(degradation coefficient)	-			0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90		
	ToI (temperature operating limit)	[°C]			2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00		
(E) ToI (temperature operating limit)	Pdh (declared heating capacity)	[kW]			12.04	13.10	11.10	12.04	13.10	11.10	12.04	13.10	11.10	12.04	13.10	11.10	12.04		
	COPd (declared COP)	-			3.44	3.35	3.59	3.44	3.35	3.59	3.44	3.35	3.59	3.44	3.35	3.59	3.35		
	WTOL (Heating water Operation Limit)	[°C]			65	65	65	65	65	65	65	65	65	65	65	65	65		
	Tbiv	[°C]			7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00		
(F) Trivalent temperature	Pdh (declared heating capacity)	[kW]			7.78	8.41	7.14	7.78	8.41	7.14	7.78	8.41	7.14	7.78	8.41	7.14	7.78		
	COPd (declared COP)	-			5.84	5.36	5.87	5.84	5.36	5.87	5.84	5.36	5.87	5.84	5.36	5.87	5.36		
	WTOL (Heating water Operation Limit)	[°C]			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	Psup (@Tdesignh: 2°C)	[kW]			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	12.07	13.04	13.38	12.07	13.04	13.38	12.07	13.04		
	COPd (declared COP)	-			2.20	2.29	2.31	2.20	2.29	2.31	2.20	2.29	2.31	2.20	2.29	2.31	2.29		
	Cdh(degradation coefficient)	-			0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90		
	Pdh (declared heating capacity)	[kW]			9.11	9.11	8.04	9.11	9.11	8.04	9.11	9.11	8.04	9.11	9.11	8.04	9.11		
(C) condition (7°C)	COPd (declared COP)	-			3.89	3.89	3.86	3.89	3.89	3.86	3.89	3.89	3.86	3.89	3.89	3.86	3.89		
	Cdh(degradation coefficient)	-			0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90		
	Pdh (declared heating capacity)	[kW]			4.08	4.06	3.75	4.08	4.06	3.75	4.08	4.06	3.75	4.08	4.06	3.75	4.06		
	COPd (declared COP)	-			5.90	5.86	5.70	5.90	5.86	5.70	5.90	5.86	5.70	5.90	5.86	5.70	5.86		
(D) condition (12°C)	Cdh(degradation coefficient)	-			0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90		
	ToI (temperature operating limit)	[°C]			2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	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	12.07	13.04	13.38	12.07	13.04	13.38	12.07	13.38		
	COPd (declared COP)	-			2.20	2.29	2.31	2.20	2.29	2.31	2.20	2.29	2.31	2.20	2.29	2.31	2.29		
(E) ToI (temperature operating limit)	WTOL (Heating water Operation Limit)	[°C]			65	65	65	65	65	65	65	65	65	65	65	65	65		
	Tbiv	[°C]			7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00		
	Pdh (declared heating capacity)	[kW]			9.11	9.11	8.04	9.11	9.11	8.04	9.11	9.11	8.04	9.11	9.11	8.04	9.11		
	COPd (declared COP)	-			3.89	3.89	3.86	3.89	3.89	3.86	3.89	3.89	3.86	3.89	3.89	3.86	3.89		
Supplementary capacity at P_design	[kW]			1.13	0.79	0.43	1.13	0.79	0.43	1.13	0.79	0.43	1.13	0.79	0.43	1.13			

Product fiche 6

Heat pump space heating

Product description	Outdoor		HOP4WODU	HOP6WODU	HOP8WODU	HOP10WODU	HOP12WODU
	Indoor	Outdoor	HOP60WIDU*** HOP100/190IDU*** HOP100/240IDU***	HOP60WIDU*** HOP100/190IDU*** HOP100/240IDU***	HOP100WIDU*** HOP100/190IDU*** HOP100/240IDU***	HOP100WIDU*** HOP100/190IDU*** HOP100/240IDU***	HOP160WIDU*** HOP160/240IDU***
Air-to-water heat pump	Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Water-to-water heat pump	Y/N	No	No	No	No	No	No
Brine-to-water heat pump	Y/N	No	No	No	No	No	No
Low-temperature heat pump	Y/N	No	No	No	No	No	No
Equipped with a supplementary heater	Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Heat pump combination heater	Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Air to water unit	[m³/h]	2770	2770	4030	4030	4030	4060
Brine/water to water unit	-	/	/	/	/	/	/
Capacity control	-	Inverter	Inverter	Inverter	Inverter	Inverter	Inverter
Poff (Power consumption Off mode)	[kW]	0.014	0.014	0.014	0.014	0.014	0.014
Pto (Power consumption Thermostat off mode)	[kW]	0.024	0.024	0.024	0.024	0.024	0.024
Psb (Power consumption Standby mode)	[kW]	0.014	0.014	0.014	0.014	0.014	0.014
Ppk (Power crankcase heater mode)	[kW]	0.000	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) HOP60WIDU*** includes the following type:
HOP60WIDU : with 3kW back-up heater and 1-Phase Source.
- 2) HOP100WIDU*** includes the following type:
HOP100WIDU : with 3kW back-up heater and 1-Phase Source.
HOP100WIDU3 : with 9kW back-up heater and 3-Phase Source.
- 3) HOP160WIDU*** includes the following type:
HOP160WIDU3 : with 9kW back-up heater and 3-Phase Source.

OPTIMUS PRO tank seires

- 1) HOP100/190IDU*** includes the following type:
HOP100/190IDU : 190L tank with 3kW back-up heater and 1-Phase Source.
HOP100/190IDU3 : 190L tank with 9kW back-up heater and 3-Phase Source.
 - 2) HOP100/240IDU*** includes the following type:
HOP100/240IDU : 240L tank with 3kW back-up heater and 1-Phase Source.
HOP100/240IDU3 : 240L tank with 9kW back-up heater and 3-Phase Source.
 - 3) HOP160/240IDU*** includes the following type:
HOP100/240IDU3 : 240L tank with 9kW back-up heater and 3-Phase Source.
HOP160/240IDU3 : 240L tank with 9kW back-up heater and 3-Phase Source.
- Product fiche data according to energy label directive 2010/30/EC regulation (EU) 811/2013.
*Sound power measured according to the EN12102 under conditions of the EN14825.
Details and precautions on installation, maintenance and assembly can be found in the installation and or operation manuals.

Product fiche 6

Heat pump space heating

		Outdoor	HOP14WODU	HOP16WODU	HOP12WODU3	HOP14WODU3	HOP16WODU3
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
	Rated airflow (outdoor)	[m ³ /h]	4060	4650	4060	4060	4650
	Rated water/brine flow (outdoor H/E)	-	/	/	/	/	/
	Capacity control	-	Inverter	Inverter	Inverter	Inverter	Inverter
	P _{off} (Power consumption Off mode)	[kW]	0.014	0.014	0.020	0.020	0.020
P _{to} (Power consumption Thermostat off mode)	[kW]	0.024	0.024	0.030	0.030	0.030	
P _{sb} (Power consumption Standby mode)	[kW]	0.014	0.014	0.020	0.020	0.020	
P _{ck} (Power crankcase heater mode)	[kW]	0.000	0.000	0.000	0.000	0.000	
Q _{elec} (Daily electricity consumption)	[kWh]	/	/	/	/	/	
Q _{fuel} (Daily fuel consumption)	[kWh]	/	/	/	/	/	

Note:

Indoor unit type explanation:

Hydraulic module series

- 1) HOP60WIDU*** includes the following type:
HOP60WIDU : with 3kW back-up heater and 1-Phase Source.
- 2) HOP100WIDU*** includes the following type:
HOP100WIDU : with 3kW back-up heater and 1-Phase Source.
HOP100WIDU3 : with 9kW back-up heater and 3-Phase Source.
- 3) HOP160WIDU*** includes the following type:
HOP160WIDU3 : with 9kW back-up heater and 3-Phase Source.

OPTIMUS PRO tank series

- 1) HOP100/190IDU*** includes the following type:
HOP100/190IDU : 190L tank with 3kW back-up heater and 1-Phase Source.
HOP100/190IDU3 : 190L tank with 9kW back-up heater and 3-Phase Source.
- 2) HOP100/240IDU*** includes the following type:
HOP100/240IDU : 240L tank with 3kW back-up heater and 1-Phase Source.
HOP100/240IDU3 : 240L tank with 9kW back-up heater and 3-Phase Source.
- 3) HOP160/240IDU*** includes the following type:
HOP160/240IDU3 : 240L tank with 9kW back-up heater and 3-Phase Source.

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

*Sound power measured according to the EN12102 under conditions of the EN14825. Details and precautions on installation, maintenance and assembly can be found in the installation and or operation manuals.

Product fiche 7

Heat pump space cooling

		Outdoor	HOP4WODU HOP60WIDU*** HOP100/190IDU*** HOP100/240IDU***	HOP6WODU HOP60WIDU*** HOP100/190IDU*** HOP100/240IDU***	HOP8WODU HOP100WIDU*** HOP100/190IDU*** HOP100/240IDU***	HOP10WODU HOP100WIDU*** HOP100/190IDU*** HOP100/240IDU***	HOP12WODU HOP160WIDU*** HOP160/240IDU***
Indoor unit sound power (*)		Indoor					
Average climate low temperature application		dB	38	40	42	42	43
Average climate medium temperature application		dB	56	58	60	61	65
Prated (declared cooling capacity) @ 35°C		dB	55	58	60	60	64
Seasonal space cooling efficiency (ηs)		[kW]	4.7	7.0	7.4	8.2	11.6
Annual energy consumption		[%]	196.2	209.5	230.1	235.3	194.2
Prated (declared cooling capacity) @ 35°C		[kW/h]	566	791	762	826	1,412
Seasonal space cooling efficiency (ηs)		[kW]	4.5	6.55	8.4	10.0	12.0
Annual energy consumption		[%]	307.7	326.8	354.9	348.8	282.4
Part load conditions space cooling : low temperature application@7°C		[kW/h]	348	477	563	682	1,009
(A) condition (35°C)		[kW]	4.70	7.00	7.40	8.20	11.60
EERd (declared EER)		-	3.45	3.00	3.38	3.30	2.75
Cdc(degradation coefficient)		-	0.90	0.90	0.90	0.90	0.90
(B) condition (30°C)		[kW]	3.66	5.13	5.72	6.68	8.76
EERd (declared EER)		-	4.76	4.00	4.71	4.47	3.93
Cdc(degradation coefficient)		-	0.90	0.90	0.90	0.90	0.90
(C) condition (25°C)		[kW]	2.21	3.48	3.62	4.26	5.81
EERd (declared EER)		-	5.72	6.45	6.65	7.02	5.73
Cdc(degradation coefficient)		-	0.90	0.90	0.90	0.90	0.90
(D) condition (20°C)		[kW]	0.94	1.53	1.64	1.94	2.63
EERd (declared EER)		-	5.72	7.73	8.55	9.54	6.75
Cdc(degradation coefficient)		-	0.90	0.90	0.90	0.90	0.90

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

Product fiche 7

Heat pump space cooling

		Outdoor	HOP14WODU	HOP16WODU	HOP12WODU3	HOP14WODU3	HOP16WODU3
Indoor unit sound power (*)		Indoor	HOP160WIDU*** HOP160/240IDU***	HOP160WIDU*** HOP160/240IDU***	HOP160WIDU*** HOP160/240IDU***	HOP160WIDU*** HOP160/240IDU***	HOP160WIDU*** HOP160/240IDU***
Outdoor		dB	44	44	43	44	44
Indoor		dB	65	68	65	65	68
	Average climate low temperature application	dB	64	67	64	64	67
	Average climate medium temperature application	[kW]	12.7	14.0	11.6	12.7	14.0
	Prated (declared cooling capacity) @ 35°C	[%]	192.4	184.1	193.0	191.4	183.3
Space cooling 7°C	Seasonal space cooling efficiency (ns)	[kW/h]	1,560	1,796	1,420	1,568	1,804
	Annual energy consumption	[kW]	13.5	14.2	12.0	13.5	14.2
Space cooling 18°C	Prated (declared cooling capacity) @ 35°C	[%]	274.4	266.8	280.1	272.5	265.0
	Seasonal space cooling efficiency (ns)	[kW/h]	1,168	1,263	1,017	1,176	1,271
	Annual energy consumption						
Part load conditions space cooling: low temperature application@7°C							
(A) condition (35°C)	Pdc (declared cooling capacity)	[kW]	12.70	14.00	11.60	12.70	14.00
	EERd (declared EER)	-	2.55	2.45	2.75	2.55	2.45
	Cdc(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(B) condition (30°C)	Pdc (declared cooling capacity)	[kW]	9.41	10.68	8.76	9.41	10.68
	EERd (declared EER)	-	3.85	3.63	3.93	3.85	3.63
	Cdc(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(C) condition (25°C)	Pdc (declared cooling capacity)	[kW]	6.16	6.76	5.81	6.16	6.76
	EERd (declared EER)	-	5.80	5.27	5.73	5.80	5.27
	Cdc(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(D) condition (20°C)	Pdc (declared cooling capacity)	[kW]	2.63	3.41	2.63	2.63	3.41
	EERd (declared EER)	-	6.74	7.29	6.75	6.74	7.29
	Cdc(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90

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

Product fiche 8

Heat pump space cooling

		Part load conditions space cooling: medium temperature application@18°C					
		Outdoor	HOP4WODU HOP60WIDU** HOP100/190IDU*** HOP100/240IDU***	HOP6WODU HOP60WIDU** HOP100/190IDU*** HOP100/240IDU***	HOP8WODU HOP100WIDU*** HOP100/190IDU*** HOP100/240IDU***	HOP10WODU HOP100WIDU** HOP100/190IDU*** HOP100/240IDU***	HOP12WODU HOP160WIDU*** HOP160/240IDU***
(A) condition (35°C)	Pdc (declared cooling capacity)	[kW]	4.50	6.55	8.40	10.00	12.00
	EERd (declared EER)	-	5.55	4.90	5.05	4.80	4.00
	Cdc(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(B) condition (30°C)	Pdc (declared cooling capacity)	[kW]	3.44	4.84	6.47	7.71	9.21
	EERd (declared EER)	-	7.23	7.16	7.02	6.45	5.50
	Cdc(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(C) condition (25°C)	Pdc (declared cooling capacity)	[kW]	2.19	3.26	4.31	5.03	5.74
	EERd (declared EER)	-	8.94	9.64	10.67	10.36	8.66
	Cdc(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(D) condition (20°C)	Pdc (declared cooling capacity)	[kW]	1.13	1.41	1.80	2.32	3.33
	EERd (declared EER)	-	10.48	11.48	13.61	14.98	10.07
	Cdc(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
Air to water unit	Rated airflow (outdoor)	[m³/h]	2770	2770	4030	4030	4060
Brine/water to water unit	Rated water/brine flow (outdoor H/E)	-	/	/	/	/	/
Other	Capacity control	-	Inverter	Inverter	Inverter	Inverter	Inverter
	Poff (Power consumption Off mode)	[kW]	0.014	0.014	0.014	0.014	0.014
	Pto (Power consumption Thermostat off mode)	[kW]	0.010	0.010	0.010	0.010	0.010
	Psb (Power consumption Standby mode)	[kW]	0.014	0.014	0.014	0.014	0.014
	Pck (Power crankcase heater mode)	[kW]	0.000	0.000	0.000	0.000	0.000
	Qelec (Daily electricity consumption)	[kWh]	/	/	/	/	/
	Qfuel (Daily fuel consumption)	[kWh]	/	/	/	/	/

Product fiche 8

Heat pump space cooling

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

		Outdoor	HOP14WODU	HOP16WODU	HOP12WODU3	HOP14WODU3	HOP16WODU3
		Indoor	HOP160WIDU*** HOP160/240IDU***	HOP160WIDU*** HOP160/240IDU***	HOP160WIDU*** HOP160/240IDU***	HOP160WIDU*** HOP160/240IDU***	HOP160WIDU*** HOP160/240IDU***
(A) condition (35°C)	Pdc (declared cooling capacity)	[kW]	13.50	14.20	12.00	13.50	14.20
	EERd (declared EER)	-	3.61	3.61	4.00	3.61	3.61
	Cdc(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(B) condition (30°C)	Pdc (declared cooling capacity)	[kW]	10.20	11.42	9.21	10.20	11.42
	EERd (declared EER)	-	5.26	5.14	5.50	5.26	5.14
	Cdc(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(C) condition (25°C)	Pdc (declared cooling capacity)	[kW]	6.57	7.27	5.74	6.57	7.27
	EERd (declared EER)	-	8.45	7.83	8.66	8.45	7.83
	Cdc(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(D) condition (20°C)	Pdc (declared cooling capacity)	[kW]	3.33	3.40	3.33	3.33	3.40
	EERd (declared EER)	-	10.07	10.35	10.07	10.07	10.35
	Cdc(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
Air to water unit	Rated airflow (outdoor)	[m ³ /h]	4060	4650	4060	4060	4650
Brine/water to water unit	Rated water/brine flow (outdoor H/E)	-	/	/	/	/	/
Other	Capacity control	-	Inverter	Inverter	Inverter	Inverter	Inverter
	Poff (Power consumption Off mode)	[kW]	0.014	0.014	0.020	0.020	0.020
	Pto (Power consumption Thermostat off mode)	[kW]	0.010	0.010	0.010	0.010	0.010
	Psb (Power consumption Standby mode)	[kW]	0.014	0.014	0.020	0.020	0.020
	Pck (Power crankcase heater mode)	[kW]	0.000	0.000	0.000	0.000	0.000
	Qelec (Daily electricity consumption)	[kWh]	/	/	/	/	/
	Qfuel (Daily fuel consumption)	[kWh]	/	/	/	/	/

HOP4WODU
HOP60WIDU

55°C

35°C

38dB

56dB

3

4

5

kW

5

5

5

kW

2019

811/2013

HOP4WODU
HOP100/190IDU

55°C

35°C

38dB

56dB

3

4

5

kW

5

5

5

kW

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HOP4WODU
HOP100/190IDU3



55°C

35°C



A
++

A
+++

38dB

56dB

2019

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HOP4WODU
HOP100/240IDU



55°C

35°C



A
++

A
+++

38dB

56dB

2019

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NØRDIS

HOP4WODU
HOP100/240IDU3



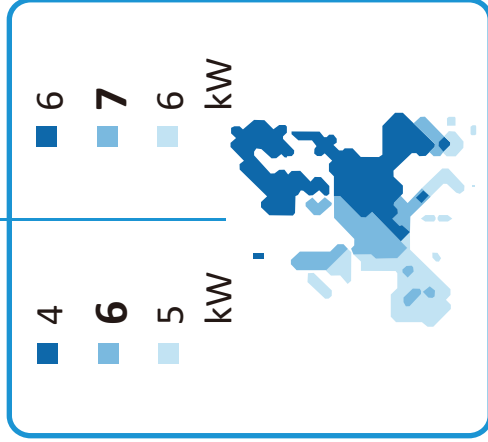
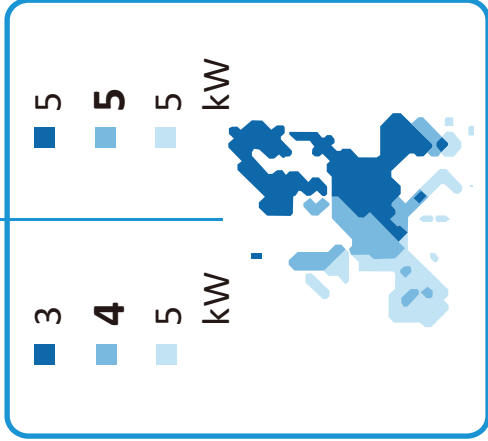
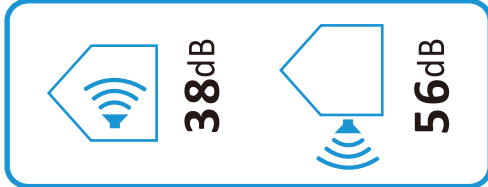
55°C

35°C



A
++

A
+++



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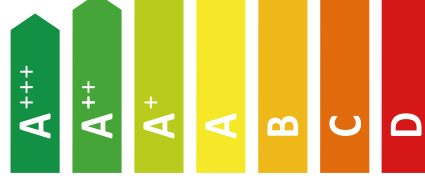
NØRDIS

HOP6WODU
HOP60WIDU



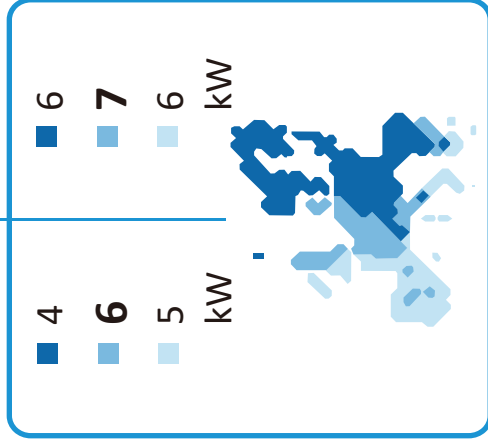
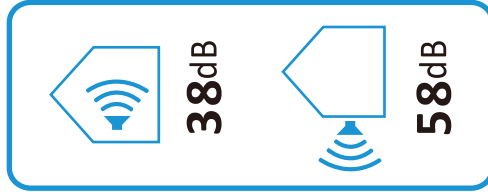
55°C

35°C



A
++

A
+++



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Y IJA
IE IA

NØRDIS

HOP6WODU
HOP100/190IDU



55°C

35°C



A⁺⁺

A⁺⁺⁺

38dB

4 6 5 kW

6 7 6 kW

2019

811/2013



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Y IJA
IE IA

NØRDIS

HOP6WODU
HOP100/190IDU3



55°C

35°C



A⁺⁺

A⁺⁺⁺

38dB

4 6 5 kW

6 7 6 kW

2019

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HOP6WODU
HOP100/240IDU3



55°C

35°C

A+++

A++

A+

A

B

C

D

A+++

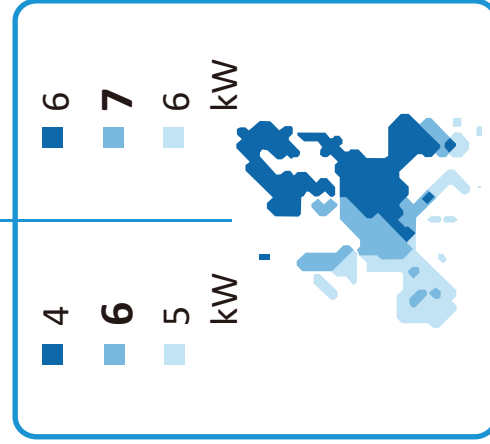
A++

A+++

A++



38dB



38dB



58dB

2019

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HOP6WODU
HOP100/240IDU3



55°C

35°C

A+++

A++

A+

A

B

C

D

A+++

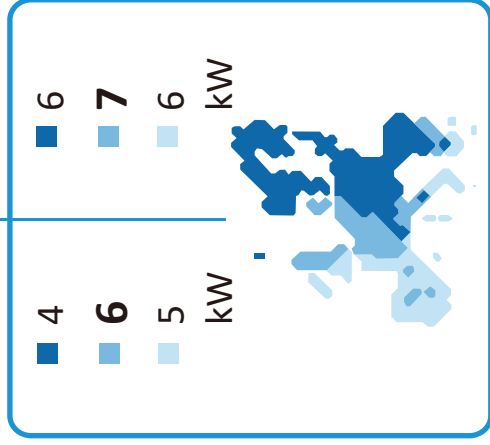
A++

A+++

A++



38dB



38dB



58dB

2019

811/2013



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Y IJA
IE IA

NØRDIS

HOP8WODU
HOP100WIDU



55°C

35°C

A+++

A++

A+

A

B

C

D

A+++

A++

A+

A

B

C

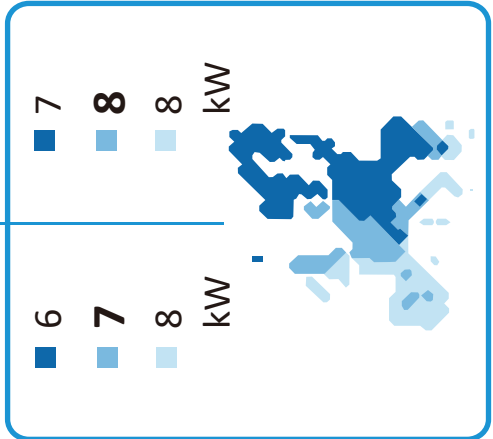
D

A+++

A++



42dB



59dB

2019

811/2013



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Y IJA
IE IA

NØRDIS

HOP8WODU
HOP100WIDU



55°C

35°C

A+++

A++

A+

A

B

C

D

A+++

A++

A+

A

B

C

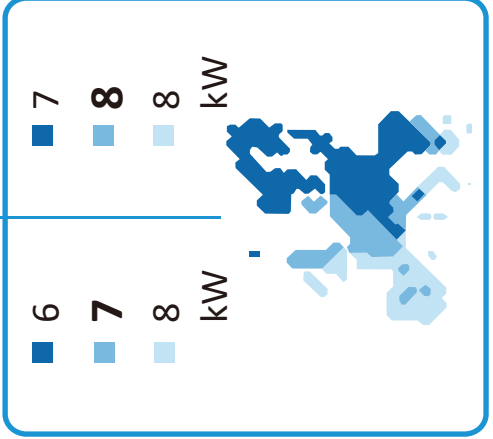
D

A+++

A++



42dB



59dB

2019

811/2013



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HOP8WODU
HOP100/190IDU



55°C

35°C

A
+++

A
++

A
+

A

B

C

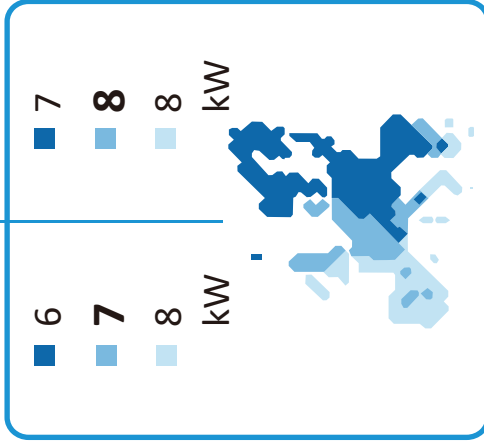
D

A
+++

A
++



40dB



6

7

8

kW

7

8

8

kW



59dB

2019

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HOP8WODU
HOP100/190IDU3



55°C

35°C

A
+++

A
++

A
+

A

B

C

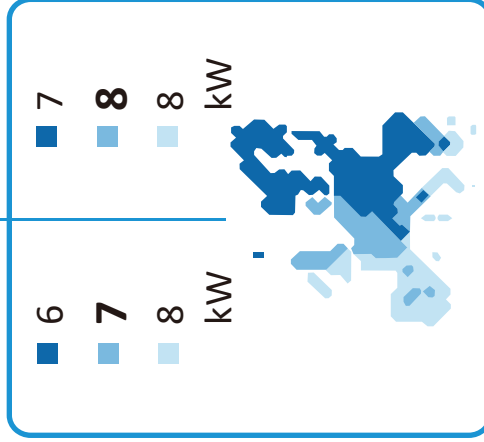
D

A
+++

A
++



40dB



6

7

8

kW

7

8

8

kW



59dB

2019

811/2013

HOP8WODU
HOP100/240IDU

55°C

35°C

A⁺⁺⁺

A⁺⁺

40dB

59dB

6 7 8 kW

7 8 8 kW

2019

811/2013

HOP8WODU
HOP100/240IDU3

55°C

35°C

A⁺⁺⁺

A⁺⁺

40dB

59dB

6 7 8 kW

7 8 8 kW

2019

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HOP10WODU
HOP100WIDU3



55°C

35°C



42dB

7 **8** **9** kW

8 **9** **9** kW

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HOP10WODU
HOP100WIDU



55°C

35°C



42dB

7 **8** **9** kW

8 **9** **9** kW

2019

811/2013



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HOP10WODU
HOP100/190IDU



55°C

35°C



A
++

A
+++

40dB

60dB

2019

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HOP10WODU
HOP100/190IDU3



55°C

35°C



A
++

A
+++

40dB

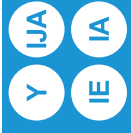
60dB

2019

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HOP10WODU
HOP100/240IDU3



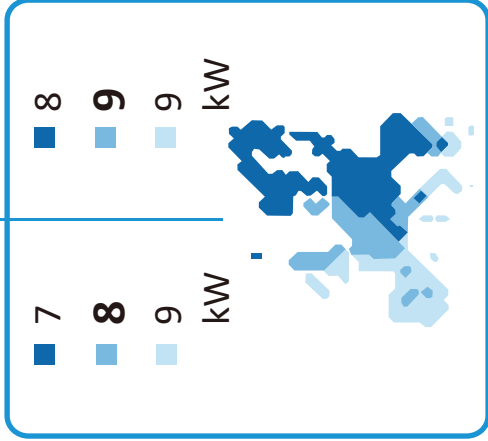
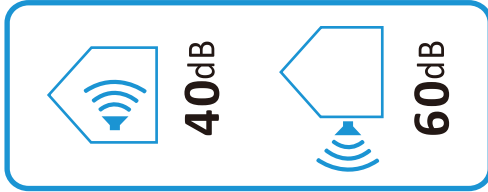
55°C

35°C



A⁺⁺

A⁺⁺⁺

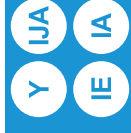


2019

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HOP10WODU
HOP100/240IDU3



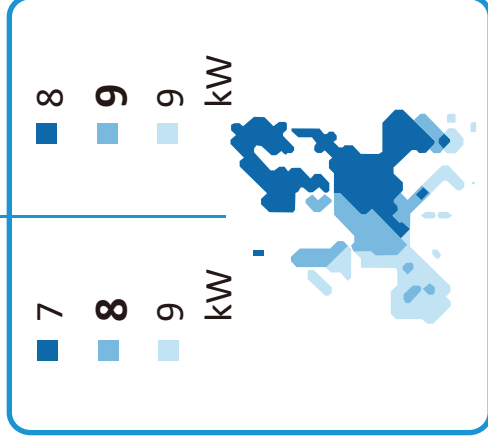
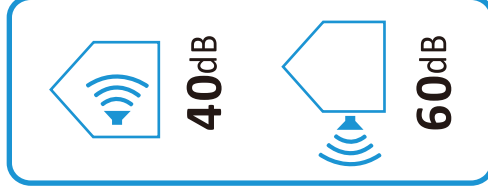
55°C

35°C



A⁺⁺

A⁺⁺⁺



2019

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HOP12WODU
HOP160WIDU3



55°C

35°C

A⁺⁺⁺

A⁺⁺

A⁺

A

B

C

D

A⁺⁺

A⁺⁺⁺



43dB



64dB



2019

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HOP12WODU
HOP160/240IDU3



55°C

35°C

A⁺⁺⁺

A⁺⁺

A⁺

A

B

C

D

A⁺⁺

A⁺⁺⁺



42dB



64dB



2019

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NØRDIS

HOP12WODU3
HOP160WIDU3



55°C

35°C



A⁺⁺

A⁺⁺⁺

43dB

10 kW
12 kW
11 kW

2019

811/2013



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NØRDIS

HOP12WODU3
HOP160/240IDU3



55°C

35°C



A⁺⁺


A⁺⁺⁺

42dB



10 kW
12 kW
11 kW

2019


811/2013



HOP14WODU
HOP160WIDU3





55°C




A⁺⁺


35°C



A⁺⁺⁺




43dB



65dB


■ 11 ■ 12 ■ 14 kW

■ 13 ■ 14 ■ 12 kW





2019


811/2013



HOP14WODU
HOP160/240IDU3





55°C




A⁺⁺


35°C



A⁺⁺⁺




44dB



65dB

■ 11 ■ 12 ■ 14 kW

■ 13 ■ 14 ■ 12 kW



2019

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HOP14WODU3
HOP160WIDU3



55°C

35°C



A ++

A +++

43dB

65dB

2019

811/2013



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HOP14WODU3
HOP160/240IDU3



55°C

35°C



A ++

A +++

44dB

65dB

2019

811/2013



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Y IJA
IE IA



HOP16WODU
HOP160WIDU3



55°C

35°C

A+++

A++

A+

A

B

C

D

A+++

A++

A+++

A++



43dB



68dB

■ 12
■ 13
■ 14
kW

■ 14
■ 15
■ 13
kW



2019

811/2013



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Y IJA
IE IA



HOP16WODU
HOP160/240IDU3



55°C

35°C

A+++

A++

A+

A

B

C

D

A+++

A++

A+++

A++



44dB



68dB

■ 12
■ 13
■ 14
kW

■ 14
■ 15
■ 13
kW



2019

811/2013



HOP16WODU3
HOP160WIDU3



55°C

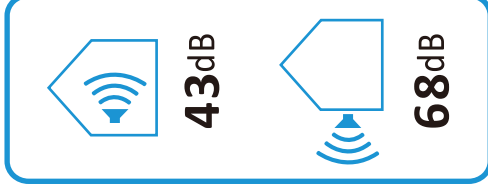
35°C



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

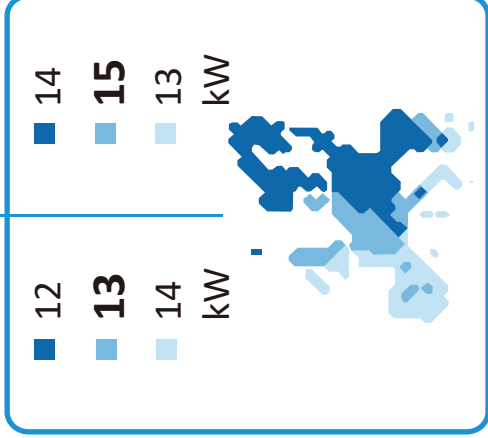
A++

A+++



43dB

68dB



12

13

14

kW

14

15

13

kW



2019

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HOP16WODU3
HOP160/240IDU3



55°C

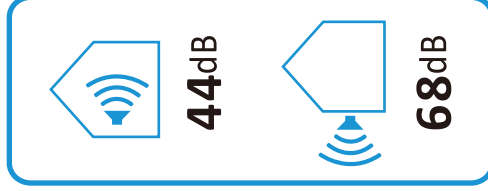
35°C



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

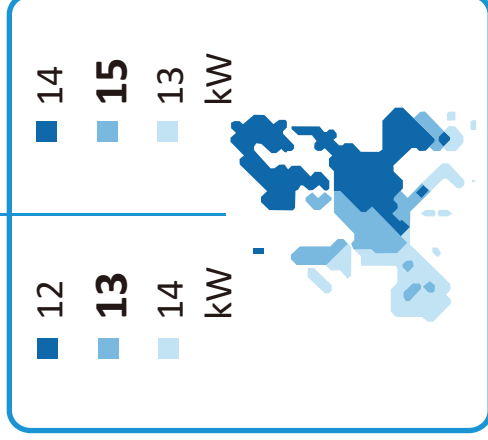
A++

A+++



44dB

68dB



12

13

14

kW

14

15

13

kW



2019

811/2013

Outdoor unit	Indoor unit	Ambient Temperature: 35/24 Water temperature: 23/18			Ambient Temperature: 35/24 Water temperature: 12/7			Ambient Temperature: 7/6 Water temperature: 30/35			Ambient Temperature: 2/1 Water temperature: 30/35		
		Capacity kW	Power input kW	EER	Capacity kW	Power input kW	EER	Capacity kW	Power input kW	COP	Capacity kW	Power input kW	COP
HOP4WODU	HOP60WIDU***	4.50	0.81	5.55	4.70	1.36	3.45	4.25	0.82	5.20	4.45	1.10	4.05
	HOP100/190IDU***	4.50	0.81	5.55	4.70	1.36	3.45	4.25	0.82	5.20	4.45	1.10	4.05
	HOP100/240IDU***	4.50	0.81	5.55	4.70	1.36	3.45	4.25	0.82	5.20	4.45	1.10	4.05
HOP6WODU	HOP60WIDU***	6.55	1.34	4.90	7.00	2.33	3.00	6.20	1.24	5.00	5.50	1.39	3.95
	HOP100/190IDU***	6.55	1.34	4.90	7.00	2.33	3.00	6.20	1.24	5.00	5.50	1.39	3.95
	HOP100/240IDU***	6.55	1.34	4.90	7.00	2.33	3.00	6.20	1.24	5.00	5.50	1.39	3.95
HOP8WODU	HOP100WIDU***	8.40	1.66	5.05	7.40	2.19	3.38	8.30	1.60	5.20	7.10	1.73	4.10
	HOP100/190IDU***	8.40	1.66	5.05	7.40	2.19	3.38	8.30	1.60	5.20	7.10	1.73	4.10
	HOP100/240IDU***	8.40	1.66	5.05	7.40	2.19	3.38	8.30	1.60	5.20	7.10	1.73	4.10
HOP10WODU	HOP100WIDU***	10.00	2.08	4.80	8.20	2.48	3.30	10.00	2.00	5.00	8.20	2.02	4.05
	HOP100/190IDU***	10.00	2.08	4.80	8.20	2.48	3.30	10.00	2.00	5.00	8.20	2.02	4.05
	HOP100/240IDU***	10.00	2.08	4.80	8.20	2.48	3.30	10.00	2.00	5.00	8.20	2.02	4.05
HOP12WODU	HOP160WIDU***	12.00	3.00	4.00	11.60	4.22	2.75	12.10	2.44	4.95	9.30	2.35	3.95
	HOP160/240IDU***	12.00	3.00	4.00	11.60	4.22	2.75	12.10	2.44	4.95	9.30	2.35	3.95
	HOP160WIDU***	12.00	3.00	4.00	11.60	4.22	2.75	12.10	2.44	4.95	9.30	2.35	3.95
HOP14WODU	HOP160WIDU***	13.50	3.74	3.61	12.70	4.98	2.55	14.50	3.09	4.70	11.40	3.12	3.65
	HOP160/240IDU***	13.50	3.74	3.61	12.70	4.98	2.55	14.50	3.09	4.70	11.40	3.12	3.65
	HOP160WIDU***	13.50	3.74	3.61	12.70	4.98	2.55	14.50	3.09	4.70	11.40	3.12	3.65
HOP16WODU	HOP160/240IDU***	14.20	3.94	3.61	14.00	5.71	2.45	16.00	3.56	4.50	13.00	3.71	3.50
	HOP160WIDU***	14.20	3.94	3.61	14.00	5.71	2.45	16.00	3.56	4.50	13.00	3.71	3.50
	HOP160/240IDU***	14.20	3.94	3.61	14.00	5.71	2.45	16.00	3.56	4.50	13.00	3.71	3.50

Outdoor unit	Indoor unit	Ambient Temperature: -7/-8 Water temperature: 30/35			Ambient Temperature: 7/6 Water temperature: 40/45			Ambient Temperature: 2/1 Water temperature: 40/45			Ambient Temperature: -7/-8 Water temperature: 40/45		
		Capacity kW	Power input kW	COP	Capacity kW	Power input kW	COP	Capacity kW	Power input kW	COP	Capacity kW	Power input kW	COP
HOP4WODU	HOP60WIDU***	4.80	1.52	3.15	4.35	1.14	3.80	5.10	1.70	3.00	4.30	1.83	2.35
	HOP100/190IDU***	4.80	1.52	3.15	4.35	1.14	3.80	5.10	1.70	3.00	4.30	1.83	2.35
	HOP100/240IDU***	4.80	1.52	3.15	4.35	1.14	3.80	5.10	1.70	3.00	4.30	1.83	2.35
HOP6WODU	HOP60WIDU***	6.10	2.00	3.05	6.35	1.69	3.75	5.80	1.93	3.00	5.40	2.25	2.40
	HOP100/190IDU***	6.10	2.00	3.05	6.35	1.69	3.75	5.80	1.93	3.00	5.40	2.25	2.40
	HOP100/240IDU***	6.10	2.00	3.05	6.35	1.69	3.75	5.80	1.93	3.00	5.40	2.25	2.40
HOP8WODU	HOP100WIDU**	7.10	2.18	3.25	8.20	2.08	3.95	7.40	2.28	3.25	6.60	2.59	2.55
	HOP100/190IDU***	7.10	2.18	3.25	8.20	2.08	3.95	7.40	2.28	3.25	6.60	2.59	2.55
	HOP100/240IDU***	7.10	2.18	3.25	8.20	2.08	3.95	7.40	2.28	3.25	6.60	2.59	2.55
HOP10WODU	HOP100WIDU***	8.25	2.62	3.15	10.00	2.63	3.80	7.85	2.45	3.20	7.35	2.88	2.55
	HOP100/190IDU***	8.25	2.62	3.15	10.00	2.63	3.80	7.85	2.45	3.20	7.35	2.88	2.55
	HOP100/240IDU***	8.25	2.62	3.15	10.00	2.63	3.80	7.85	2.45	3.20	7.35	2.88	2.55
HOP12WODU	HOP160WIDU**	10.00	3.33	3.00	12.30	3.24	3.80	10.70	3.57	3.00	10.20	4.25	2.40
	HOP160/240IDU***	10.00	3.33	3.00	12.30	3.24	3.80	10.70	3.57	3.00	10.20	4.25	2.40
	HOP160WIDU***	10.00	3.33	3.00	12.30	3.24	3.80	10.70	3.57	3.00	10.20	4.25	2.40
HOP14WODU	HOP160WIDU***	12.00	4.29	2.80	14.20	3.89	3.65	11.70	4.09	2.86	11.80	5.02	2.35
	HOP160/240IDU***	12.00	4.29	2.80	14.20	3.89	3.65	11.70	4.09	2.86	11.80	5.02	2.35
	HOP160WIDU***	12.00	4.29	2.80	14.20	3.89	3.65	11.70	4.09	2.86	11.80	5.02	2.35
HOP16WODU	HOP160WIDU***	13.30	4.93	2.70	16.00	4.44	3.60	12.80	4.49	2.85	12.90	5.78	2.23
	HOP160/240IDU***	13.30	4.93	2.70	16.00	4.44	3.60	12.80	4.49	2.85	12.90	5.78	2.23
	HOP160WIDU***	13.30	4.93	2.70	16.00	4.44	3.60	12.80	4.49	2.85	12.90	5.78	2.23
HOP16WODU3	HOP160/240IDU***	13.30	4.93	2.70	16.00	4.44	3.60	12.80	4.49	2.85	12.90	5.78	2.23
	HOP160WIDU***	13.30	4.93	2.70	16.00	4.44	3.60	12.80	4.49	2.85	12.90	5.78	2.23
	HOP160/240IDU***	13.30	4.93	2.70	16.00	4.44	3.60	12.80	4.49	2.85	12.90	5.78	2.23

Outdoor unit	Indoor unit	Ambient Temperature: 7/6 Water temperature: 47/55			Ambient Temperature: 2/1 Water temperature: 47/55			Ambient Temperature: -7/-8 Water temperature: 47/55		
		Capacity kW	Power input kW	COP	Capacity kW	Power input kW	COP	Capacity kW	Power input kW	COP
HOP4WODU	HOP60WIDU	4.40	1.49	2.95	5.10	2.08	2.45	4.00	2.05	1.95
	HOP100/190IDU***	4.40	1.49	2.95	5.10	2.08	2.45	4.00	2.05	1.95
	HOP100/240IDU***	4.40	1.49	2.95	5.10	2.08	2.45	4.00	2.05	1.95
HOP6WODU	HOP60WIDU***	6.00	2.00	3.00	5.65	2.31	2.45	5.15	2.58	2.00
	HOP100/190IDU***	6.00	2.00	3.00	5.65	2.31	2.45	5.15	2.58	2.00
	HOP100/240IDU***	6.00	2.00	3.00	5.65	2.31	2.45	5.15	2.58	2.00
HOP8WODU	HOP100WIDU***	7.50	2.36	3.18	7.10	2.73	2.60	6.15	3.00	2.05
	HOP100/190IDU***	7.50	2.36	3.18	7.10	2.73	2.60	6.15	3.00	2.05
	HOP100/240IDU***	7.50	2.36	3.18	7.10	2.73	2.60	6.15	3.00	2.05
HOP10WODU	HOP100WIDU***	9.50	3.06	3.10	8.10	3.16	2.56	6.85	3.43	2.00
	HOP100/190IDU***	9.50	3.06	3.10	8.10	3.16	2.56	6.85	3.43	2.00
	HOP100/240IDU***	9.50	3.06	3.10	8.10	3.16	2.56	6.85	3.43	2.00
HOP12WODU	HOP160WIDU***	12.00	3.87	3.10	11.40	4.47	2.55	10.00	4.88	2.05
	HOP160/240IDU***	12.00	3.87	3.10	11.40	4.47	2.55	10.00	4.88	2.05
	HOP160WIDU***	12.00	3.87	3.10	11.40	4.47	2.55	10.00	4.88	2.05
HOP14WODU	HOP160WIDU***	13.80	4.60	3.00	12.40	5.06	2.45	11.00	5.37	2.05
	HOP160/240IDU***	13.80	4.60	3.00	12.40	5.06	2.45	11.00	5.37	2.05
	HOP160WIDU***	13.80	4.60	3.00	12.40	5.06	2.45	11.00	5.37	2.05
HOP16WODU	HOP160WIDU***	16.00	5.52	2.90	13.40	5.58	2.40	12.50	6.19	2.02
	HOP160/240IDU***	16.00	5.52	2.90	13.40	5.58	2.40	12.50	6.19	2.02
	HOP160WIDU***	16.00	5.52	2.90	13.40	5.58	2.40	12.50	6.19	2.02
HOP16WODU3	HOP160/240IDU***	16.00	5.52	2.90	13.40	5.58	2.40	12.50	6.19	2.02
	HOP160WIDU***	16.00	5.52	2.90	13.40	5.58	2.40	12.50	6.19	2.02
	HOP160WIDU***	16.00	5.52	2.90	13.40	5.58	2.40	12.50	6.19	2.02

ErP Information

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

Specified Information of Fan:

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

ErP Information

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

Specified Information of Fan:

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

ErP Information

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

Specified Information of Fan:

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

