TECHNICAL DATA MANUAL AND ENERGY EFFICIENCY

HYUNDAI

M-thermal Split Outdoor Unit

IMPORTANT NOTE:

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

Licensed by HYUNDAI Corporation Holdings, Korea

GENUINE PRODUCT OF
HYUNDAI CORPORATION

Product fiche

Energy labelling regulation: (EU)811/2013

Ecodesign regulation: (EU)813/2013

Heat pump combination heater		Outdoor	HHPS-M4TH	HHPS-M4TH	HHPS-M6TH	HHPS-M6TH	HHPS-M8TH	HHPS-M8TH	HHPS-M10TH
		Indoor	HBT-A100/190CD***GN8-B	HBT-A100/240CD***GN8-B	HBT-A100/190CD***GN8-B	HBT-A100/240CD***GN8-B	HBT-A100/190CD***GN8-B	HBT-A100/240CD***GN8-B	HBT-A100/190CD***GN8-B
Indoor unit sound power(*)		dB	38	38	38	38	40	40	40
Outdoor unit sound power(*)		dB	56	56	58	58	59	59	60
Water heating	Declared load profile	-	L	XL	L	XL	L	XL	L
	Energy efficiency class	-	A+	A+	A+	A+	A+	A+	A+
Space heating	Energy efficiency class at 55℃ (High temp. app.)	-	A++	A++	A++	A++	A++	A++	A++
Average climate									
Water heating	Water heating energy efficiency (η_{wh})	[%]	127	136	127	136	125	137	125
	Annual electricity consumption (AEC)	[kWh]	801	1229	801	1229	820	1218	820
Space heating	P_{rated} (declared heating capacity)@-10℃	[kW]	4.4	4.4	5.7	5.7	6.6	6.6	7.7
	Seasonal space heating efficiency(η_s)	[%]	129.5	129.5	137.9	137.9	131.5	131.5	136.6
	Annual energy consumption	[kWh]	2744	2744	3345	3345	4056	4056	4539
Off-peak operation function integrated in heat pump		Y/N	Y	Y	Y	Y	Y	Y	Y
Colder climate									
Water heating	Water heating energy efficiency (η_{wh})	[%]	102	107	102	107	107	111	107
	Annual energy consumption	[kWh]	998	1561	998	1561	950	1508	950
Space heating	P_{rated} (declared heating capacity)@-22℃	[kW]	3.36	3.36	4.26	4.26	5.77	5.77	6.71
	Seasonal space heating efficiency(η_s)	[%]	102.1	102.1	111.1	111.1	112.0	112.0	116.4
	Annual energy consumption	[kWh]	3159	3159	3681	3681	4950	4950	5540
Warmer climate									
Water heating	Water heating energy efficiency (η_{wh})	[%]	157	174	157	174	151	171	151
	Annual energy consumption	[kWh]	649	963	649	963	675	977	675
Space heating	P_{rated} (declared heating capacity)@2℃	[kW]	5.01	5.01	5.14	5.14	8.37	8.37	8.63
	Seasonal space heating efficiency(η_s)	[%]	162.4	162.4	164.7	164.7	176.9	176.9	180.3
	Annual energy consumption	[kWh]	1621	1621	1640	1640	2485	2485	2516
Ecodesign technical data									
Product description	Air-to-water heat pump	Y/N	Y	Y	Y	Y	Y	Y	Y
	Water-to-water heat pump	Y/N	N	N	N	N	N	N	N
	Brine-to-water heat pump	Y/N	N	N	N	N	N	N	N
	Low-temperature heat pump	Y/N	N	N	N	N	N	N	N
	Equipped with a supplementary heater	Y/N	Y	Y	Y	Y	Y	Y	Y
	Heat pump combination heater	Y/N	Y	Y	Y	Y	Y	Y	Y
Air-to-water unit	Rated airflow (outdoor)	[m^3/h]	2770	2770	2770	2770	4030	4030	4030
Brine/water-to-water heat pump	Rated brine/water flow (outdoor H/E)	[m^3/h]	-	-	-	-	-	-	-

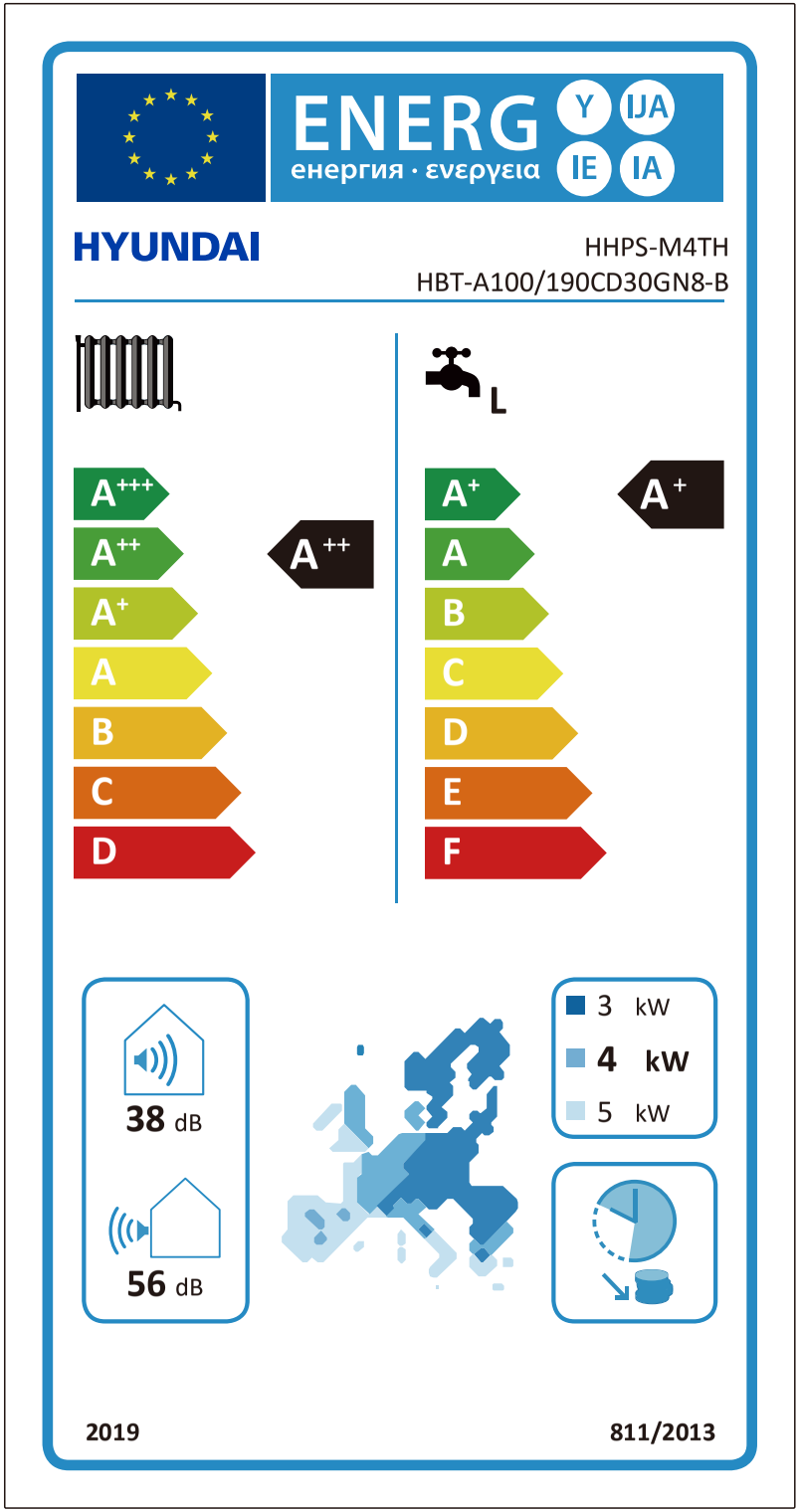
Heat pump combination heater		Outdoor	HHPS-M10TH	HHPS-M12TH	HHPS-M12TH3	HHPS-M14TH	HHPS-M14TH3	HHPS-M16TH	HHPS-M16TH3
		Indoor	HBT-A100/240CD***GN8-B	HBT-A160/240CD***GN8-B	HBT-A160/240CD***GN8-B	HBT-A160/240CD***GN8-B	HBT-A160/240CD***GN8-B	HBT-A160/240CD***GN8-B	HBT-A160/240CD***GN8-B
Indoor unit sound power(*)		dB	40	42	42	44	44	44	44
Outdoor unit sound power(*)		dB	60	64	64	65	65	68	68
Water heating	Declared load profile	-	XL	XL	XL	XL	XL	XL	XL
	Energy efficiency class	-	A+	A+	A+	A+	A+	A+	A+
Space heating	Energy efficiency class at 55℃ (High temp. app.)	-	A++	A++	A++	A++	A++	A++	A++
Average climate									
Water heating	Water heating energy efficiency (η_{wh})	[%]	137	123	123	123	123	123	123
	Annual electricity consumption (AEC)	[kWh]	1218	1360	1360	1360	1360	1360	1360
Space heating	P_{rated} (declared heating capacity)@-10℃	[kW]	7.7	11.6	11.6	12.1	12.1	13.0	13.0
	Seasonal space heating efficiency(η_s)	[%]	136.6	135.1	135.1	135.6	135.6	133.3	133.2
	Annual energy consumption	[kWh]	4539	6927	6928	7202	7203	7895	7896
Off-peak operation function integrated in heat pump		Y/N	Y	Y	Y	Y	Y	Y	Y
Colder climate									
Water heating	Water heating energy efficiency (η_{wh})	[%]	111	92	92	92	92	92	92
	Annual energy consumption	[kWh]	1508	1822	1822	1822	1822	1822	1822
Space heating	P_{rated} (declared heating capacity)@-22℃	[kW]	6.71	10.31	10.3	10.96	11	11.8	11.8
	Seasonal space heating efficiency(η_s)	[%]	116.4	117.8	117.7	118.9	118.9	121.8	121.8
	Annual energy consumption	[kWh]	5540	8419	8420	8866	8867	9309	9310
Warmer climate									
Water heating	Water heating energy efficiency (η_{wh})	[%]	171	153	153	153	153	153	153
	Annual energy consumption	[kWh]	977	1088	1088	1088	1088	1088	1088
Space heating	P_{rated} (declared heating capacity)@2℃	[kW]	8.63	12.5	12.5	14.17	14.17	14.17	14.17
	Seasonal space heating efficiency(η_s)	[%]	180.3	174.0	173.8	174.9	174.7	176.0	175.8
	Annual energy consumption	[kWh]	2516	3776	3780	4258	4262	4231	4236
Ecodesign technical data									
Product description	Air-to-water heat pump	Y/N	Y	Y	Y	Y	Y	Y	Y
	Water-to-water heat pump	Y/N	N	N	N	N	N	N	N
	Brine-to-water heat pump	Y/N	N	N	N	N	N	N	N
	Low-temperature heat pump	Y/N	N	N	N	N	N	N	N
	Equipped with a supplementary heater	Y/N	Y	Y	Y	Y	Y	Y	Y
	Heat pump combination heater	Y/N	Y	Y	Y	Y	Y	Y	Y
Air-to-water unit	Rated airflow (outdoor)	[m^3/h]	4030	4060	4060	4060	4060	4650	4650
Brine/water-to-water heat pump	Rated brine/water flow (outdoor H/E)	[m^3/h]	-	-	-	-	-	-	-

Heat pump combination heater		Outdoor	HHPS-M4TH	HHPS-M4TH	HHPS-M6TH	HHPS-M6TH	HHPS-M8TH	HHPS-M8TH	HHPS-M10TH
		Indoor	HBT-A100/190CD***GN8-B	HBT-A100/240CD***GN8-B	HBT-A100/190CD***GN8-B	HBT-A100/240CD***GN8-B	HBT-A100/190CD***GN8-B	HBT-A100/240CD***GN8-B	HBT-A100/190CD***GN8-B
Other	Capacity control	-	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
	P_{to} (Power consumption Thermostat off mode)	[kW]	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
	P_{CK} (Power crankcase heater model)	[kW]	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Q_{elec} (Daily electricity consumption)	[kWh]	3.66	5.71	3.66	5.71	3.78	5.67	3.78
	Q_{fuel} (Daily fuel consumption)	[kWh]	-	-	-	-	-	-	-
Part load conditions space heating average climate									
(A) condition (-7℃)	P_{dh} (declared heating capacity)	[kW]	3.89	3.89	5.04	5.04	5.84	5.84	6.78
	COP_d (declared COP)	-	2.17	2.17	2.17	2.17	2.16	2.16	2.24
	Cdh (declaradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90
(B) condition (2℃)	P_{dh} (declared heating capacity)	[kW]	2.38	2.38	3.12	3.12	3.76	3.76	4.28
	COP_d (declared COP)	-	3.30	3.30	3.51	3.51	3.30	3.30	3.42
	Cdh (declaradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90
(C) condition (7℃)	P_{dh} (declared heating capacity)	[kW]	2.94	2.94	2.08	2.08	2.43	2.43	2.77
	COP_d (declared COP)	-	4.41	4.41	4.54	4.54	4.34	4.34	4.52
	Cdh (declaradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90
(D) condition (12℃)	P_{dh} (declared heating capacity)	[kW]	1.32	1.32	1.28	1.28	1.39	1.39	1.58
	COP_d (declared COP)	-	5.66	5.66	5.59	5.59	5.33	5.33	5.68
	Cdh (declaradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90
(E) Tol (Temperature Operating Limit)	Tol (Temperature Operating Limit)	[℃]	-10	-10	-10	-10	-10	-10	-10
	P_{dh} (declared heating capacity)	[kW]	3.42	3.42	4.52	4.52	4.91	4.91	5.38
	COP_d (declared COP)	-	1.91	1.91	1.91	1.91	1.84	1.84	1.83
	WTOL(Heating water Operation Limit)	[℃]	65	65	65	65	65	65	65
(F) Tbivalent Temperature	T_{biv}	[℃]	-7	-7	-7	-7	-7	-7	-7
	P_{dh} (declared heating capacity)	[kW]	3.89	3.89	5.04	5.04	5.84	5.84	6.78
	COP_d (declared COP)	-	2.17	2.17	2.17	2.17	2.16	2.16	2.24
Capacity of the back-up heater integrated in the unit	P_{sup} back-up heater (@ Tdesignh: -10℃)	[kW]	3/6/9	3/6/9	3/6/9	3/6/9	3/6/9	3/6/9	3/6/9
Supplementary capacity at P_design	P_{sup} (@ Tdesignh: -10℃)	[kW]	0.98	0.98	1.18	1.18	1.69	1.69	2.28

Heat pump combination heater		Outdoor	HHPS-M10TH	HHPS-M12TH	HHPS-M12TH3	HHPS-M14TH	HHPS-M14TH3	HHPS-M16TH	HHPS-M16TH3
		Indoor	HBT-A100/240CD***GN8-B	HBT-A160/240CD***GN8-B	HBT-A160/240CD***GN8-B	HBT-A160/240CD***GN8-B	HBT-A160/240CD***GN8-B	HBT-A160/240CD***GN8-B	HBT-A160/240CD***GN8-B
Other	Capacity control	-	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
	P_{to} (Power consumption Thermostat off mode)	[kW]	0.024	0.024	0.030	0.024	0.030	0.024	0.030
	P_{sb} (Power consumption standby mode)	[kW]	0.014	0.014	0.020	0.014	0.020	0.014	0.020
	P_{CK} (Power crankcase heater model)	[kW]	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Q_{elec} (Daily electricity consumption)	[kWh]	5.67	6.35	6.35	6.35	6.35	6.35	6.35
	Q_{fuel} (Daily fuel consumption)	[kWh]	-	-	-	-	-	-	-
Part load conditions space heating average climate									
(A) condition (-7℃)	P_{dh} (declared heating capacity)	[kW]	6.78	10.24	10.24	10.68	10.68	11.52	11.52
	COP_d (declared COP)	-	2.24	2.01	2.01	2.01	2.01	1.99	1.99
	Cdh (declaradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90
(B) condition (2℃)	P_{dh} (declared heating capacity)	[kW]	4.28	6.52	6.52	6.86	6.86	7.18	7.18
	COP_d (declared COP)	-	3.42	3.44	3.44	3.43	3.43	3.34	3.34
	Cdh (declaradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90
(C) condition (7℃)	P_{dh} (declared heating capacity)	[kW]	2.77	4.36	4.36	4.63	4.63	4.67	4.67
	COP_d (declared COP)	-	4.52	4.59	4.59	4.66	4.66	4.61	4.61
	Cdh (declaradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90
(D) condition (12℃)	P_{dh} (declared heating capacity)	[kW]	1.58	3.29	3.29	3.31	3.31	3.32	3.32
	COP_d (declared COP)	-	5.68	6.05	6.05	6.13	6.13	6.07	6.07
	Cdh (declaradation coefficient)	-	0.90	0.90	0.90	0.90	0.90	0.90	0.90
(E) Tol (Temperature Operating Limit)	Tol (Temperature Operating Limit)	[℃]	-10	-10	-10	-10	-10	-10	-10
	P_{dh} (declared heating capacity)	[kW]	5.38	9.1	9.1	9.19	9.19	10.33	10.33
	COP_d (declared COP)	-	1.83	1.79	1.79	1.76	1.76	1.80	1.80
	WTOL(Heating water Operation Limit)	[℃]	65	65	65	65	65	65	65
(F) Tbivalent Temperature	T_{biv}	[℃]	-7	-7	-7	-7	-7	-7	-7
	P_{dh} (declared heating capacity)	[kW]	6.78	10.27	10.27	10.68	10.68	11.52	11.52
	COP_d (declared COP)	-	2.24	2.01	2.01	2.01	2.01	1.99	1.99
Capacity of the back-up heater integrated in the unit	P_{sup} back-up heater (@ Tdesignh: -10℃)	[kW]	3/6/9	3/6/9	3/6/9	3/6/9	3/6/9	3/6/9	3/6/9
Supplementary capacity at P_design	P_{sup} (@ Tdesignh: -10℃)	[kW]	2.28	2.5	2.5	2.91	2.91	2.67	2.67

Indoor unit type explanation:
1.HBT-A100/190CD***GN8-B includes the following type：
HBT-A100/190CD30GN8-B：190L tank with 3kW back-up heater and 1-Phase Source.
HBT-A100/190CD60GN8-B：190L tank with 6kW back-up heater and 1-Phase Source.
HBT-A100/190CDS90GN8-B：190L tank with 9kW back-up heater and 3-Phase Source.
2.HBT-A100/240CD***GN8-B includes the following type：
HBT-A100/190CD30GN8-B：240L tank with 3kW back-up heater and 1-Phase Source.
HBT-A100/190CD60GN8-B：240L tank with 6kW back-up heater and 1-Phase Source.
HBT-A100/190CDS90GN8-B：240L tank with 9kW back-up heater and 3-Phase Source.
3.HBT-A160/240CD***GN8-B includes the following type：
HBT-A160/240CD30GN8-B：240L tank with 3kW back-up heater and 1-Phase Source.
HBT-A160/240CD60GN8-B：240L tank with 6kW back-up heater and 1-Phase Source.
HBT-A160/240CDS90GN8-B：240L tank with 9kW back-up heater and 3-Phase Source.

Note：
Details and precautions on installation, maintaenance 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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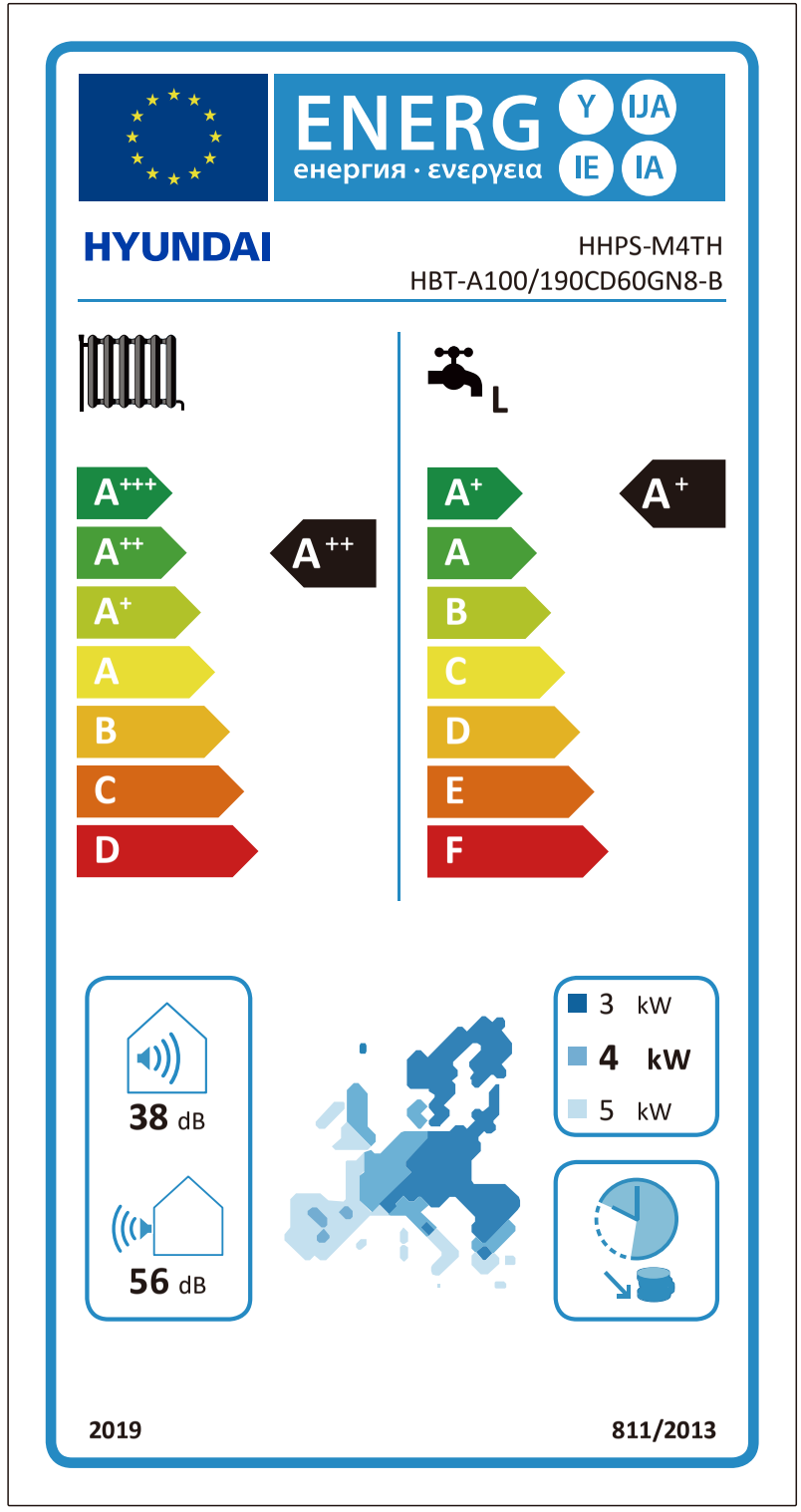
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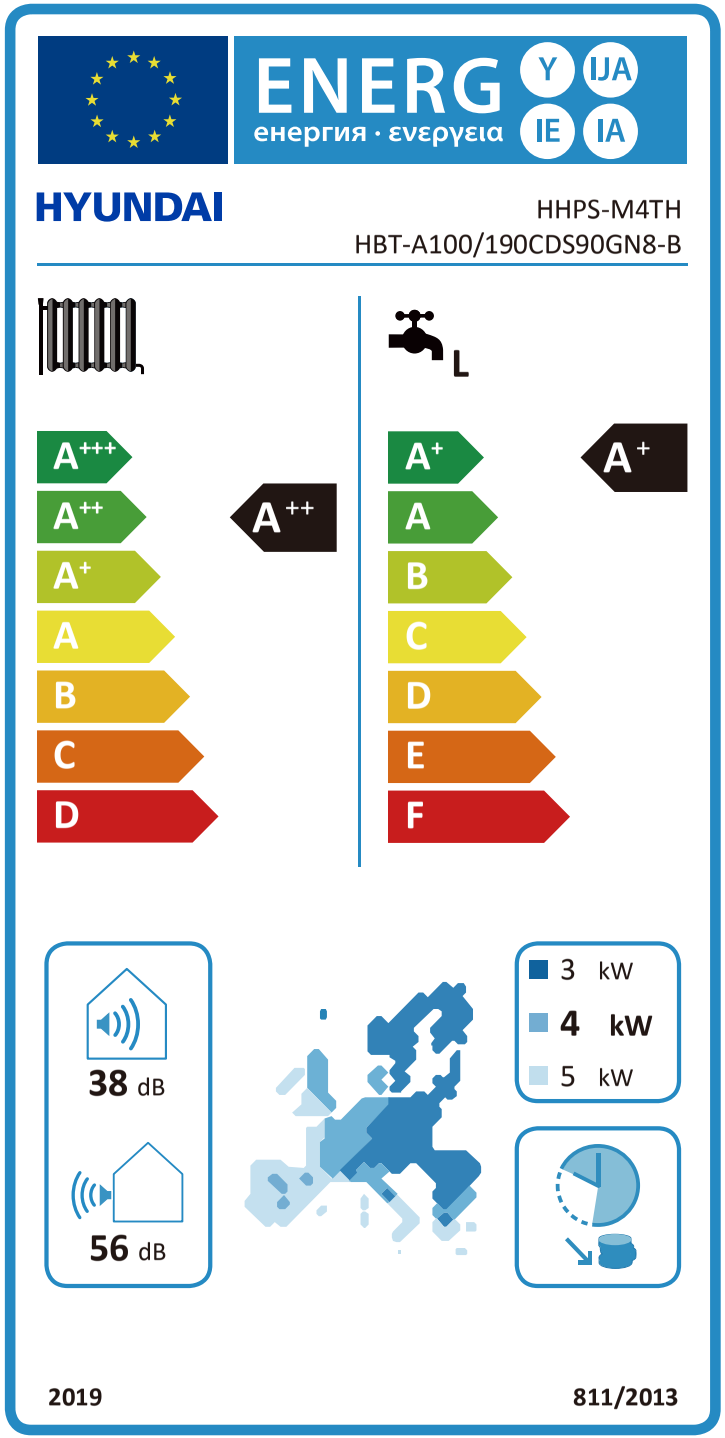
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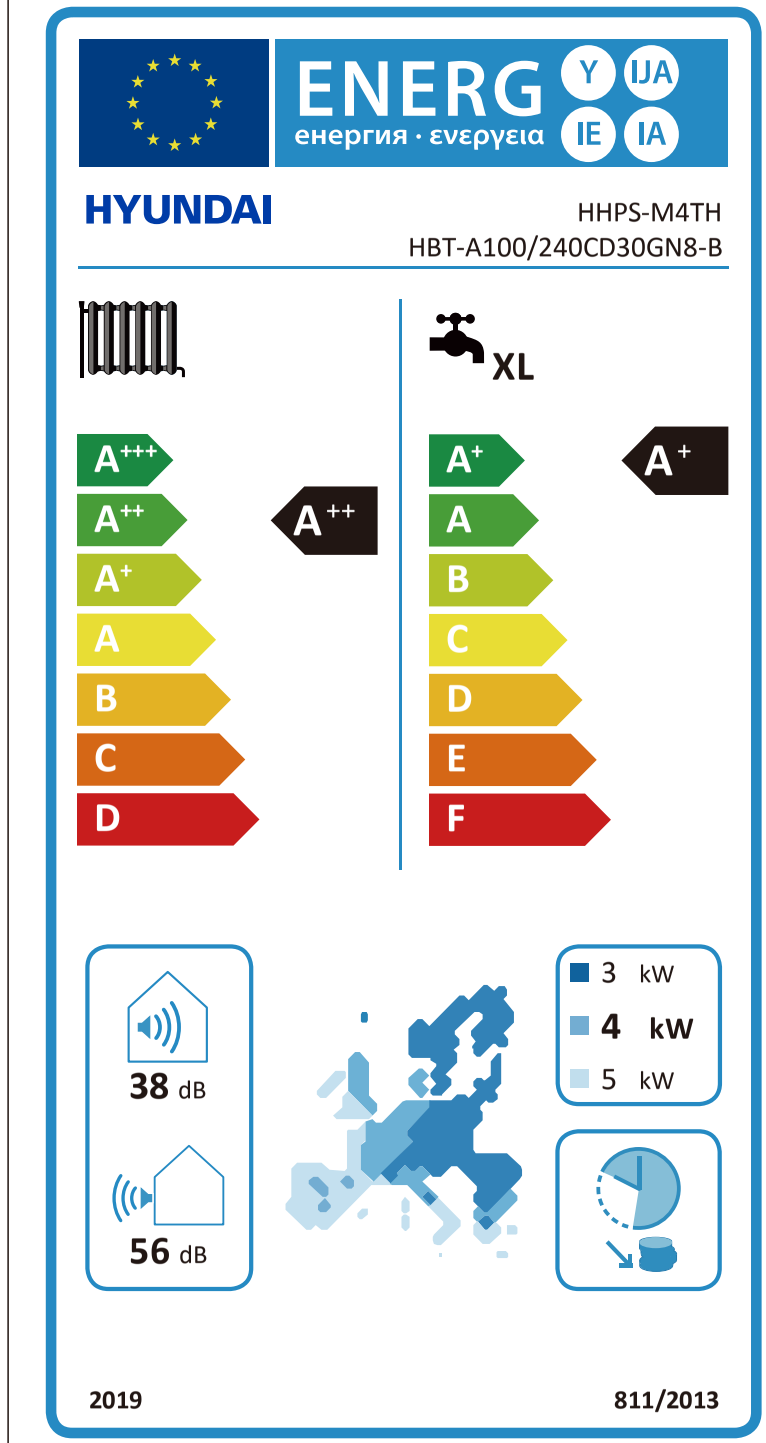
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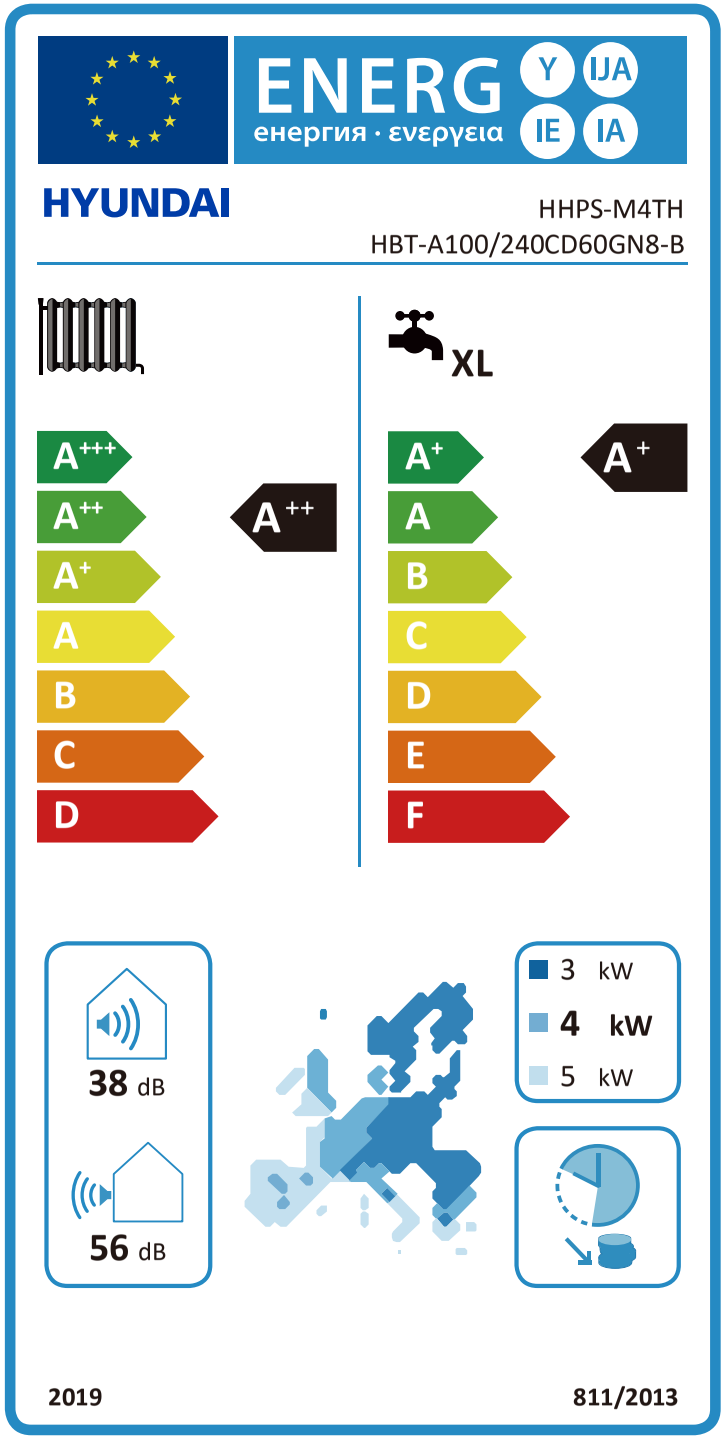
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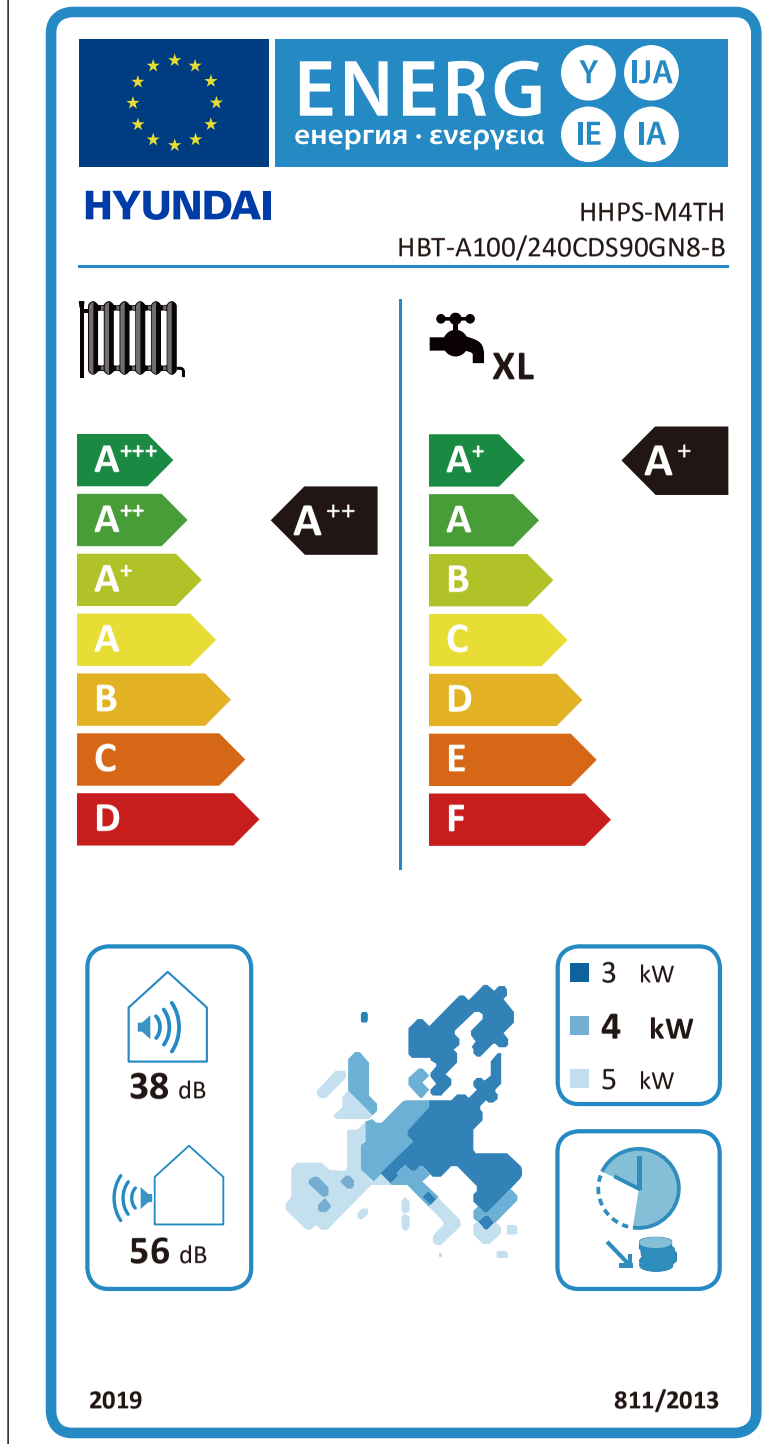
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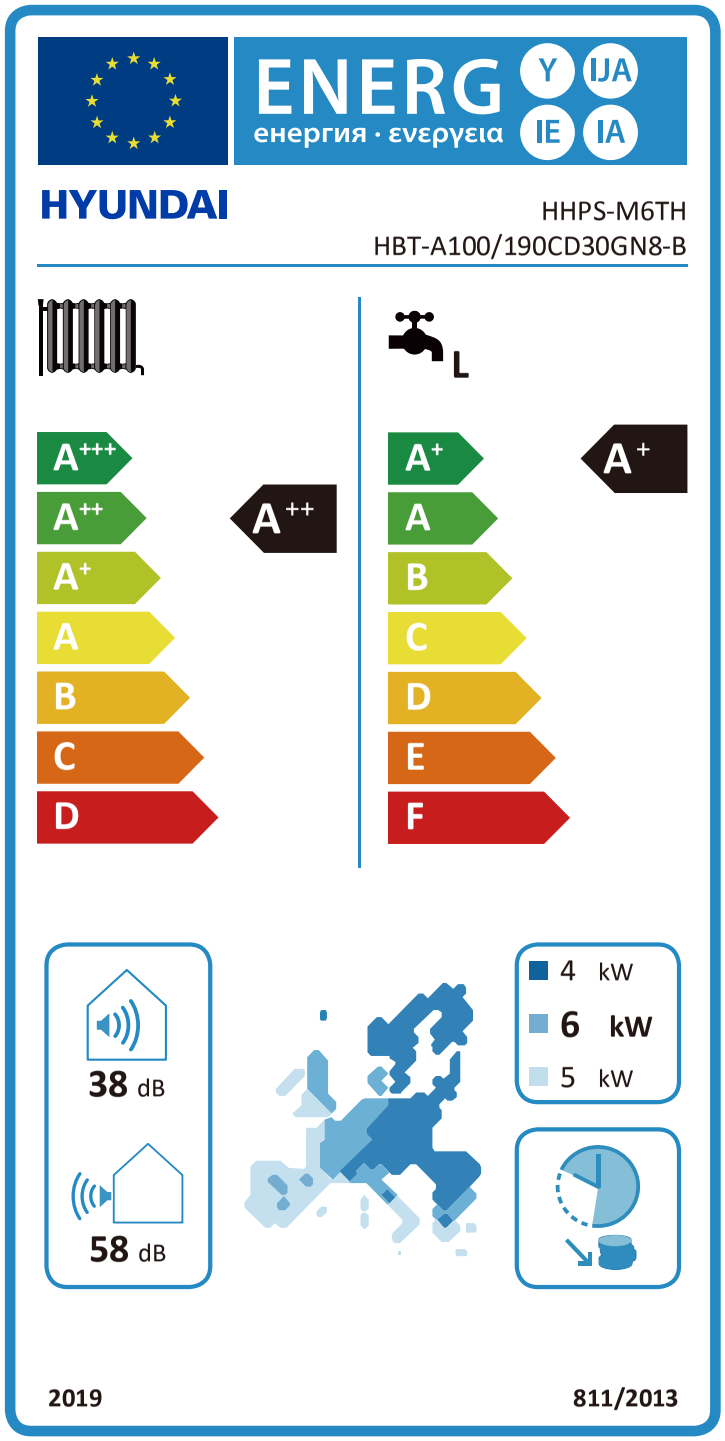
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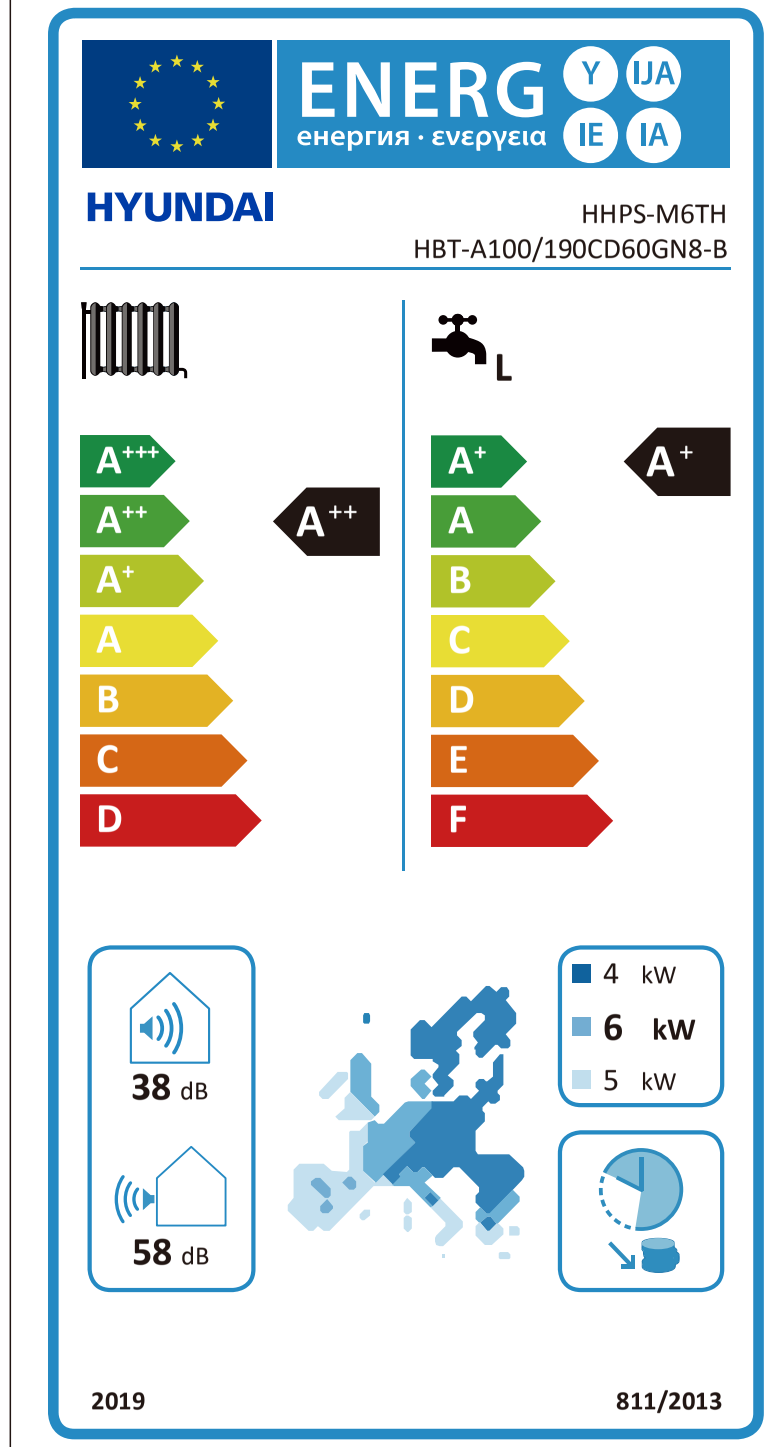
58 dB
4 kW
6 kW
5 kW
2019
811/2013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4 kW
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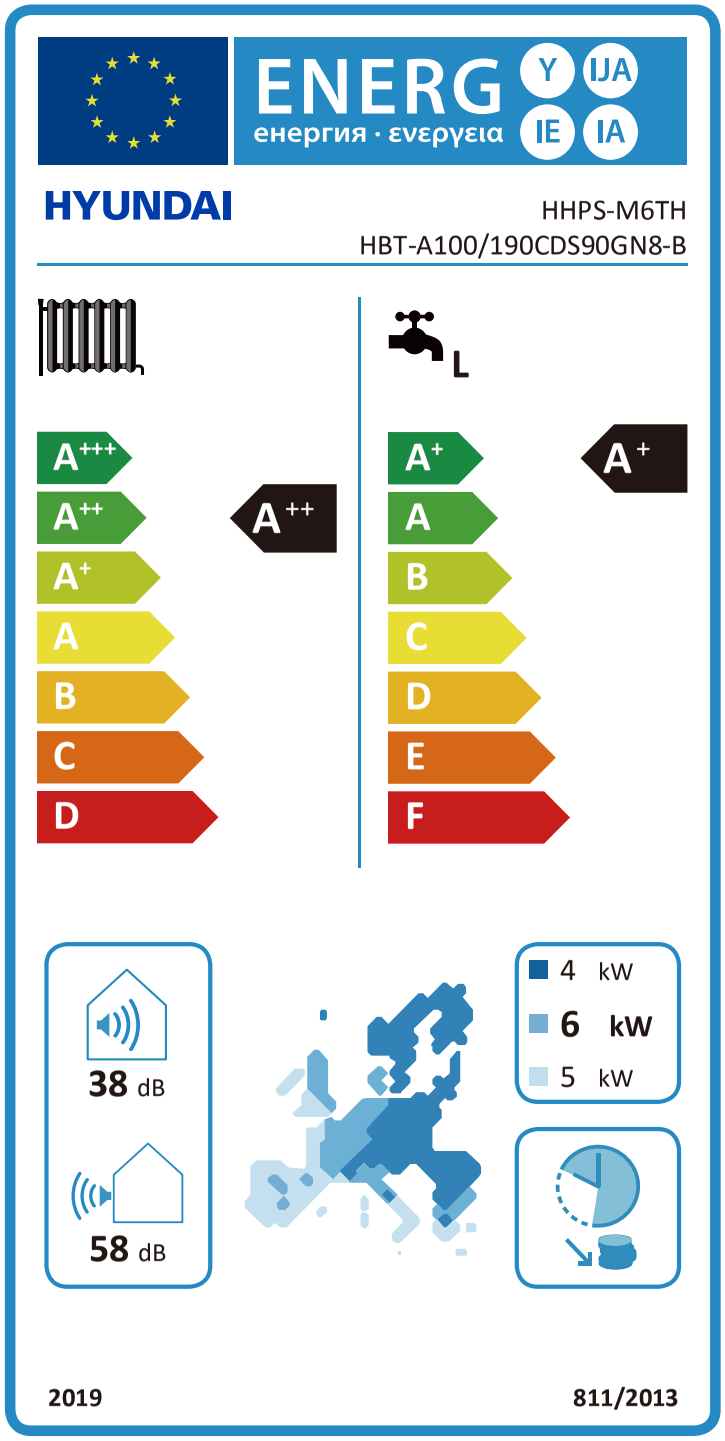
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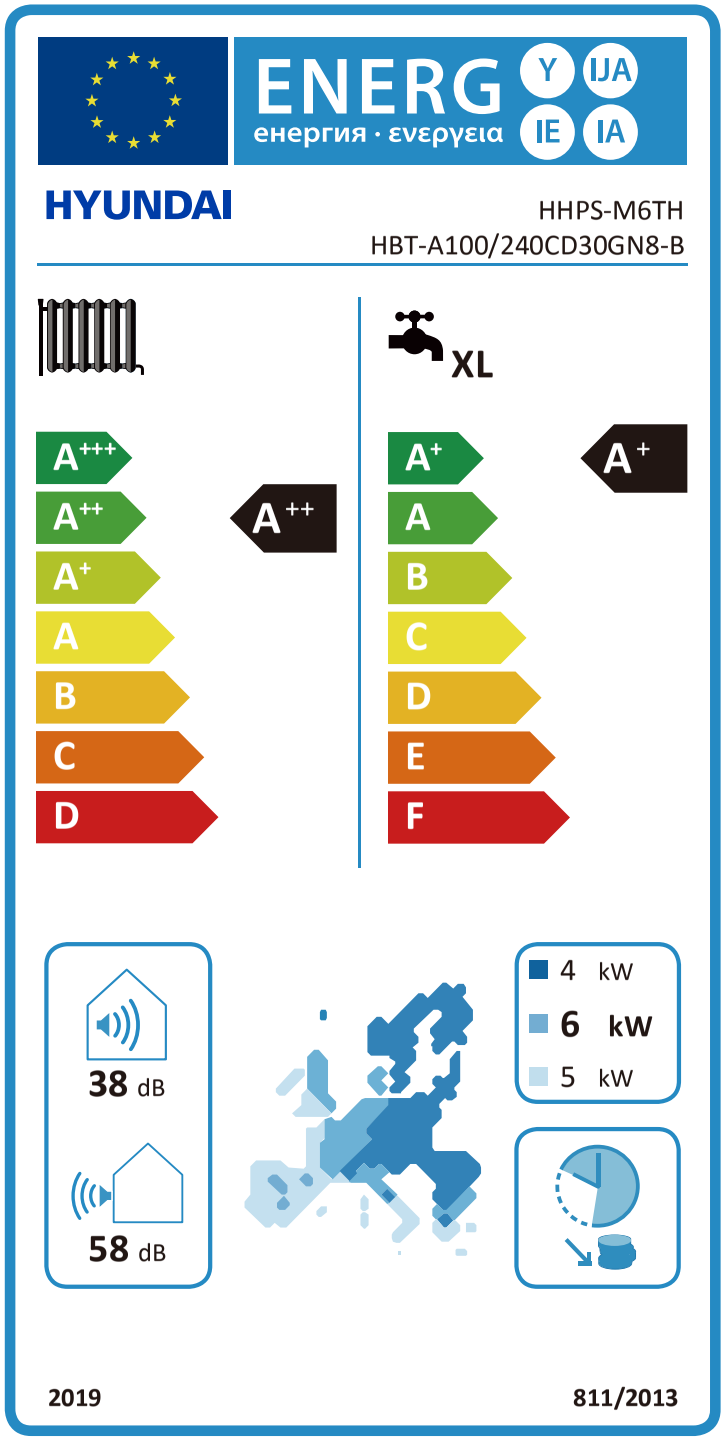
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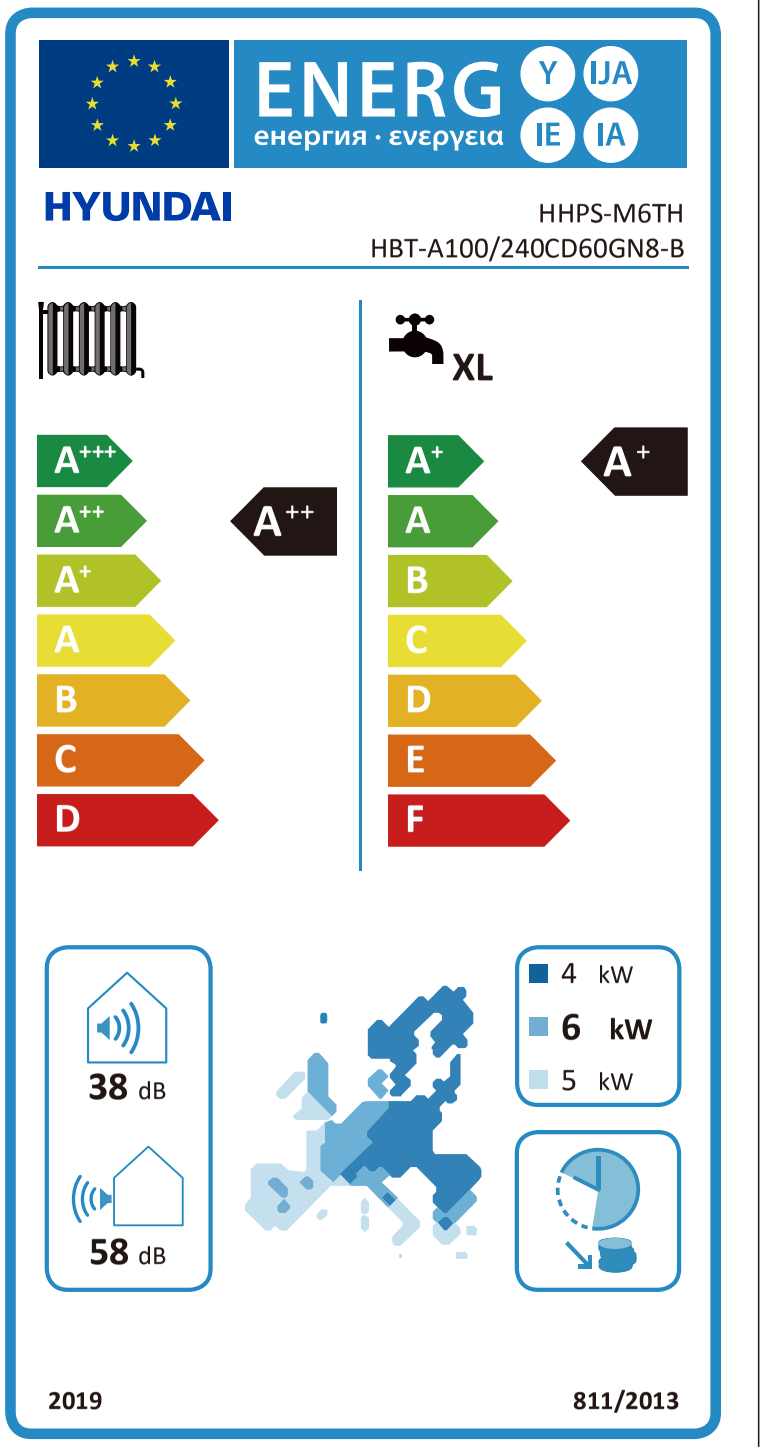
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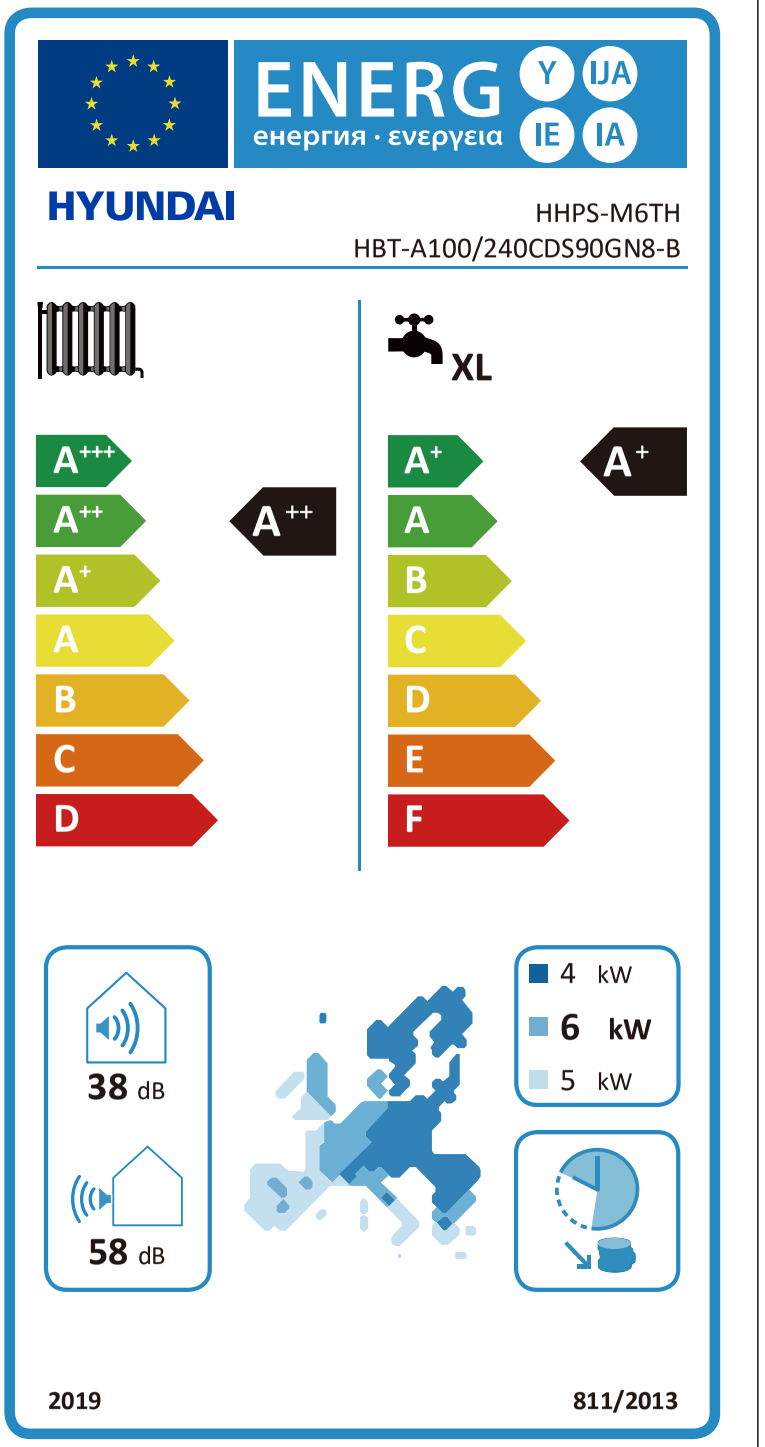
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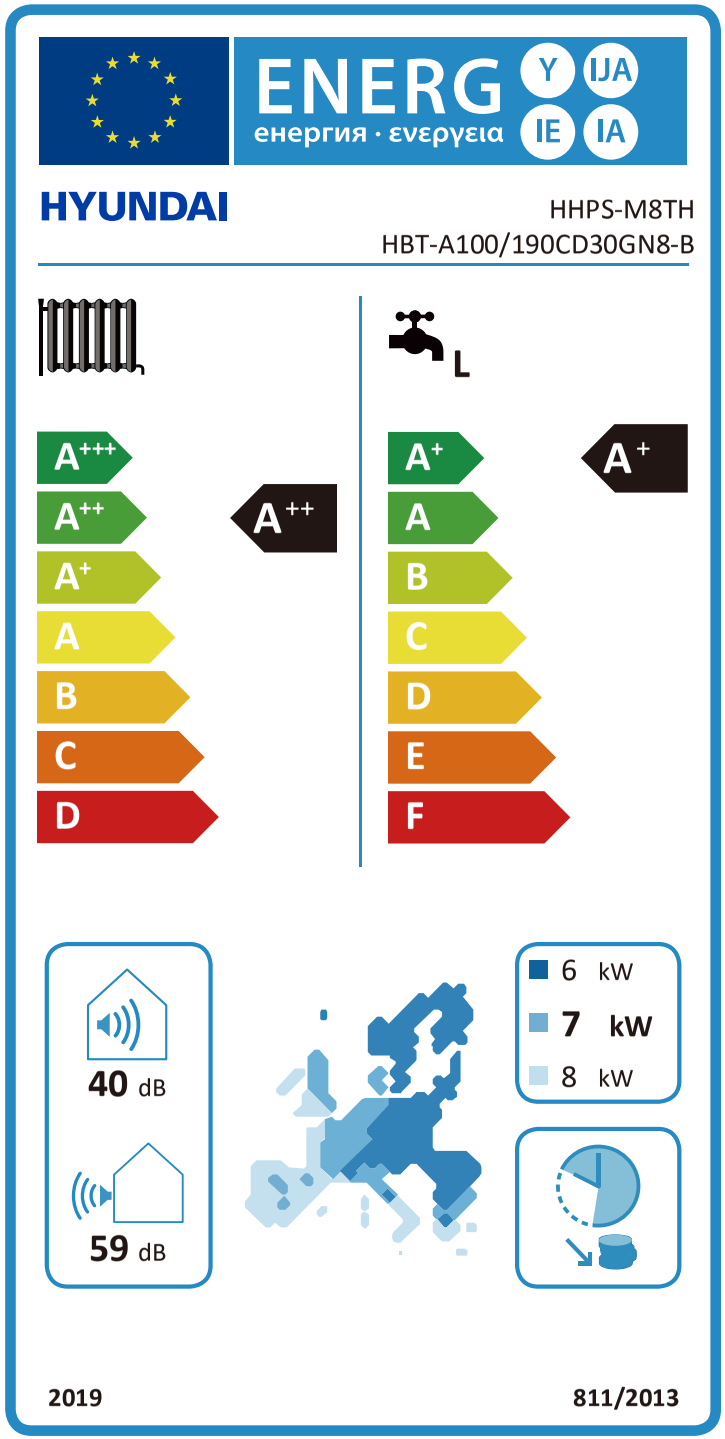
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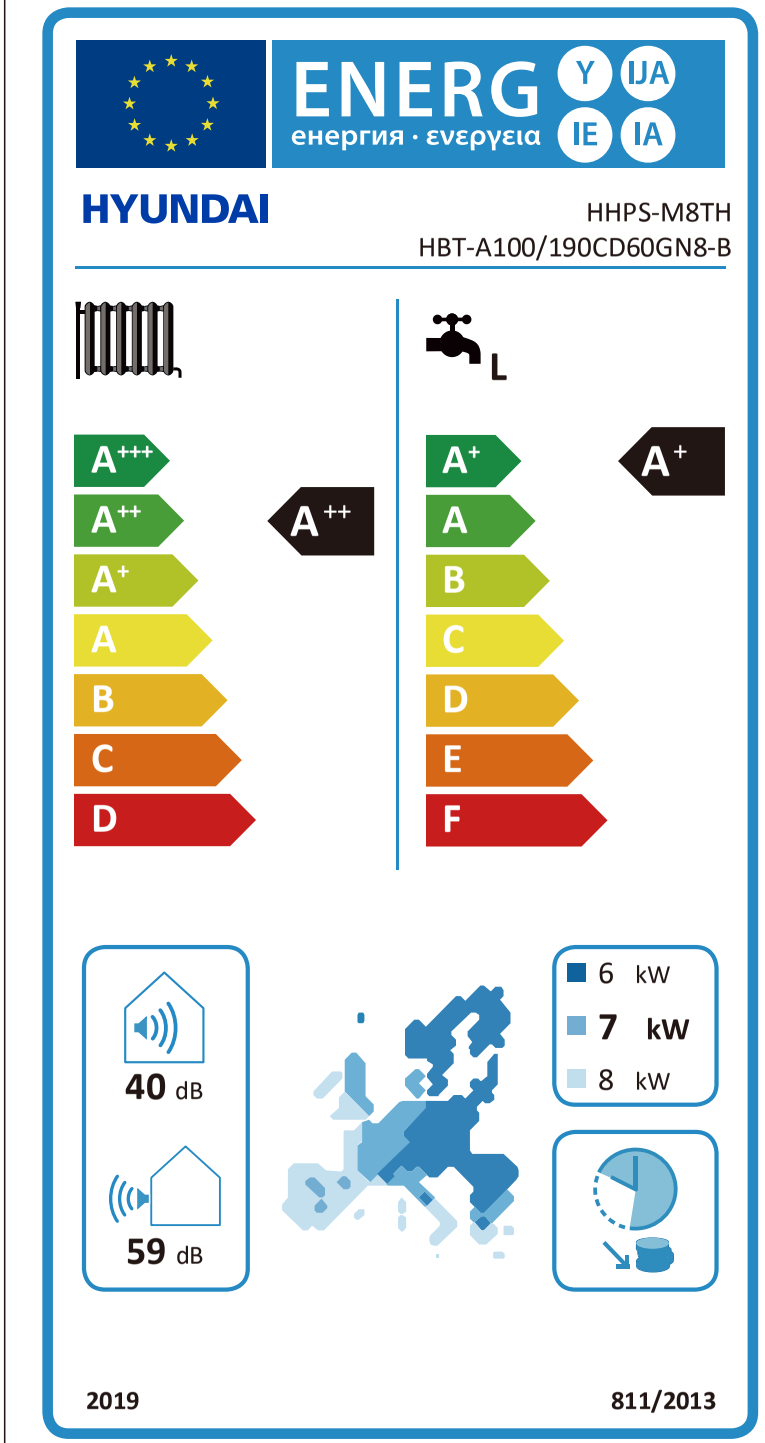
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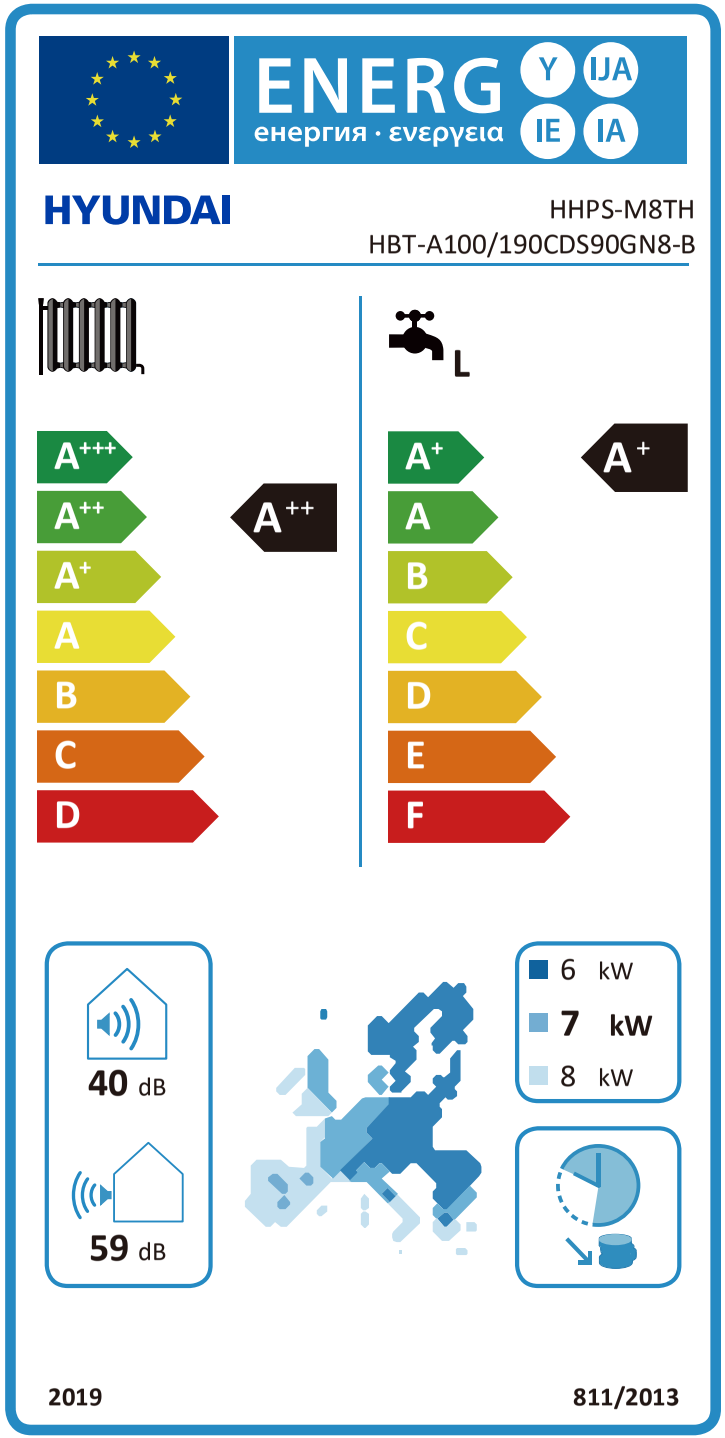
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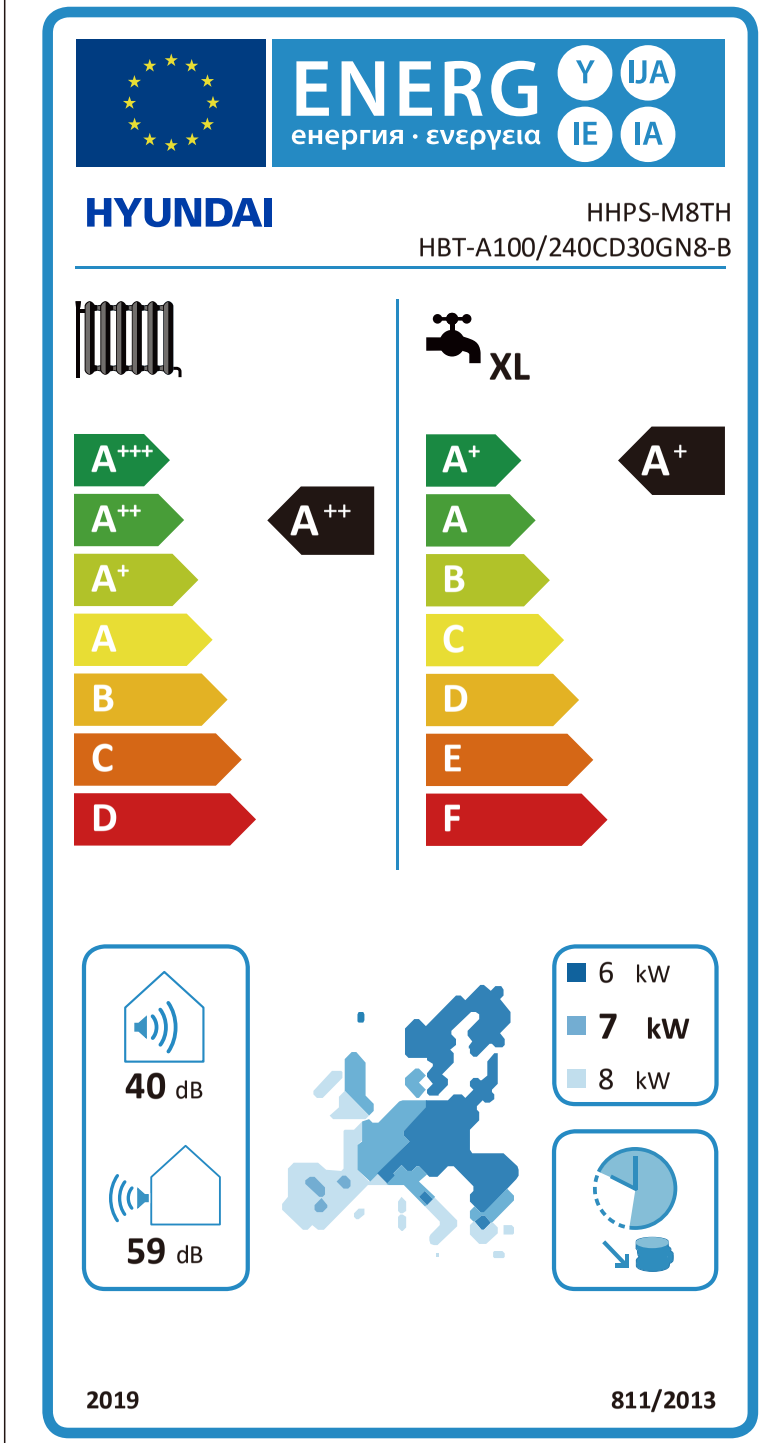
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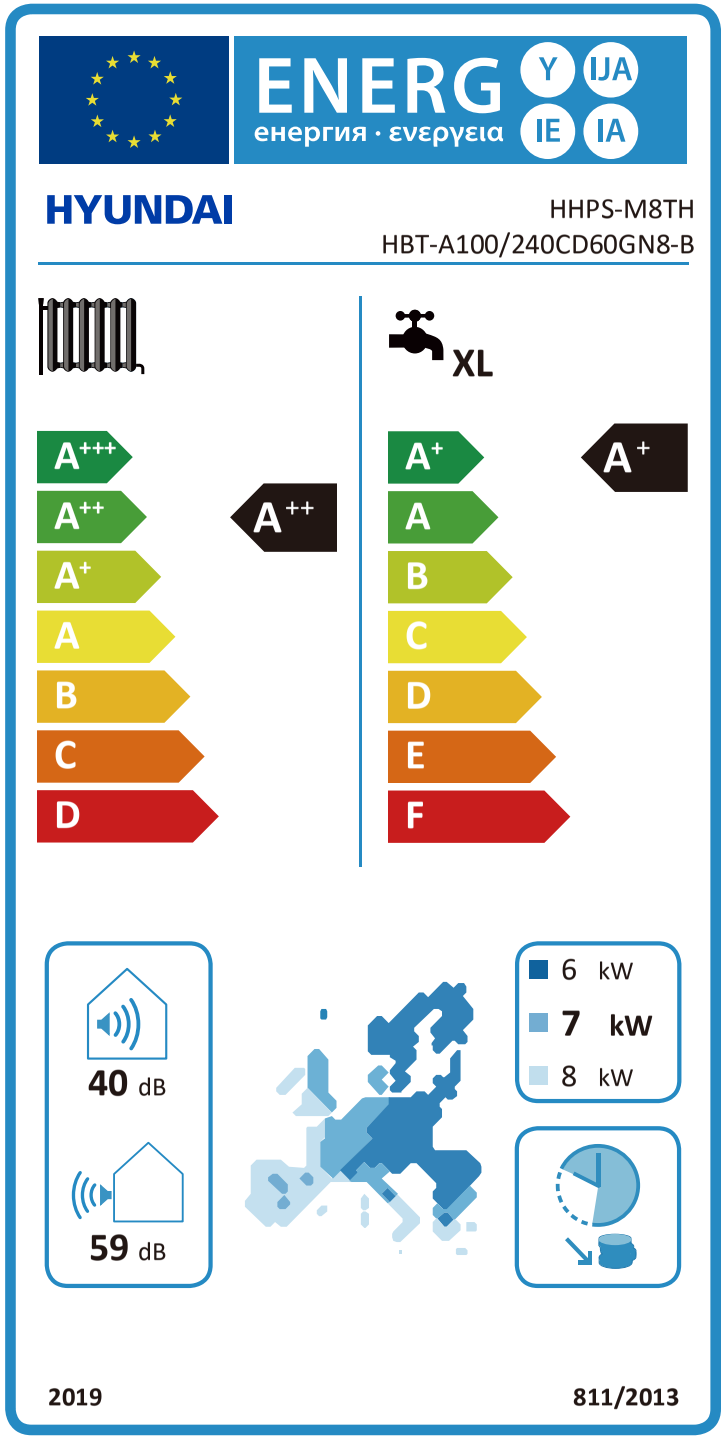
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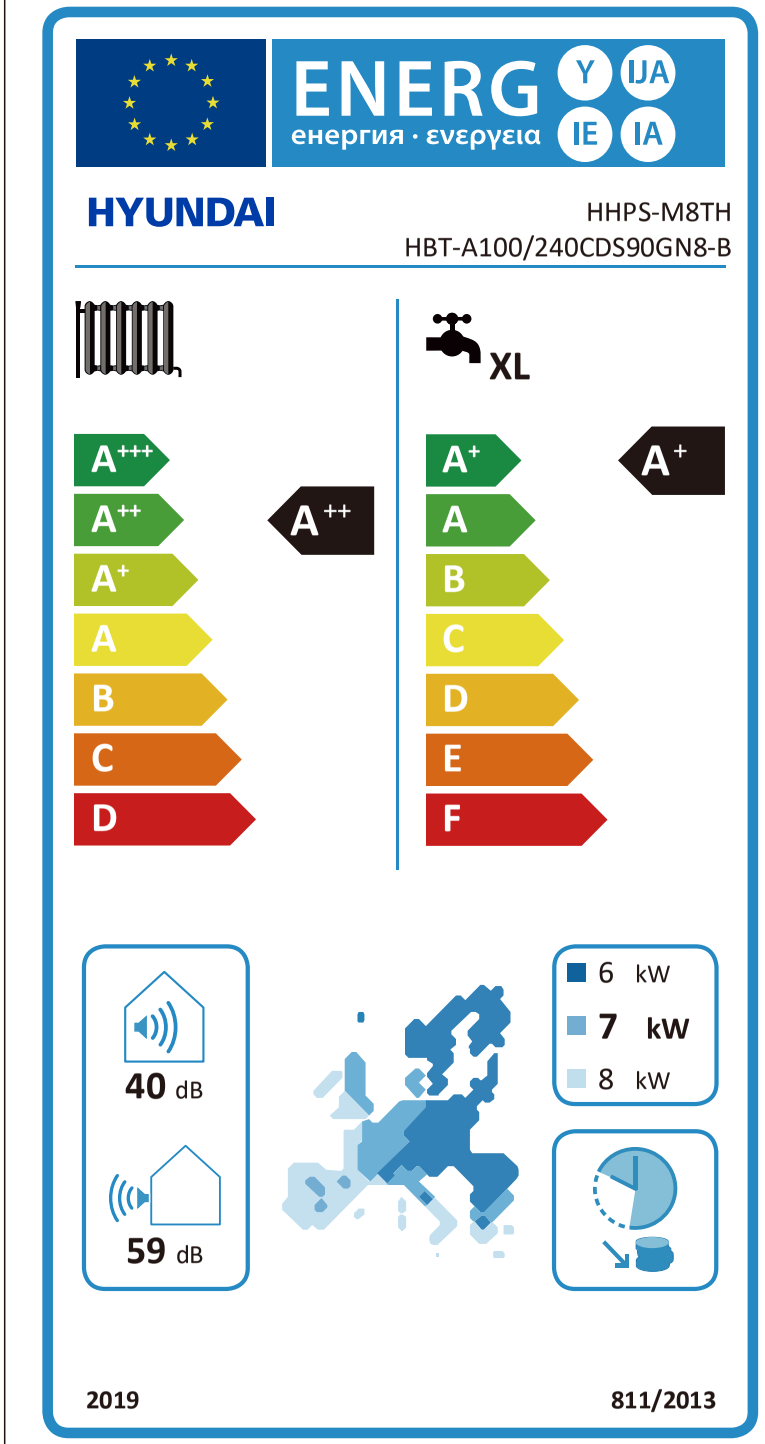
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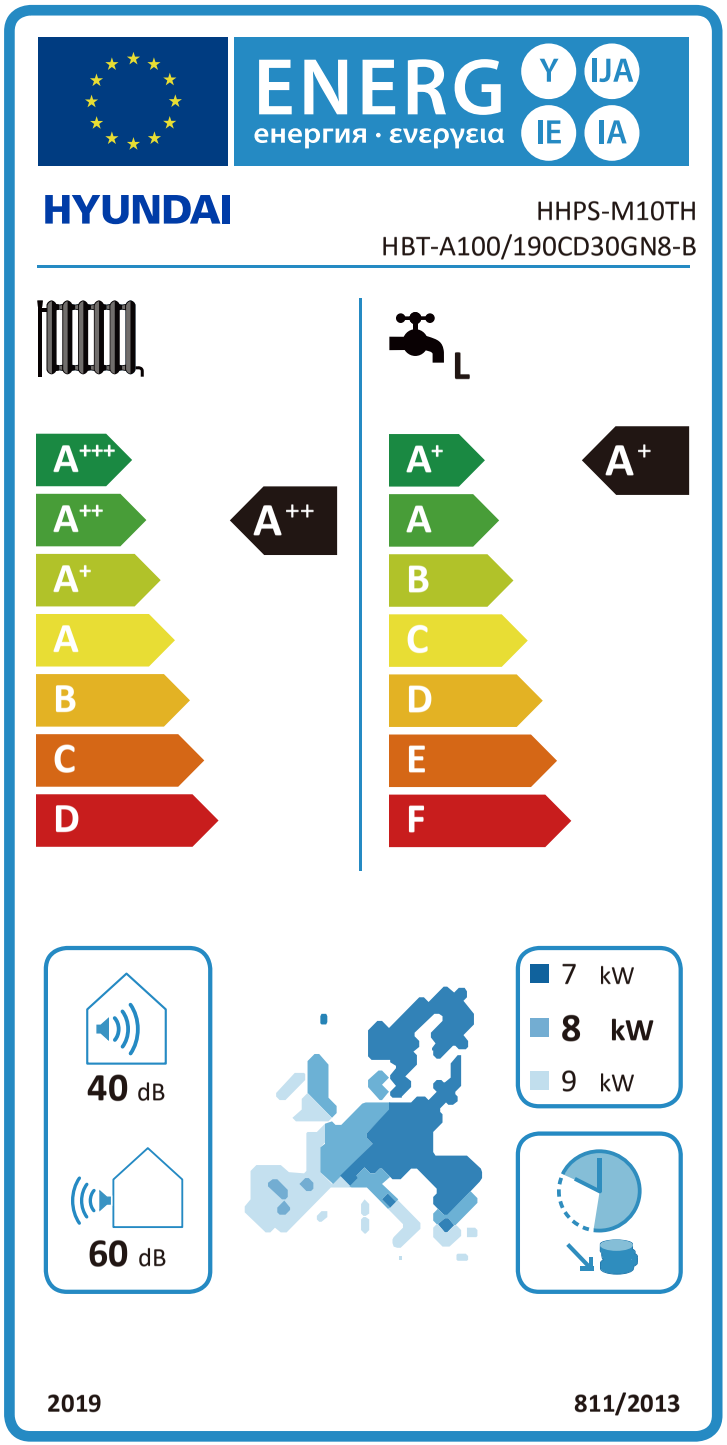
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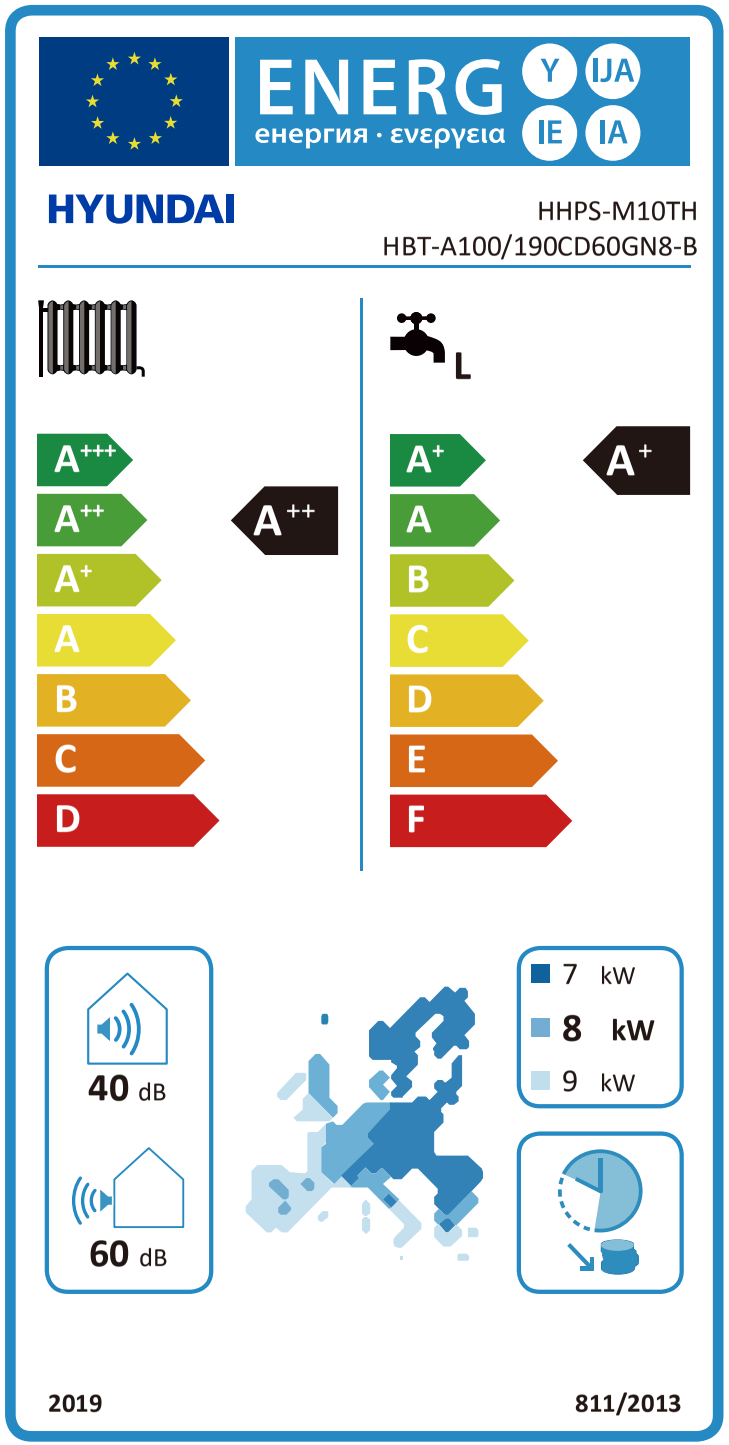
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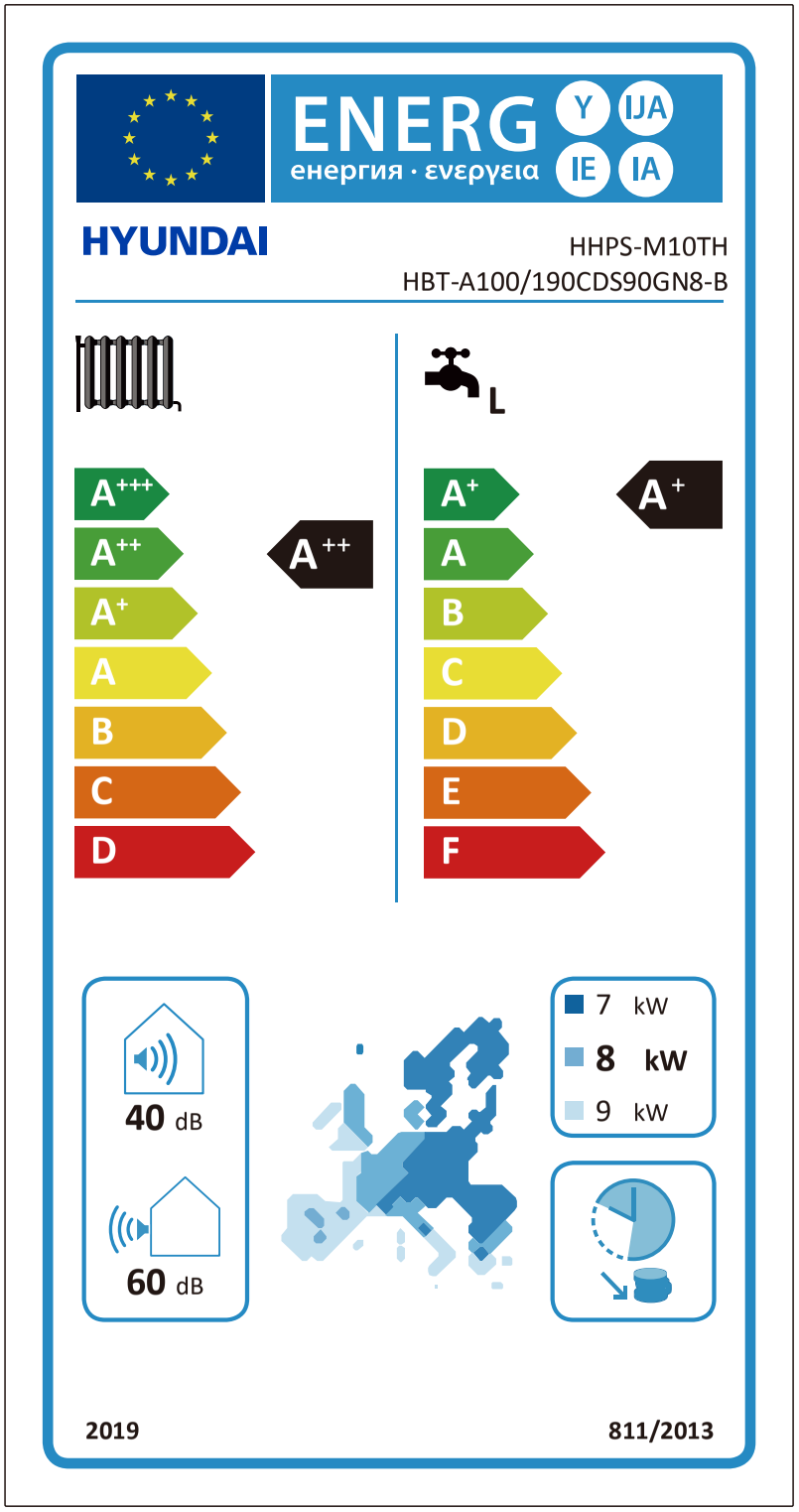
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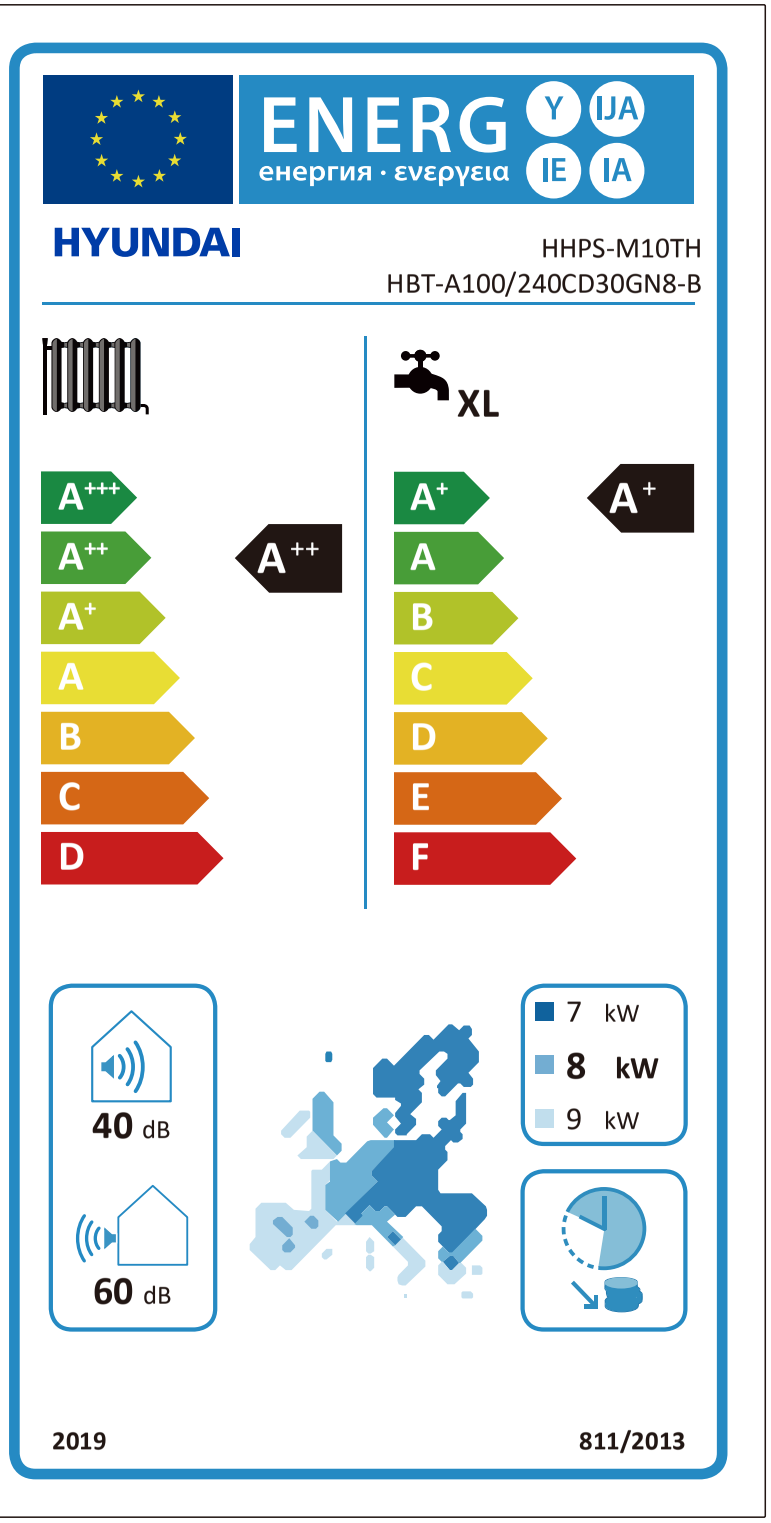
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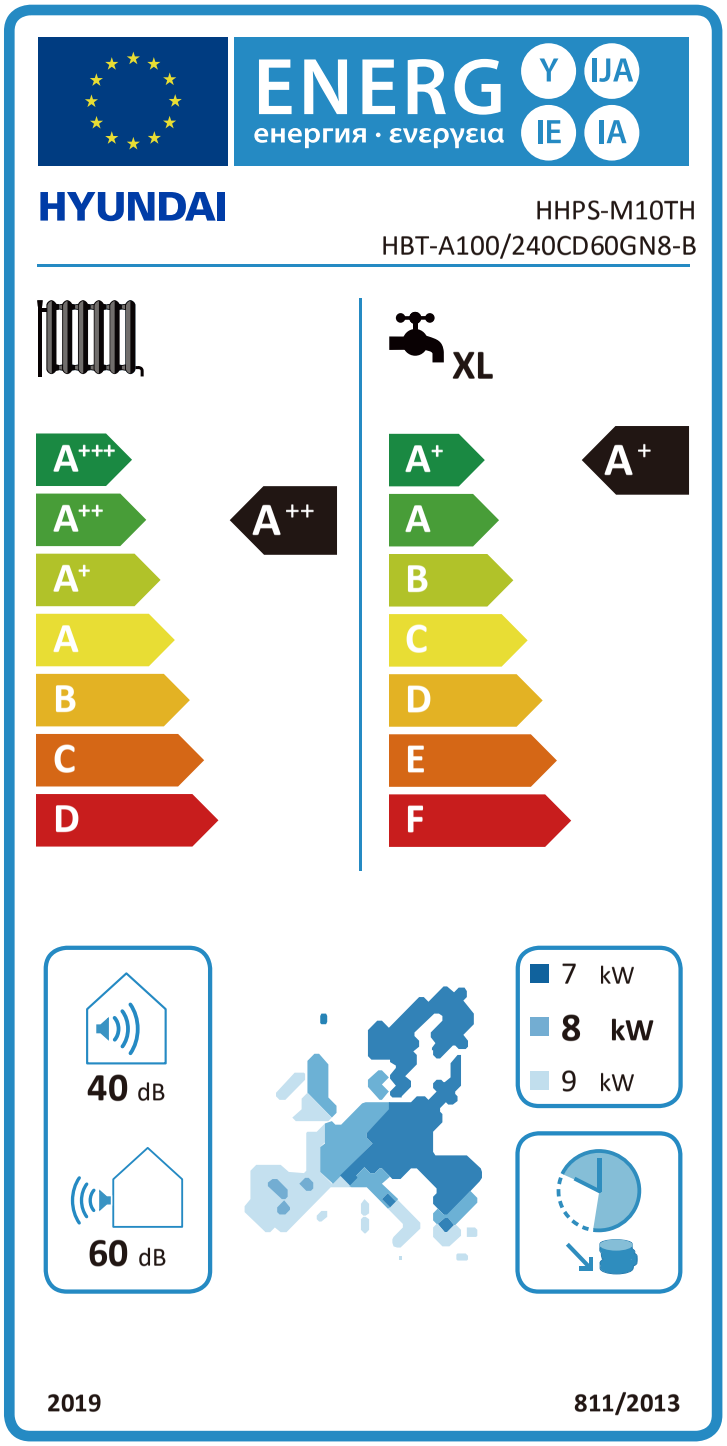
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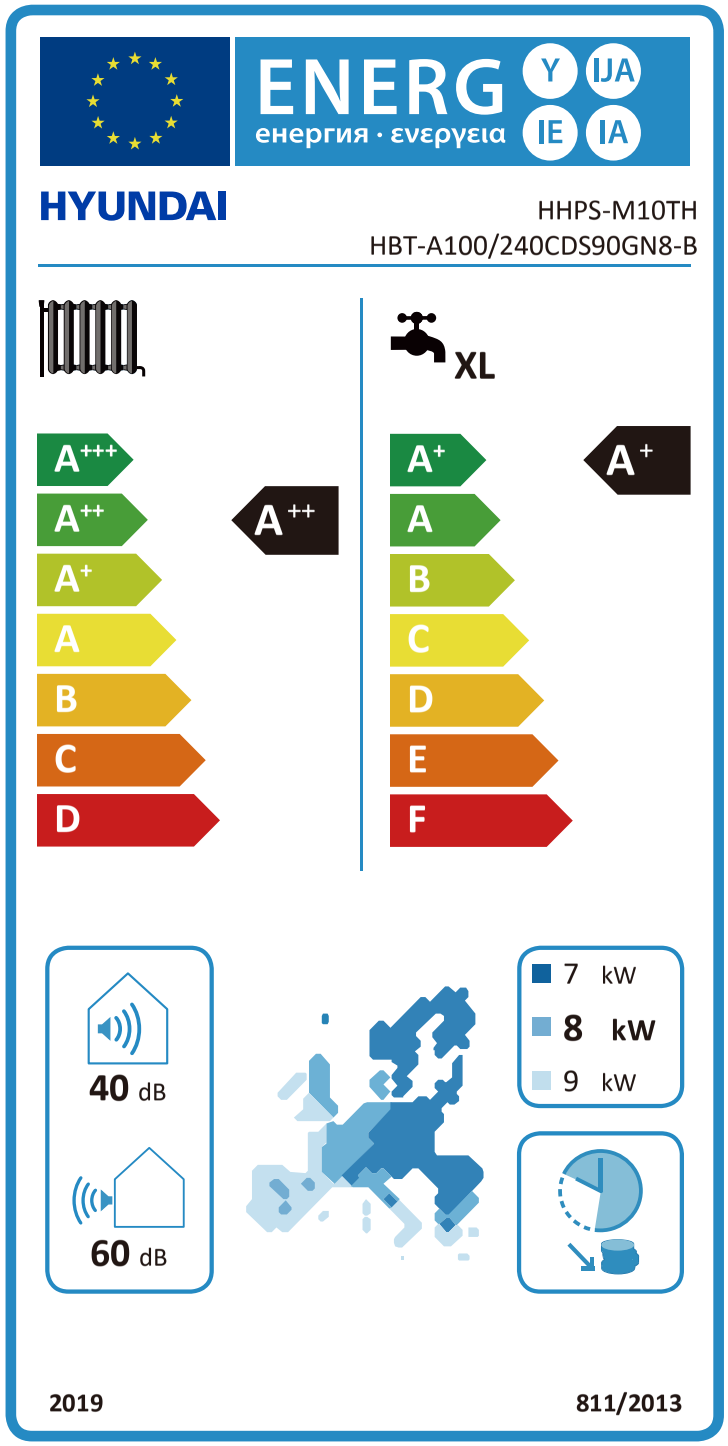
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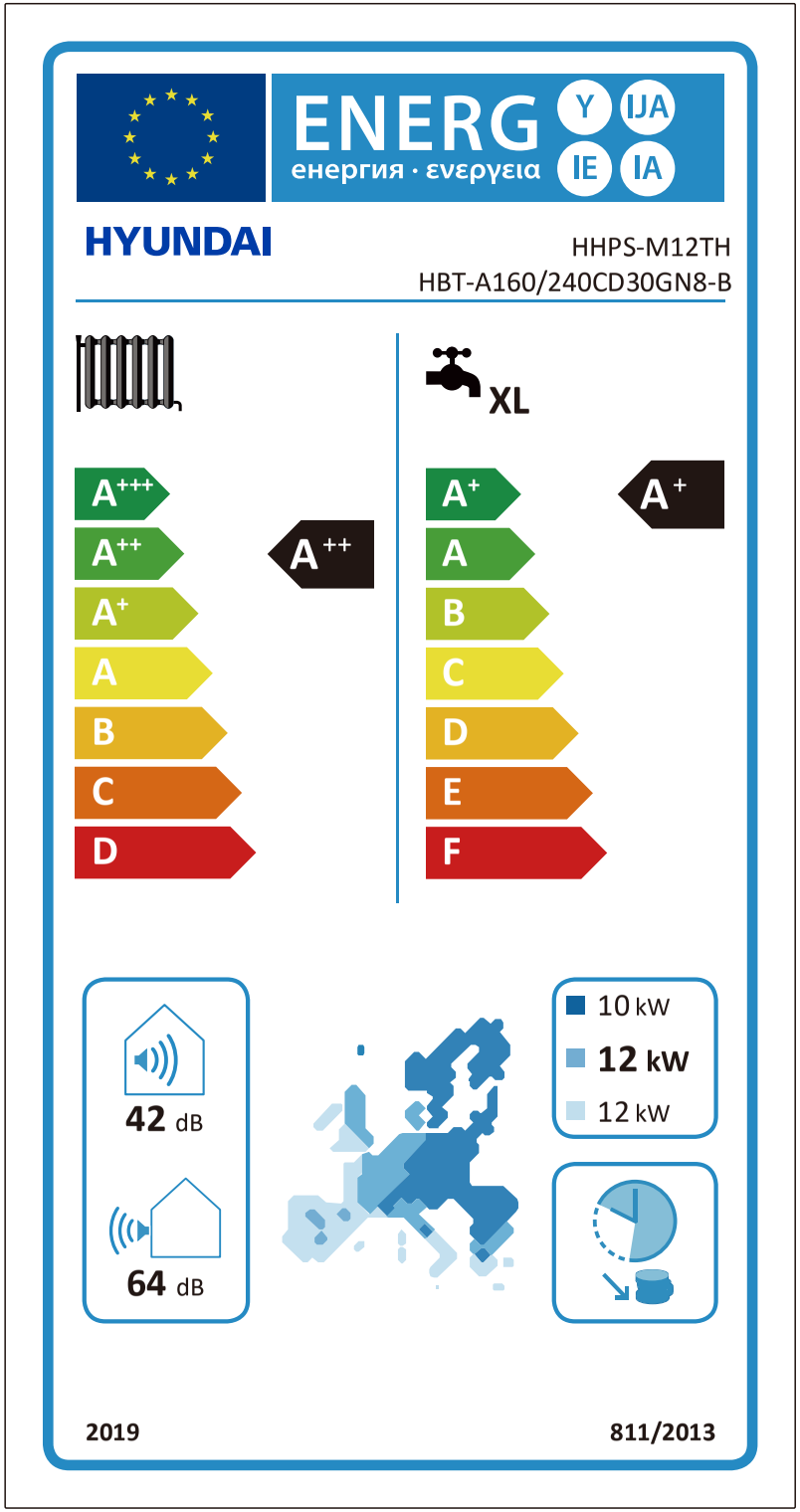
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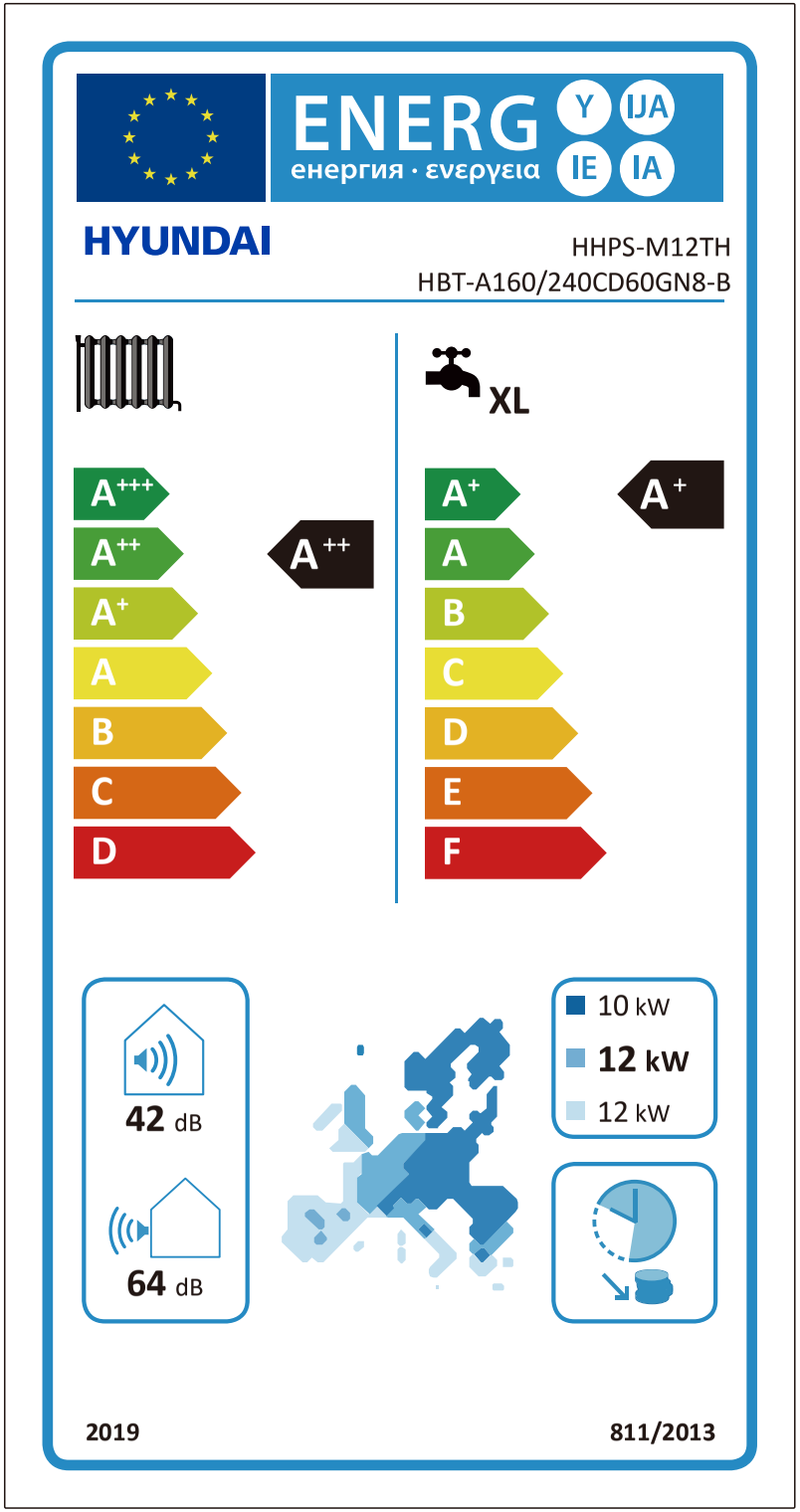
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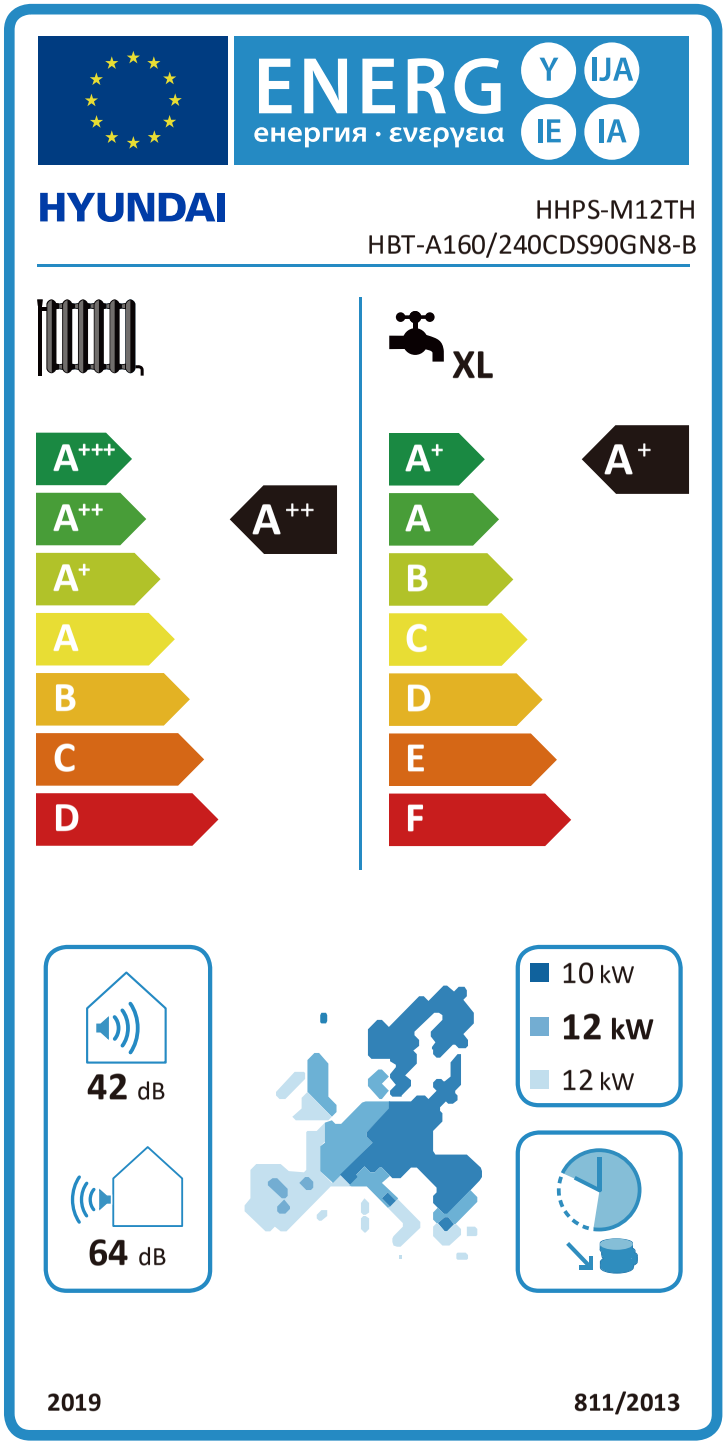
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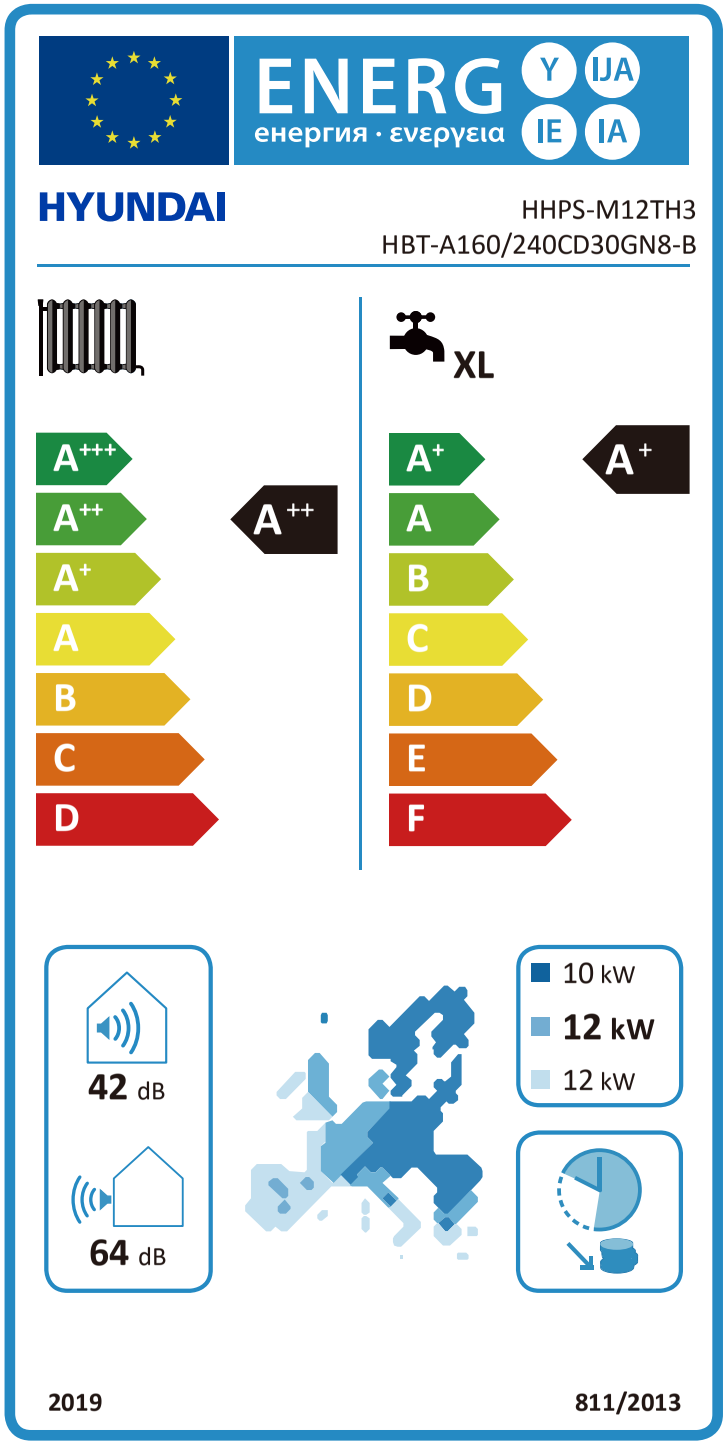
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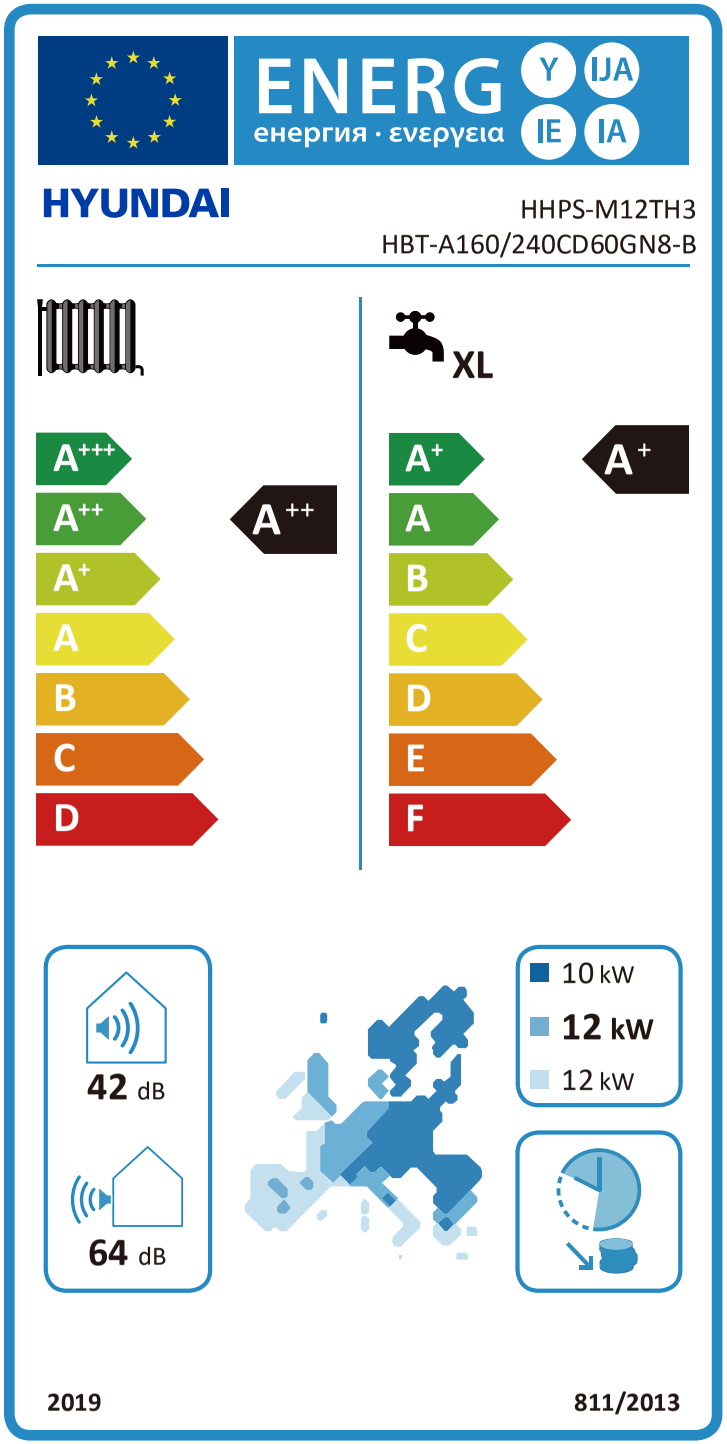
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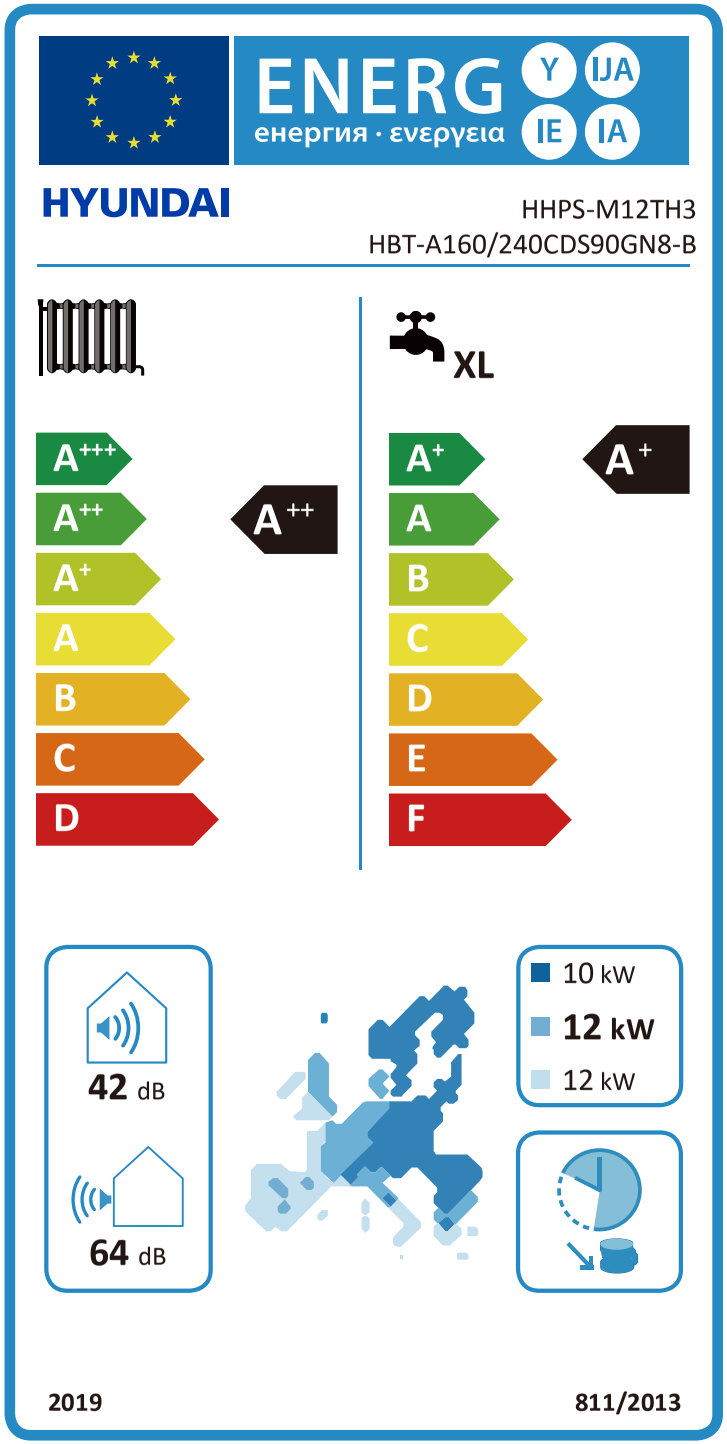
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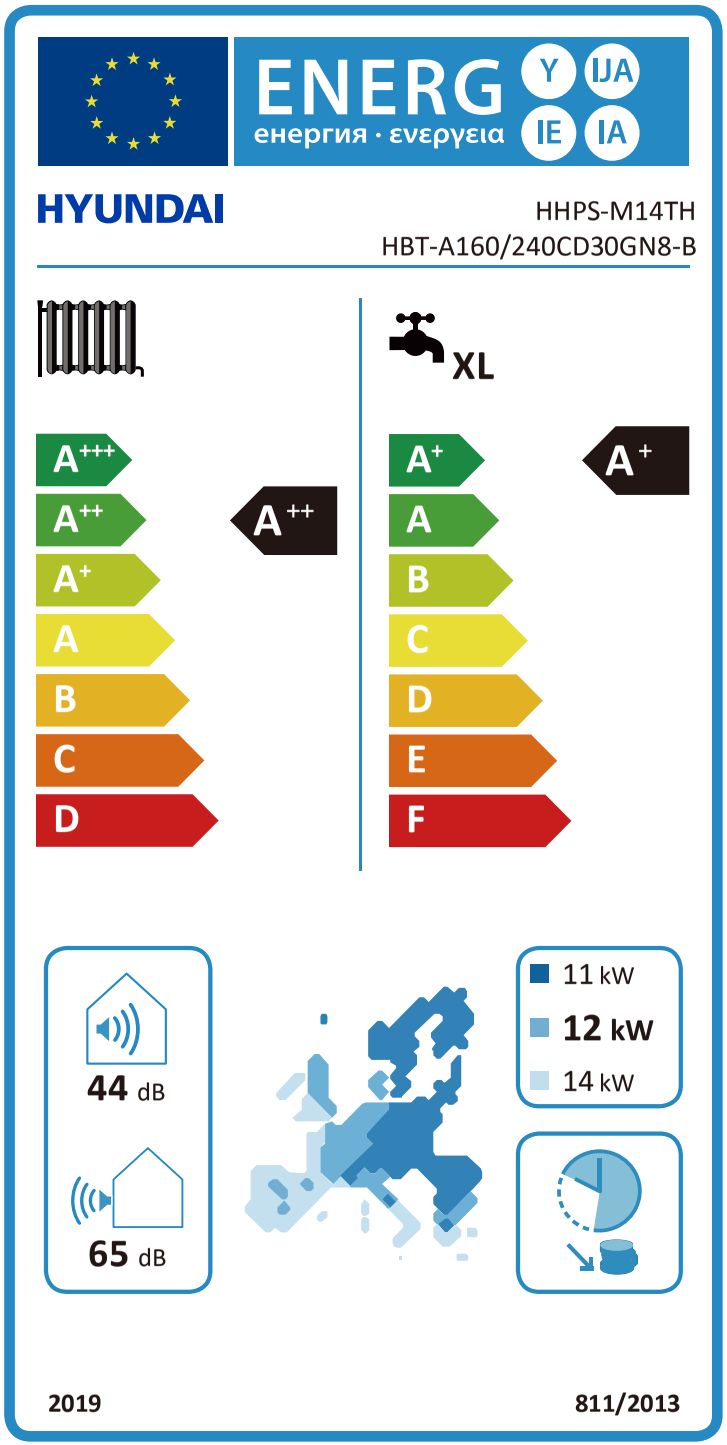
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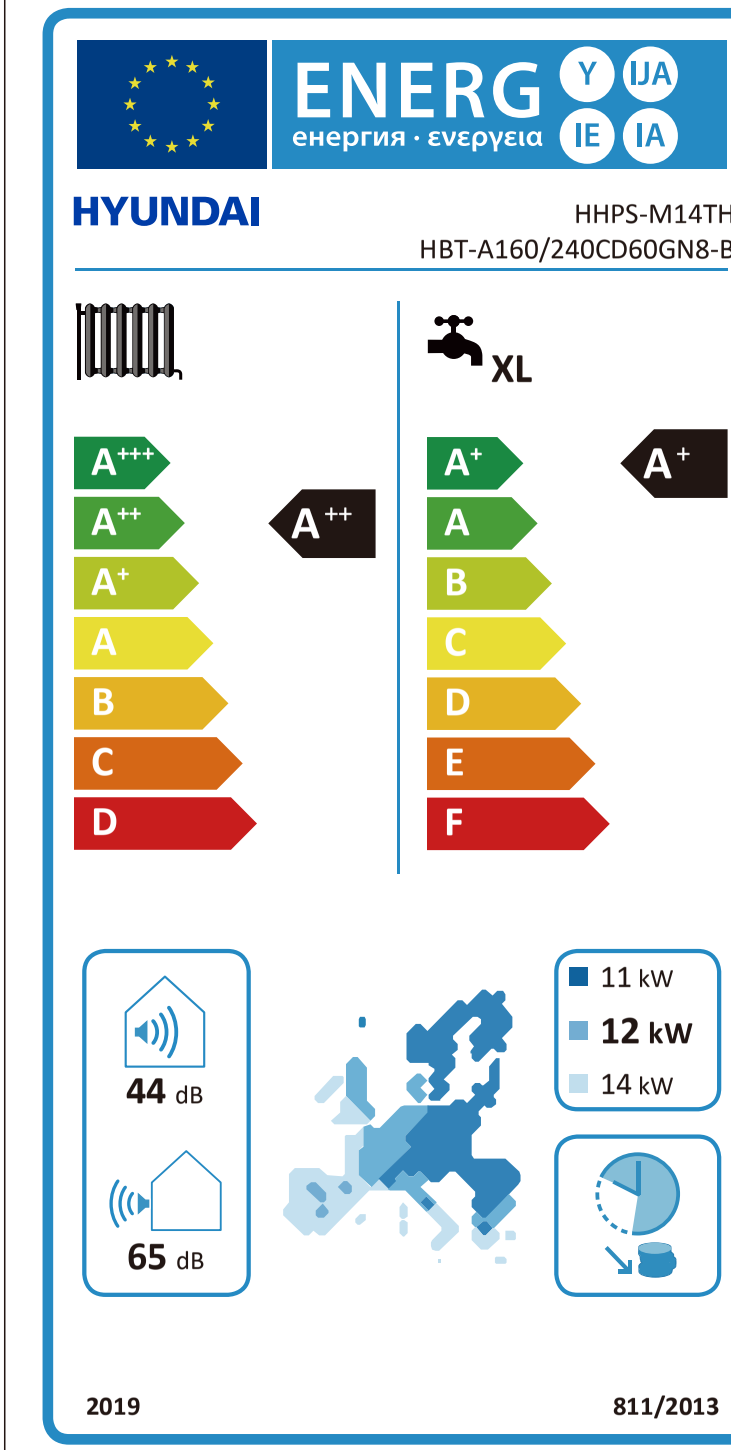
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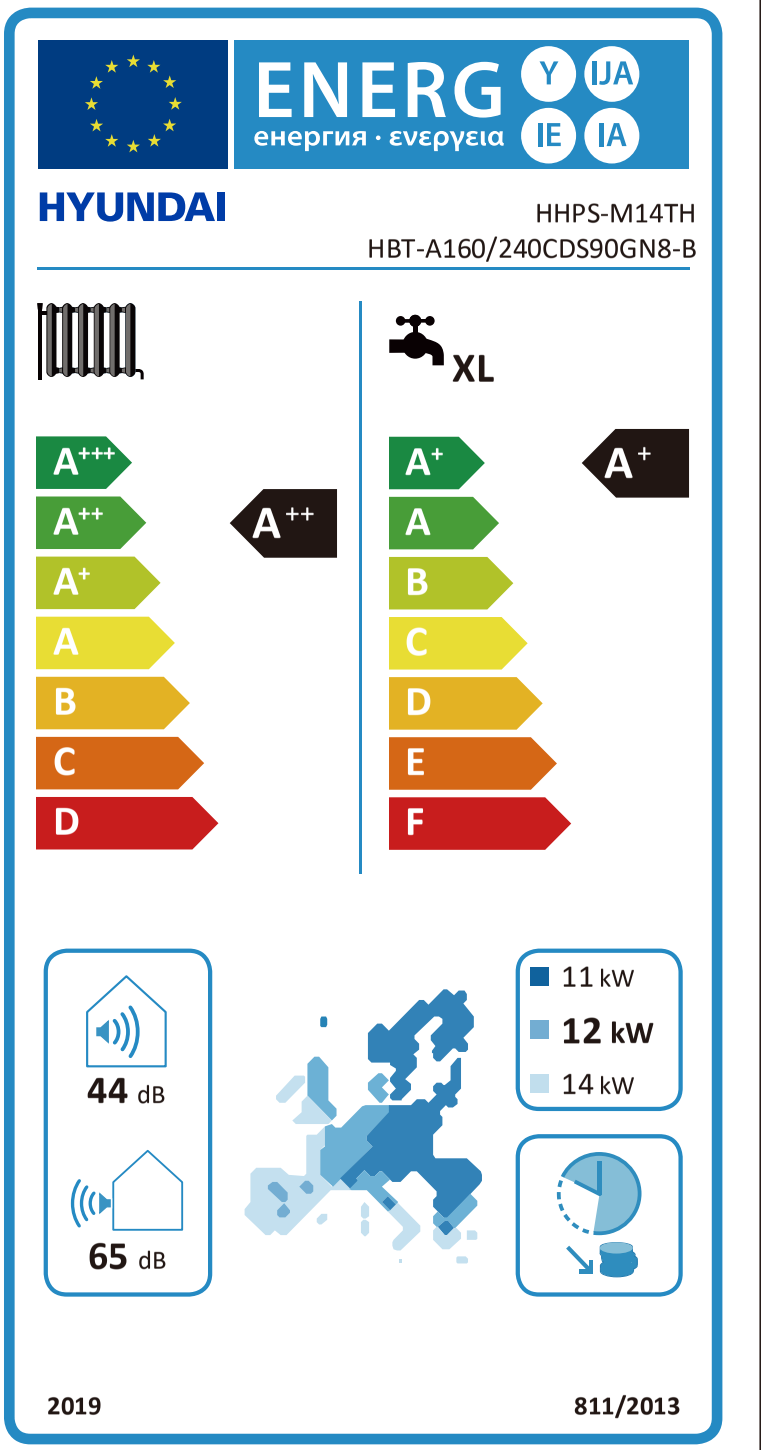
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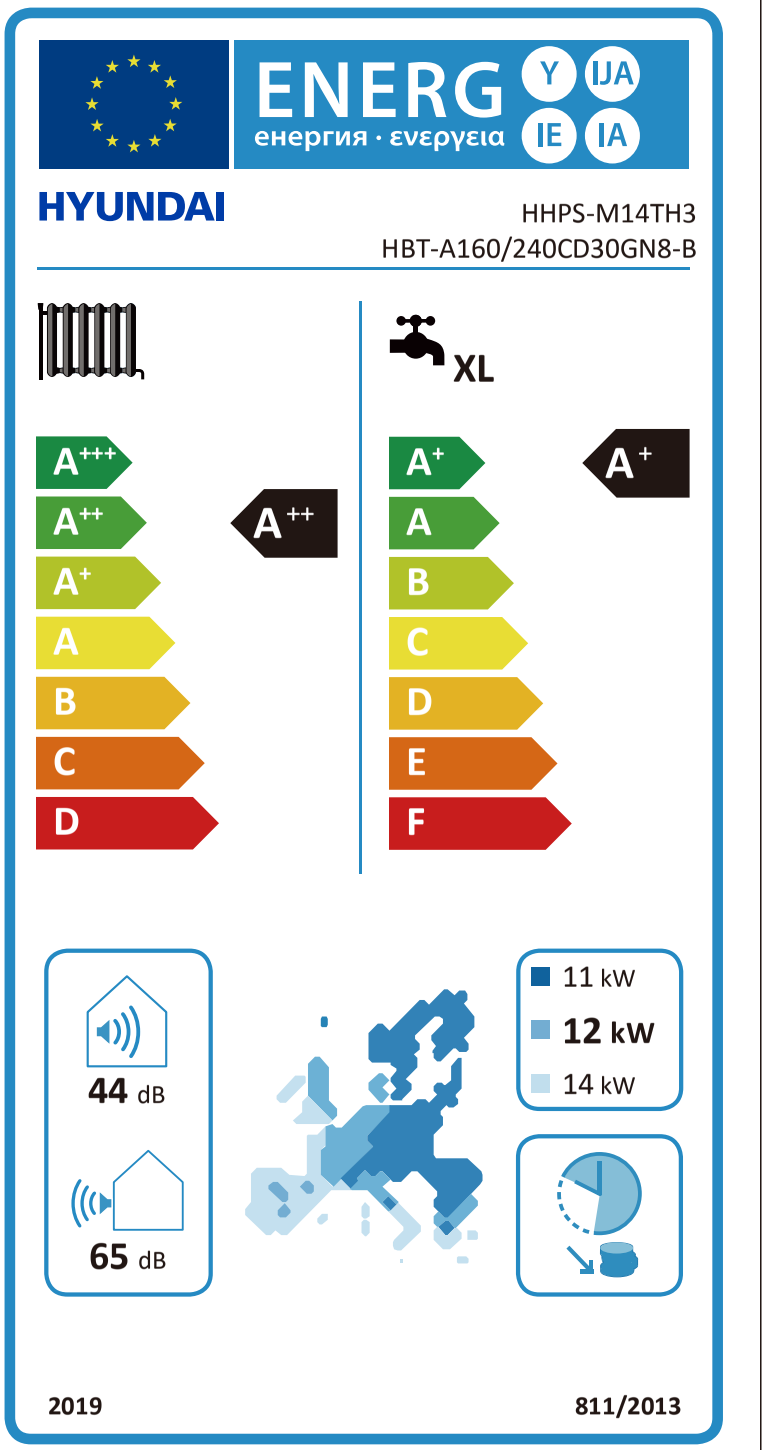
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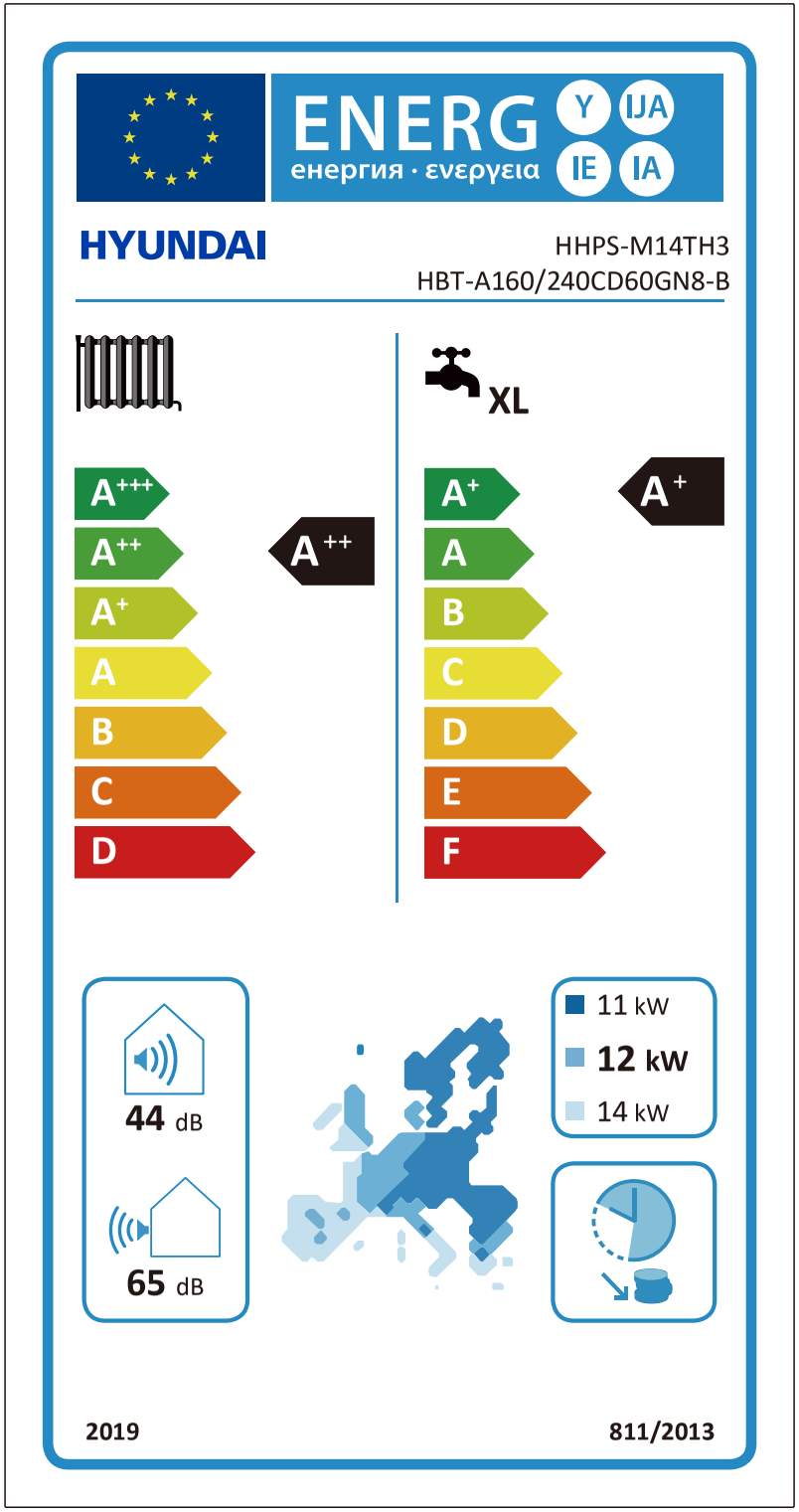
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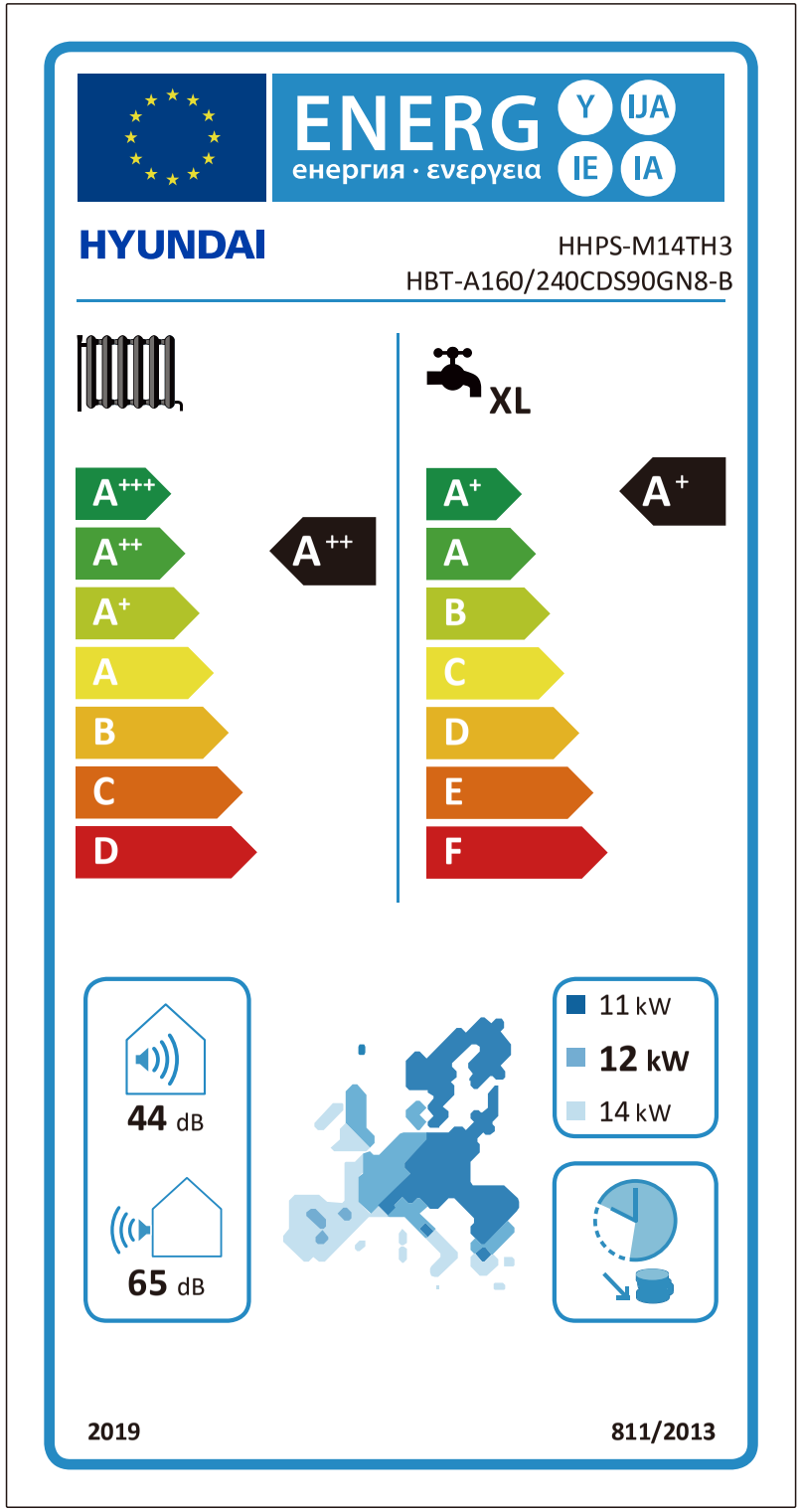
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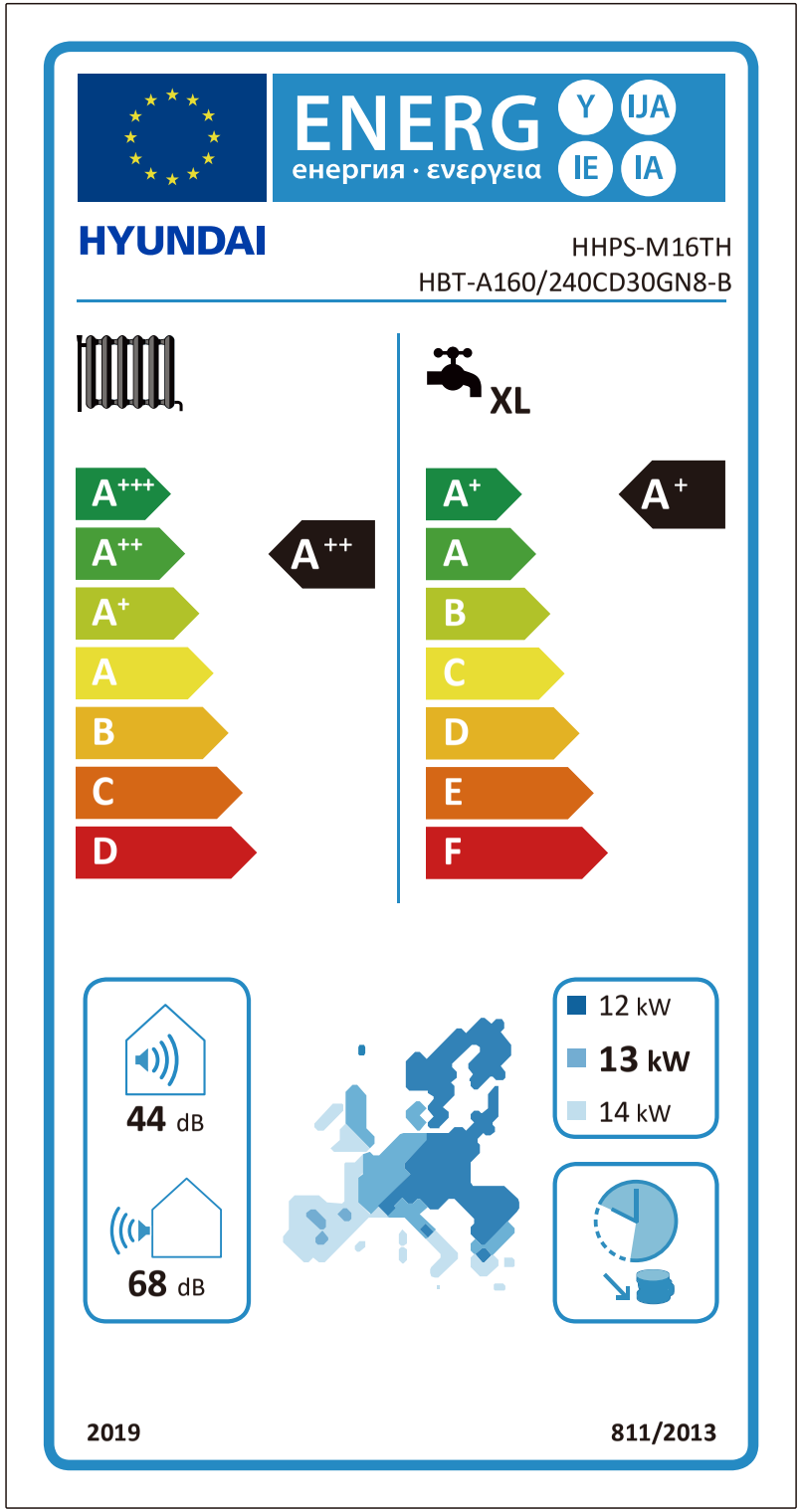
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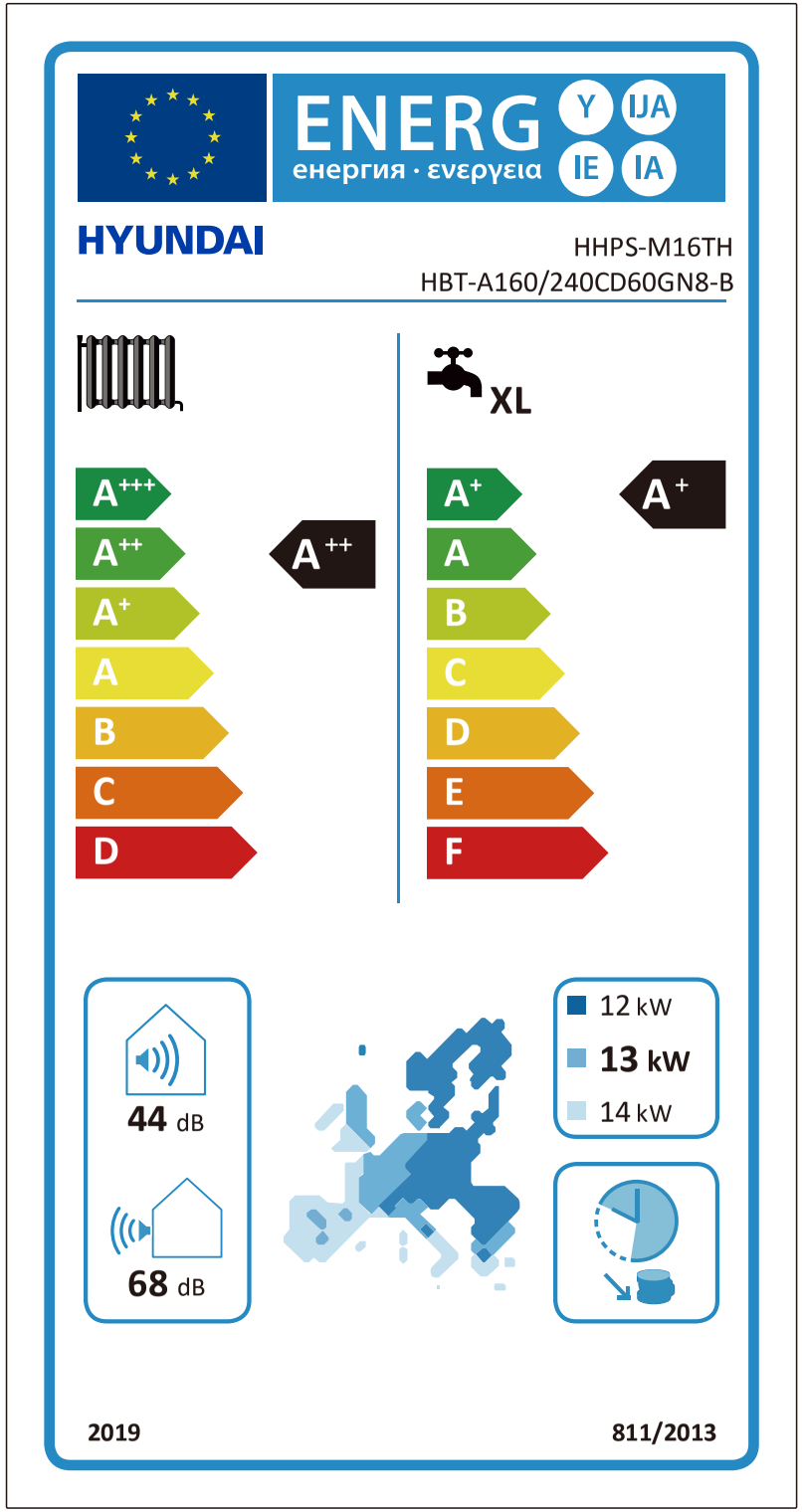
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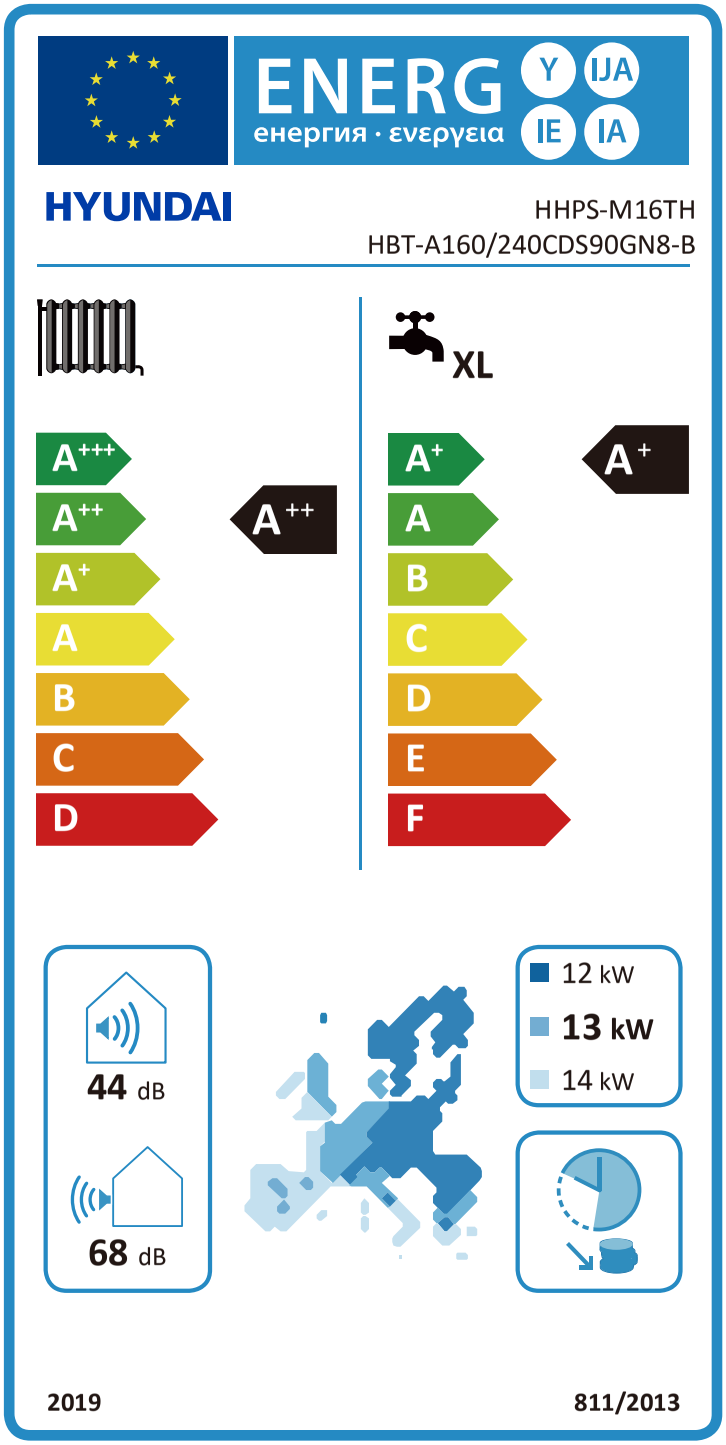
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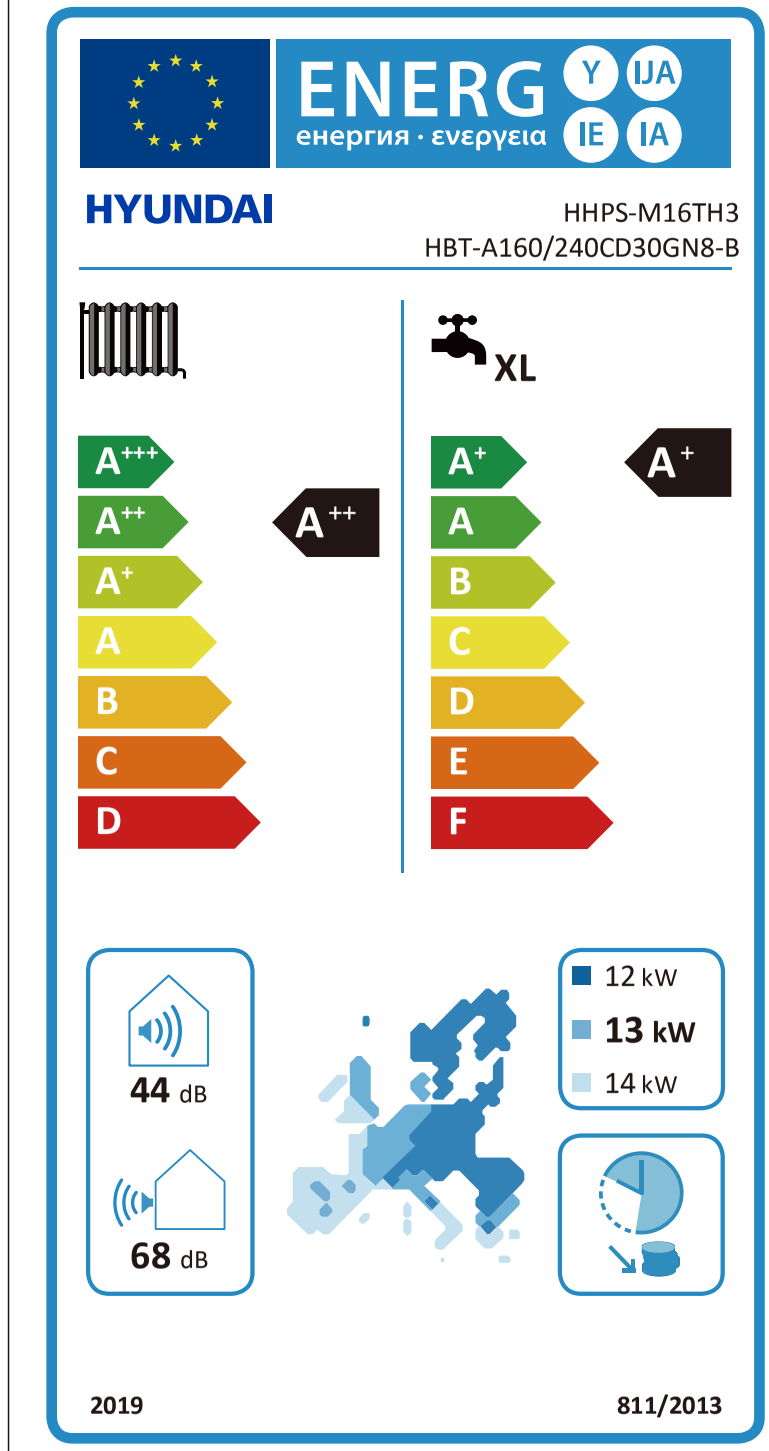
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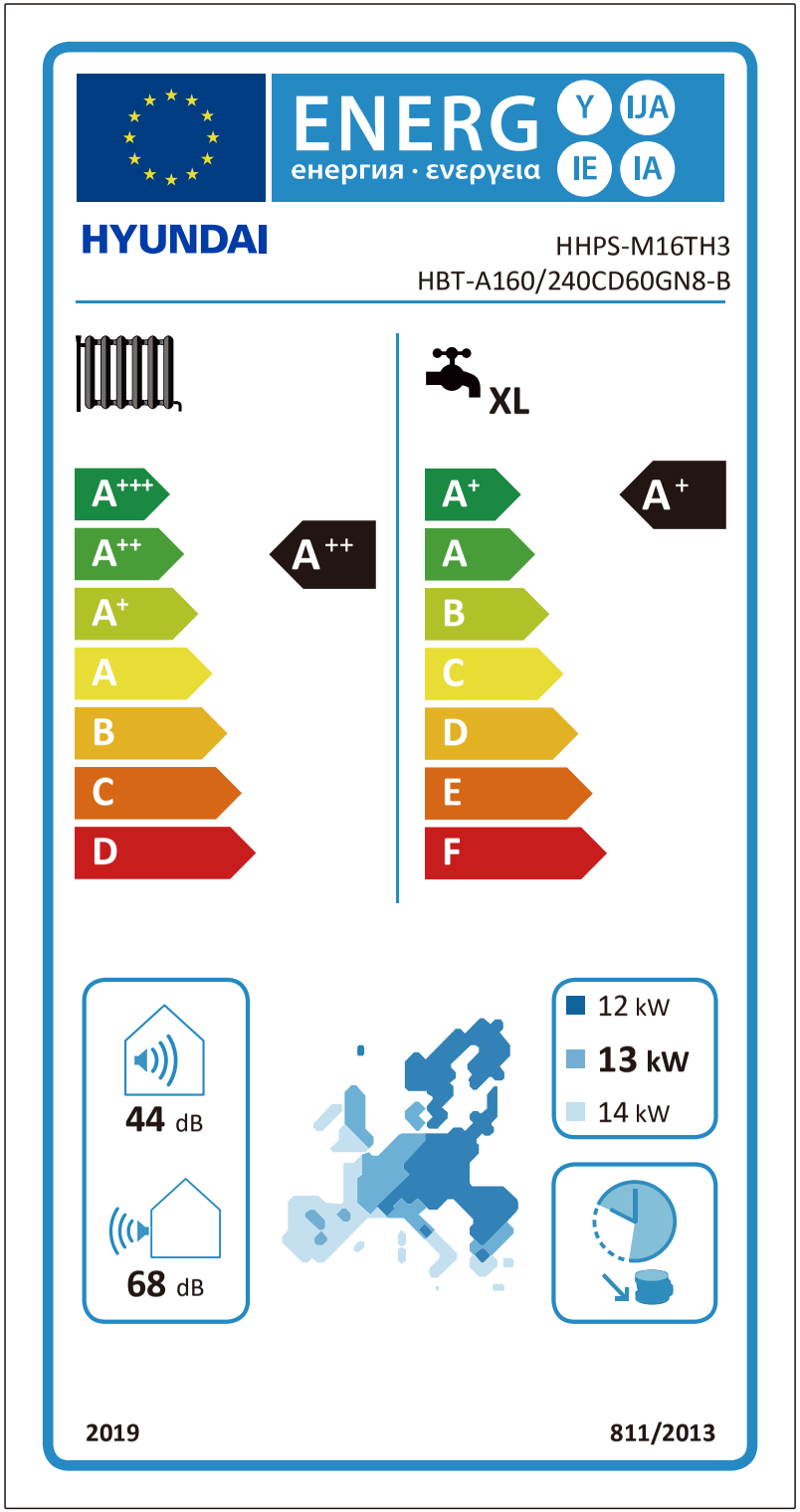
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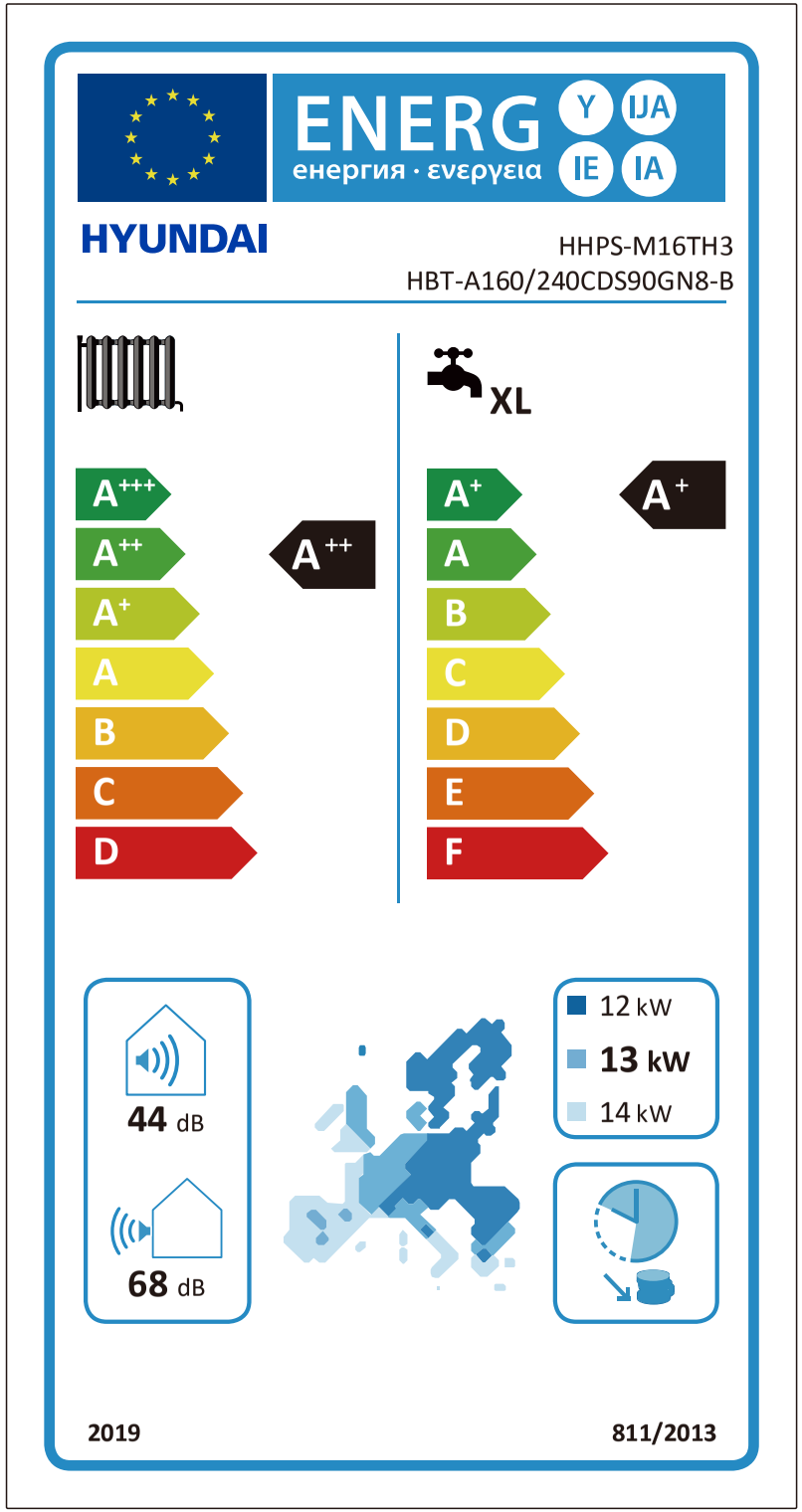
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2019
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Heat pump space heating		For medium - temperature application											
Outdoor unit	Indoor unit	Energy efficiency class	Indoor unit sound power	Outdoor unit sound power	average climate			colder 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
HHPS-M4TH	HB-A60/C***GN8-B	A++	38	56	4.4	129.5	2744	3.4	102.1	3158	5.0	163.1	1614
	HBT-A100/190CD***GN8-B	A++	38	56	4.4	129.5	2744	3.4	102.1	3158	5.0	163.1	1614
	HBT-A100/240CD***GN8-B	A++	38	56	4.4	129.5	2744	3.4	102.1	3158	5.0	163.1	1614
HHPS-M6TH	HB-A60/C***GN8-B	A++	38	58	5.7	137.9	3345	4.3	111.1	3680	5.1	165.4	1634
	HBT-A100/190CD***GN8-B	A++	38	58	5.7	137.9	3345	4.3	111.1	3680	5.1	165.4	1634
	HBT-A100/240CD***GN8-B	A++	38	58	5.7	137.9	3345	4.3	111.1	3680	5.1	165.4	1634
HHPS-M8TH	HB-A100/C***GN8-B	A++	42	59	6.6	131.5	4056	5.8	112.1	4948	8.37	176.9	2485
	HBT-A100/190CD***GN8-B	A++	40	59	6.6	131.5	4056	5.8	112.1	4948	8.37	176.9	2485
	HBT-A100/240CD***GN8-B	A++	40	59	6.6	131.5	4056	5.8	112.1	4948	8.37	176.9	2485
HHPS-M10TH	HB-A100/C***GN8-B	A++	42	60	7.7	136.6	4539	6.7	116.5	5539	8.6	180.3	2496
	HBT-A100/190CD***GN8-B	A++	40	60	7.7	136.6	4539	6.7	116.5	5539	8.6	180.3	2496
	HBT-A100/240CD***GN8-B	A++	40	60	7.7	136.6	4539	6.7	116.5	5539	8.6	180.3	2496
HHPS-M12TH	HB-A160/C***GN8-B	A++	43	64	11.6	135.1	6927	10.3	117.8	8419	12.5	174.0	3776
	HBT-A160/240CD***GN8-B	A++	42	64	11.6	135.1	6927	10.3	117.8	8419	12.5	174.0	3776
HHPS-M12TH3	HB-A160/C***GN8-B	A++	43	64	11.6	135.1	6928	10.3	117.7	8420	12.5	173.8	3780
	HBT-A160/240CD***GN8-B	A++	42	64	11.6	135.1	6928	10.3	117.7	8420	12.5	173.8	3780
HHPS-M14TH	HB-A160/C***GN8-B	A++	43	65	12.1	135.6	7202	11.0	118.9	8866	14.17	174.9	4258
	HBT-A160/240CD***GN8-B	A++	44	65	12.1	135.6	7202	11.0	118.9	8866	14.17	174.9	4258
HHPS-M14TH3	HB-A160/C***GN8-B	A++	43	65	12.1	135.6	7203	11.0	118.9	8867	14.17	174.7	4262
	HBT-A160/240CD***GN8-B	A++	44	65	12.1	135.6	7203	11.0	118.9	8867	14.17	174.7	4262
HHPS-M16TH	HB-A160/C***GN8-B	A++	43	68	13.0	133.3	7895	11.8	121.8	9309	14.17	176.0	4231
	HBT-A160/240CD***GN8-B	A++	44	68	13.0	133.3	7895	11.8	121.8	9309	14.17	176.0	4231
HHPS-M16TH3	HB-A160/C***GN8-B	A++	43	68	13.0	133.2	7896	11.8	121.8	9310	14.17	175.8	4236
	HBT-A160/240CD***GN8-B	A++	44	68	13.0	133.2	7896	11.8	121.8	9310	14.17	175.8	4236

Heat pump space heating		For low - temperature appl ication											
Outdoor unit	Indoor unit	Energy efficiency class	Indoor unit sound power	Outdoor unit sound power	average climate			colder climate			warmer climate		
					Rated heat output	Seasonal space heating energy efficiency	For space heating,annual energy consumption	Rated heat output	Seasonal space heating energy efficiency	For space heating,annual energy consumption	Rated heat output	Seasonal space heating energy efficiency	For space heating,annual energy consumption
		-	dB	dB	kW	%	kWh	kW	%	kWh	kW	%	kWh
HHPS-M4TH	HB-A60/C***GN8-B	A+++	38	56	5.5	191.0	2351	4.6	159.5	2769	5.5	255.4	1146
	HBT-A100/190CD***GN8-B	A+++	38	56	5.5	191.0	2351	4.6	159.5	2769	5.5	255.4	1146
	HBT-A100/240CD***GN8-B	A+++	38	56	5.5	191.0	2351	4.6	159.5	2769	5.5	255.4	1146
HHPS-M6TH	HB-A60/C***GN8-B	A+++	38	58	6.8	195.0	2845	5.6	165.3	3300	6.1	259.8	1244
	HBT-A100/190CD***GN8-B	A+++	38	58	6.8	195.0	2845	5.6	165.3	3300	6.1	259.8	1244
	HBT-A100/240CD***GN8-B	A+++	38	58	6.8	195.0	2845	5.6	165.3	3300	6.1	259.8	1244
HHPS-M8TH	HB-A100/C***GN8-B	A+++	42	59	8.1	205.6	3218	7.0	170.0	3976	8.1	276.6	1551
	HBT-A100/190CD***GN8-B	A+++	40	59	8.1	205.6	3218	7.0	170.0	3976	8.1	276.6	1551
	HBT-A100/240CD***GN8-B	A+++	40	59	8.1	205.6	3218	7.0	170.0	3976	8.1	276.6	1551
HHPS-M10TH	HB-A100/C***GN8-B	A+++	42	60	9.2	204.8	3644	7.7	169.8	4423	8.6	280.5	1617
	HBT-A100/190CD***GN8-B	A+++	40	60	9.2	204.8	3644	7.7	169.8	4423	8.6	280.5	1617
	HBT-A100/240CD***GN8-B	A+++	40	60	9.2	204.8	3644	7.7	169.8	4423	8.6	280.5	1617
HHPS-M12TH	HB-A160/C***GN8-B	A+++	43	64	12.0	189.4	5152	11.4	160.2	6870	11.1	256.1	2292
	HBT-A160/240CD***GN8-B	A+++	42	64	12.0	189.4	5152	11.4	160.2	6870	11.1	256.1	2292
HHPS-M12TH3	HB-A160/C***GN8-B	A+++	43	64	12.0	189.3	5153	11.4	160.2	6871	11.1	255.6	2296
	HBT-A160/240CD***GN8-B	A+++	42	64	12.0	189.3	5153	11.4	160.2	6871	11.1	255.6	2296
HHPS-M14TH	HB-A160/C***GN8-B	A+++	43	65	13.7	185.7	6012	12.6	159.6	7667	12.1	260.3	2457
	HBT-A160/240CD***GN8-B	A+++	44	65	13.7	185.7	6012	12.6	159.6	7667	12.1	260.3	2457
HHPS-M14TH3	HB-A160/C***GN8-B	A+++	43	65	13.7	185.6	6013	12.6	159.6	7667	12.1	259.8	2462
	HBT-A160/240CD***GN8-B	A+++	44	65	13.7	185.6	6013	12.6	159.6	7667	12.1	259.8	2462
HHPS-M16TH	HB-A160/C***GN8-B	A+++	43	68	15.2	181.7	6804	13.7	157.8	8431	13.1	248.5	2781
	HBT-A160/240CD***GN8-B	A+++	44	68	15.2	181.7	6804	13.7	157.8	8431	13.1	248.5	2781
HHPS-M16TH3	HB-A160/C***GN8-B	A+++	43	68	15.2	181.6	6805	13.7	157.8	8431	13.1	248.1	2786
	HBT-A160/240CD***GN8-B	A+++	44	68	15.2	181.6	6805	13.7	157.8	8431	13.1	248.1	2786

Product fiche 1

Heat pump space heating		Outdoor	HHPS-M4TH	HHPS-M6TH	HHPS-M8TH	HHPS-M10TH	HHPS-M12TH
		Indoor	HB-A60/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A60/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A100/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A100/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B
Indoor unit sound power (*)		dB	38[a)] /38[b)]	38[a)] /38[b)]	42[a)] /40[b)]	42[a)] /40[b)]	43[a)] /42[b)]
Outdoor unit sound power (*)	Average climate low temperature application	dB	56	58	59	60	64
	Average climate medium temperature application	dB	56	58	59	60	64
Capicity of the back-up heater integrated in the unit	Psup back-up heater (optional)	[kW]	3/6/9	3/6/9	3/6/9	3/6/9	3/6/9
Space heating	Energy efficiency class 35°C (Low temp. app.)	-	A+++	A+++	A+++	A+++	A+++
Space heating	Energy efficiency class 55°C (Medium temp. app.)	-	A++	A++	A++	A++	A++
Average climate (Design temperature = –10°C)							
Space heating 35°C	Prated (declared heating capacity) @ –10°C	[kW]	5.5	6.8	8.1	9.2	12.0
	Seasonal space heating efficiency (ηs)	[%]	191.0	195.0	205.6	204.8	189.4
	Annual energy consumption	[kWh]	2,351	2,845	3,218	3,644	5,152
Space heating 55°C	Prated (declared heating capacity) @ –10°C	[kW]	4.4	5.7	6.6	7.7	11.6
	Seasonal space heating efficiency (ηs)	[%]	129.5	137.9	131.5	136.6	135.1
	Annual energy consumption	[kWh]	2,744	3,345	4,056	4,539	6,927
Part load conditions space heating average climate low temperature application							
(A) condition (-7°C)	Pdh (declared heating capacity)	[kW]	4.88	6.03	7.18	8.10	10.61
	COPd (declared COP)	-	3.19	3.09	3.35	3.23	2.88
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	3.05	3.88	4.65	5.18	6.69
	COPd (declared COP)	-	4.78	4.85	5.09	5.01	4.65
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	1.93	2.39	2.90	3.32	4.44
	COPd (declared COP)	-	6.13	6.63	6.82	7.08	6.62
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	1.48	1.39	1.63	1.65	3.74
	COPd (declared COP)	-	8.05	7.93	8.35	8.58	8.47
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(E) Tol (temperature operating limit)	Tol (temperature operating limit)	[°C]	-10.00	-10.00	-10.00	-10.00	-10.00
	Pdh (declared heating capacity)	[kW]	4.41	5.36	6.44	7.40	10.74
	COPd (declared COP)	-	2.86	2.76	3.04	2.96	2.77
	WTOL (Heating water Operation Limit)	[°C]	65	65	65	65	65

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

Product fiche 1

Heat pump space heating		Outdoor	HHPS-M14TH	HHPS-M16TH	HHPS-M12TH3	HHPS-M14TH3	HHPS-M16TH3
		Indoor	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B
Indoor unit sound power (*)		dB	43[a)] /44[b)]	43[a)] /44[b)]	43[a)] /42[b)]	43[a)] /44[b)]	43[a)] /44[b)]
Outdoor unit sound power (*)	Average climate low temperature application	dB	65	68	64	65	68
	Average climate medium temperature application	dB	65	68	64	65	68
Capicity of the back-up heater integrated in the unit	Psup back-up heater (optional)	[kW]	3/6/9	3/6/9	3/6/9	3/6/9	3/6/9
Space heating	Energy efficiency class 35°C (Low temp. app.)	-	A+++	A+++	A+++	A+++	A+++
Space heating	Energy efficiency class 55°C (Medium temp. app.)	-	A++	A++	A++	A++	A++
Average climate (Design temperature = –10°C)							
Space heating 35°C	Prated (declared heating capacity) @ –10°C	[kW]	13.7	15.2	12.0	13.7	15.2
	Seasonal space heating efficiency (ηs)	[%]	185.7	181.7	189.3	185.6	181.6
	Annual energy consumption	[kWh]	6,012	6,804	5,153	6,013	6,805
Space heating 55°C	Prated (declared heating capacity) @ –10°C	[kW]	12.1	13.0	11.6	12.1	13.0
	Seasonal space heating efficiency (ηs)	[%]	135.6	133.3	135.1	135.6	133.2
	Annual energy consumption	[kWh]	7,202	7,895	6,928	7,203	7,896
Part load conditions space heating average climate low temperature application							
(A) condition (-7°C)	Pdh (declared heating capacity)	[kW]	12.14	13.45	10.61	12.14	13.45
	COPd (declared COP)	-	2.79	2.72	2.88	2.79	2.72
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	7.94	8.56	6.69	7.94	8.56
	COPd (declared COP)	-	4.52	4.41	4.65	4.52	4.41
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	5.20	5.70	4.44	5.20	5.70
	COPd (declared COP)	-	6.68	6.56	6.62	6.68	6.56
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	3.75	3.78	3.74	3.75	3.78
	COPd (declared COP)	-	8.52	8.51	8.47	8.52	8.51
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(E) Tol (temperature operating limit)	Tol (temperature operating limit)	[°C]	-10.00	-10.00	-10.00	-10.00	-10.00
	Pdh (declared heating capacity)	[kW]	11.47	12.52	10.74	11.47	12.52
	COPd (declared COP)	-	2.59	2.48	2.77	2.59	2.48
	WTOL (Heating water Operation Limit)	[°C]	65	65	65	65	65

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

Product fiche 2

Heat pump space heating		Outdoor	HHPS-M4TH	HHPS-M6TH	HHPS-M8TH	HHPS-M10TH	HHPS-M12TH
		Indoor	HB-A60/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A60/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A100/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A100/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B
(F) Tbivalent temperature	Tbiv	[°C]	-7.00	-7.00	-7.00	-7.00	-7.00
	Pdh (declared heating capacity)	[kW]	4.88	6.03	7.18	8.10	10.61
	COPd (declared COP)	-	3.19	3.09	3.35	3.23	2.88
Supplementary capacity at P_design	Psup (@Tdesignh: –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
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	2.38	3.12	3.75	4.28	6.52
	COPd (declared COP)	-	3.30	3.51	3.30	3.42	3.44
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	2.94	2.08	2.42	2.77	4.36
	COPd (declared COP)	-	4.41	4.54	4.34	4.52	4.59
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	1.32	1.28	1.39	1.58	3.29
	COPd (declared COP)	-	5.66	5.59	5.33	5.68	6.05
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(E) Tol (temperature operating limit)	Tol (temperature operating limit)	[°C]	-10.00	-10.00	-10.00	-10.00	-10.00
	Pdh (declared heating capacity)	[kW]	3.42	4.52	4.90	5.38	9.10
	COPd (declared COP)	-	1.91	1.91	1.84	1.83	1.79
	WTOL (Heating water Operation Limit)	[°C]	65	65	65	65	65
(F) Tbivalent temperature	Tbiv	[°C]	-7.00	-7.00	-7.00	-7.00	-7.00
	Pdh (declared heating capacity)	[kW]	3.89	5.04	5.84	6.78	10.24
	COPd (declared COP)	-	2.17	2.17	2.16	2.24	2.01
Supplementary capacity at P_design	Psup (@Tdesignh: –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 (ηs)	[%]	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	HHPS-M14TH	HHPS-M16TH	HHPS-M12TH3	HHPS-M14TH3	HHPS-M16TH3
		Indoor	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B
(F) Tbivalent temperature	Tbiv	[°C]	-7.00	-7.00	-7.00	-7.00	-7.00
	Pdh (declared heating capacity)	[kW]	12.14	13.45	10.61	12.14	13.45
	COPd (declared COP)	-	2.79	2.72	2.88	2.79	2.72
Supplementary capacity at P_design	Psup (@Tdesignh: –10°C)	[kW]	2.23	2.68	1.26	2.23	2.68
Part load conditions space heating average climate medium temperature application							
(A) condition (-7°C)	Pdh (declared heating capacity)	[kW]	10.68	11.52	10.24	10.68	11.52
	COPd (declared COP)	-	2.01	1.99	2.01	2.01	1.99
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	6.86	7.18	6.52	6.86	7.18
	COPd (declared COP)	-	3.43	3.34	3.44	3.43	3.34
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	4.63	4.67	4.36	4.63	4.67
	COPd (declared COP)	-	4.66	4.61	4.59	4.66	4.61
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	3.31	3.31	3.29	3.31	3.31
	COPd (declared COP)	-	6.13	6.07	6.05	6.13	6.07
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(E) Tol (temperature operating limit)	Tol (temperature operating limit)	[°C]	-10.00	-10.00	-10.00	-10.00	-10.00
	Pdh (declared heating capacity)	[kW]	9.19	10.33	9.10	9.19	10.33
	COPd (declared COP)	-	1.76	1.80	1.79	1.76	1.80
	WTOL (Heating water Operation Limit)	[°C]	65	65	65	65	65
(F) Tbivalent temperature	Tbiv	[°C]	-7.00	-7.00	-7.00	-7.00	-7.00
	Pdh (declared heating capacity)	[kW]	10.68	11.52	10.24	10.68	11.52
	COPd (declared COP)	-	2.01	1.99	2.01	2.01	1.99
Supplementary capacity at P_design	Psup (@Tdesignh: –10°C)	[kW]	2.91	2.67	2.50	2.91	2.67
Colder climate (Design temperature = –22°C)							
Space heating 35°C	Prated (declared heating capacity) @ –22°C	[kW]	12.6	13.7	11.4	12.6	13.7
	Seasonal space heating efficiency (ηs)	[%]	159.6	157.8	160.2	159.6	157.8
	Annual energy consumption	[kWh]	7,667	8,431	6,871	7,667	8,431

Product fiche 3

Heat pump space heating		Outdoor	HHPS-M4TH	HHPS-M6TH	HHPS-M8TH	HHPS-M10TH	HHPS-M12TH
		Indoor	HB-A60/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A60/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A100/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A100/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B
Space heating 55°C	Prated (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
	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]	3.72	4.59	5.69	6.32	9.28
	COPd (declared COP)	-	2.57	2.53	2.83	2.64	2.59
Supplementary capacity at P_design	Psup (@Tdesignh: –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	HHPS-M14TH	HHPS-M16TH	HHPS-M12TH3	HHPS-M14TH3	HHPS-M16TH3
		Indoor	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B
Space heating 55°C	Prated (declared heating capacity) @ –22°C	[kW]	11.0	11.8	10.3	11.0	11.8
	Seasonal space heating efficiency (ηs)	[%]	118.9	121.8	117.7	118.9	121.8
	Annual energy consumption	[kWh]	8,866	9,309	8,420	8,867	9,310
Part load conditions space heating colder climate low temperature application							
(A) condition (-7°C)	Pdh (declared heating capacity)	[kW]	7.96	8.31	7.05	7.96	8.31
	COPd (declared COP)	-	3.44	3.37	3.48	3.44	3.37
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	5.05	5.26	4.67	5.05	5.26
	COPd (declared COP)	-	4.92	4.86	4.96	4.92	4.86
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	3.15	3.62	3.14	3.15	3.62
	COPd (declared COP)	-	6.11	6.49	6.10	6.11	6.49
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	3.57	3.34	3.57	3.57	3.34
	COPd (declared COP)	-	7.82	7.40	7.87	7.82	7.40
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(E) Tol (temperature operating limit)	Tol (temperature operating limit)	[°C]	-22.00	-22.00	-22.00	-22.00	-22.00
	Pdh (declared heating capacity)	[kW]	7.57	8.88	7.01	7.57	8.88
	COPd (declared COP)	-	1.92	1.97	1.98	1.92	1.97
	WTOL (Heating water Operation Limit)	[°C]	65	65	65	65	65
(F) Tbivalent temperature	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	Psup (@Tdesignh: –22°C)	[kW]	5.03	4.82	4.40	5.03	4.82
Part load conditions space heating colder climate medium temperature application							
(A) condition (-7°C)	Pdh (declared heating capacity)	[kW]	6.89	7.64	6.63	6.89	7.64
	COPd (declared COP)	-	2.66	2.65	2.63	2.66	2.65
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90

Product fiche 4

Heat pump space heating		Outdoor	HHPS-M4TH	HHPS-M6TH	HHPS-M8TH	HHPS-M10TH	HHPS-M12TH
		Indoor	HB-A60/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A60/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A100/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A100/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B
(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
(C) condition (7°C)	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
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(D) condition (12°C)	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
(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]	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
(F) Tbivalent temperature	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
	COPd (declared COP)	-	1.74	1.86	1.90	2.00	1.84
Supplementary capacity at P_design	Psup (@Tdesignh: –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
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	3.56	3.93	5.22	5.52	7.14
	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	HHPS-M14TH	HHPS-M16TH	HHPS-M12TH3	HHPS-M14TH3	HHPS-M16TH3
		Indoor	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	4.32	4.42	4.06	4.32	4.42
	COPd (declared COP)	-	3.66	3.79	3.60	3.66	3.79
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	3.06	2.97	2.78	3.06	2.97
	COPd (declared COP)	-	4.72	4.81	4.54	4.72	4.81
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	3.33	3.43	3.33	3.33	3.43
	COPd (declared COP)	-	6.25	6.29	6.25	6.25	6.29
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(E) Tol (temperature operating limit)	Tol (temperature operating limit)	[°C]	-22.00	-22.00	-22.00	-22.00	-22.00
	Pdh (declared heating capacity)	[kW]	4.20	5.21	4.19	4.20	5.21
	COPd (declared COP)	-	1.13	1.23	1.13	1.13	1.23
	WTOL (Heating water Operation Limit)	[°C]	65	65	65	65	65
(F) Tbivalent temperature	Tbiv	[°C]	-15.00	-15.00	-15.00	-15.00	-15.00
	Pdh (declared heating capacity)	[kW]	8.94	9.61	8.41	8.94	9.61
	COPd (declared COP)	-	1.79	1.86	1.84	1.79	1.86
Supplementary capacity at P_design	Psup (@Tdesignh: –22°C)	[kW]	6.76	6.59	6.12	6.76	6.59
Warmer climate (Design temperature = 2°C)							
Space heating 35°C	Prated (declared heating capacity) @ 2°C	[kW]	12.1	13.1	11.1	12.1	13.1
	Seasonal space heating efficiency (ηs)	[%]	260.3	248.5	255.6	259.8	248.1
	Annual energy consumption	[kWh]	2,457	2,781	2,296	2,462	2,786
Space heating 55°C	Prated (declared heating capacity) @ 2°C	[kW]	14.17	14.17	12.5	14.17	14.17
	Seasonal space heating efficiency (ηs)	[%]	174.9	176.0	173.8	174.7	175.8
	Annual energy consumption	[kWh]	4,258	4,231	3,780	4,231	4,236
Part load conditions space heating warmer climate low temperature application							
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	12.04	13.10	11.10	12.04	13.10
	COPd (declared COP)	-	3.44	3.35	3.59	3.44	3.35
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	7.78	8.41	7.14	7.78	8.41
	COPd (declared COP)	-	5.84	5.36	5.87	5.84	5.36
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90

Product fiche 5

Heat pump space heating		Outdoor	HHPS-M4TH	HHPS-M6TH	HHPS-M8TH	HHPS-M10TH	HHPS-M12TH
		Indoor	HB-A60/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A60/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A100/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A100/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	1.63	1.79	2.62	2.62	3.55
	COPd (declared COP)	-	7.91	8.20	9.23	9.04	7.94
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(E) Tol (temperature operating limit)	Tol (temperature operating limit)	[°C]	2.00	2.00	2.00	2.00	2.00
	Pdh (declared heating capacity)	[kW]	5.34	5.93	7.56	8.44	11.10
	COPd (declared COP)	-	3.94	3.91	3.98	3.84	3.59
	WTOL (Heating water Operation Limit)	[°C]	65	65	65	65	65
(F) Tbivalent temperature	Tbiv	[°C]	7.00	7.00	7.00	7.00	7.00
	Pdh (declared heating capacity)	[kW]	3.56	3.93	5.22	5.52	7.14
	COPd (declared COP)	-	5.92	5.89	6.26	6.18	5.87
Supplementary capacity at P_design	Psup (@Tdesignh: 2°C)	[kW]	0.18	0.18	0.55	0.14	0.00
Part load conditions space heating warmer climate medium temperature application							
(B) condition (2°C)	Pdh (declared heating capacity)	[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
(C) condition (7°C)	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
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(D) condition (12°C)	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
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(E) Tol (temperature operating limit)	Tol (temperature operating limit)	[°C]	2.00	2.00	2.00	2.00	2.00
	Pdh (declared heating capacity)	[kW]	4.83	5.02	7.55	8.06	12.07
	COPd (declared COP)	-	2.51	2.48	2.59	2.59	2.31
	WTOL (Heating water Operation Limit)	[°C]	65	65	65	65	65
(F) Tbivalent temperature	Tbiv	[°C]	7.00	7.00	7.00	7.00	7.00
	Pdh (declared heating capacity)	[kW]	3.22	3.31	5.38	5.54	8.04
	COPd (declared COP)	-	3.68	3.67	4.01	4.10	3.86
Supplementary capacity at P_design	Psup (@Tdesignh: 2°C)	[kW]	0.18	0.12	0.82	0.48	0.43

Product fiche 5

Heat pump space heating		Outdoor	HHPS-M14TH	HHPS-M16TH	HHPS-M12TH3	HHPS-M14TH3	HHPS-M16TH3
		Indoor	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	3.75	3.87	3.55	3.75	3.87
	COPd (declared COP)	-	8.25	8.11	7.94	8.25	8.11
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(E) Tol (temperature operating limit)	Tol (temperature operating limit)	[°C]	2.00	2.00	2.00	2.00	2.00
	Pdh (declared heating capacity)	[kW]	12.04	13.10	11.10	12.04	13.10
	COPd (declared COP)	-	3.44	3.35	3.59	3.44	3.35
	WTOL (Heating water Operation Limit)	[°C]	65	65	65	65	65
(F) Tbivalent temperature	Tbiv	[°C]	7.00	7.00	7.00	7.00	7.00
	Pdh (declared heating capacity)	[kW]	7.78	8.41	7.14	7.78	8.41
	COPd (declared COP)	-	5.84	5.36	5.87	5.84	5.36
Supplementary capacity at P_design	Psup (@Tdesignh: 2°C)	[kW]	0.00	0.00	0.00	0.00	0.00
Part load conditions space heating warmer climate medium temperature application							
(B) condition (2°C)	Pdh (declared heating capacity)	[kW]	13.04	13.38	12.07	13.04	13.38
	COPd (declared COP)	-	2.20	2.29	2.31	2.20	2.29
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(C) condition (7°C)	Pdh (declared heating capacity)	[kW]	9.11	9.11	8.04	9.11	9.11
	COPd (declared COP)	-	3.89	3.89	3.86	3.89	3.89
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(D) condition (12°C)	Pdh (declared heating capacity)	[kW]	4.08	4.06	3.75	4.08	4.06
	COPd (declared COP)	-	5.90	5.86	5.70	5.90	5.86
	Cdh(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(E) Tol (temperature operating limit)	Tol (temperature operating limit)	[°C]	2.00	2.00	2.00	2.00	2.00
	Pdh (declared heating capacity)	[kW]	13.04	13.38	12.07	13.04	13.38
	COPd (declared COP)	-	2.20	2.29	2.31	2.20	2.29
	WTOL (Heating water Operation Limit)	[°C]	65	65	65	65	65
(F) Tbivalent temperature	Tbiv	[°C]	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
	COPd (declared COP)	-	3.89	3.89	3.86	3.89	3.89
Supplementary capacity at P_design	Psup (@Tdesignh: 2°C)	[kW]	1.13	0.79	0.43	1.13	0.79

Product fiche 6

Heat pump space heating		Outdoor	HHPS-M4TH	HHPS-M6TH	HHPS-M8TH	HHPS-M10TH	HHPS-M12TH
		Indoor	HB-A60/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A60/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A100/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A100/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B
Product description	Air-to-water heat pump	Y/N	Yes	Yes	Yes	Yes	Yes
	Water-to-water heat pump	Y/N	No	No	No	No	No
	Brine-to-water heat pump	Y/N	No	No	No	No	No
	Low-temperature heat pump	Y/N	No	No	No	No	No
	Equipped with a supplementary heater	Y/N	Yes	Yes	Yes	Yes	Yes
	Heat pump combination heater	Y/N	Yes	Yes	Yes	Yes	Yes
Air to water unit	Rated airflow (outdoor)	[m^3/h]	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]	0.024	0.024	0.024	0.024	0.024
	Psb (Power consumption Standby mode)	[kW]	0.014	0.014	0.014	0.014	0.014
	Pck (Power crankcase heater mode)	[kW]	0.000	0.000	0.000	0.000	0.000
	Qelec (Daily electricity consumption)	[kWh]	/	/	/	/	/
	Qfuel (Daily fuel consumption)	[kWh]	/	/	/	/	/

Note:
Indoor unit type explanation:
Hydraulic module series
1) HB-A60/C***GN8-B includes the following type:
HB-A60/CGN8-B: without back-up heater.
HHPMD-M60THI3: with 3kW back-up heater and 1-Phase Source.
2).HB-A100/C***GN8-B includes the following type:
HB-A100/CGN8-B: without back-up heater.
HHPMD-M100THI3: with 3kW back-up heater and 1-Phase Source.
HB-A100/CDS90GN8-B: with 9kW back-up heater and 3-Phase Source.
3).HB-A160/C***GN8-B includes the following type:
HB-A160/CGN8-B: without back-up heater.
HHPMD-M160THI3: with 3kW back-up heater and 1-Phase Source.
HB-A160/CDS90GN8-B: with 9kW back-up heater and 3-Phase Source.

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

Product fiche 6

Heat pump space heating		Outdoor	HHPS-M14TH	HHPS-M16TH	HHPS-M12TH3	HHPS-M14TH3	HHPS-M16TH3
		Indoor	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B
Product description	Air-to-water heat pump	Y/N	Yes	Yes	Yes	Yes	Yes
	Water-to-water heat pump	Y/N	No	No	No	No	No
	Brine-to-water heat pump	Y/N	No	No	No	No	No
	Low-temperature heat pump	Y/N	No	No	No	No	No
	Equipped with a supplementary heater	Y/N	Yes	Yes	Yes	Yes	Yes
	Heat pump combination heater	Y/N	Yes	Yes	Yes	Yes	Yes
Air to water unit	Rated airflow (outdoor)	[m^3/h]	4060	4650	4060	4060	4650
Brine/water to water unit	Rated water/brine flow (outdoor H/E)	-	/	/	/	/	/
Other	Capacity control	-	Inverter	Inverter	Inverter	Inverter	Inverter
	Poff (Power consumption Off mode)	[kW]	0.014	0.014	0.020	0.020	0.020
	Pto (Power consumption Thermostat off mode)	[kW]	0.024	0.024	0.030	0.030	0.030
	Psb (Power consumption Standby mode)	[kW]	0.014	0.014	0.020	0.020	0.020
	Pck (Power crankcase heater mode)	[kW]	0.000	0.000	0.000	0.000	0.000
	Qelec (Daily electricity consumption)	[kWh]	/	/	/	/	/
	Qfuel (Daily fuel consumption)	[kWh]	/	/	/	/	/

Note:
Indoor unit type explanation:
Hydraulic module series
1).HB-A60/C***GN8-B includes the following type:
HB-A60/CGN8-B: without back-up heater.
HHPMD-M60THI3: with 3kW back-up heater and 1-Phase Source.
2).HB-A100/C***GN8-B includes the following type:
HB-A100/CGN8-B: without back-up heater.
HHPMD-M100THI3: with 3kW back-up heater and 1-Phase Source.
HB-A100/CDS90GN8-B: with 9kW back-up heater and 3-Phase Source.
3).HB-A160/C***GN8-B includes the following type:
HB-A160/CGN8-B: without back-up heater.
HHPMD-M160THI3: with 3kW back-up heater and 1-Phase Source.
HB-A160/CDS90GN8-B: with 9kW back-up heater and 3-Phase Source.

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

Product fiche 7

Heat pump space cooling		Outdoor	HHPS-M4TH	HHPS-M6TH	HHPS-M8TH	HHPS-M10TH	HHPS-M12TH
		Indoor	HB-A60/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A60/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A100/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A100/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B
Indoor unit sound power (*)		dB	38	40	42	42	43
Outdoor unit sound power (*)	Average climate low temperature application	dB	56	58	60	61	65
	Average climate medium temperature application	dB	55	58	60	60	64
Space cooling 7°C	Prated (declared cooling capacity) @ 35°C	[kW]	4.7	7.0	7.4	8.2	11.6
	Seasonal space cooling efficiency (ηs)	[%]	196.2	209.5	230.1	235.3	194.2
	Annual energy consumption	[kWh]	566	791	762	826	1,412
Space cooling 18°C	Prated (declared cooling capacity) @ 35°C	[kW]	4.5	6.55	8.4	10.0	12.0
	Seasonal space cooling efficiency (ηs)	[%]	307.7	326.8	354.9	348.8	282.4
	Annual energy consumption	[kWh]	348	477	563	682	1,009
Part load conditions space cooling：low temperature application@7°C							
(A) condition (35°C)	Pdc (declared cooling capacity)	[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)	Pdc (declared cooling capacity)	[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)	Pdc (declared cooling capacity)	[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)	Pdc (declared cooling capacity)	[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	HHPS-M14TH	HHPS-M16TH	HHPS-M12TH3	HHPS-M14TH3	HHPS-M16TH3
		Indoor	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B
Indoor unit sound power (*)		dB	44	44	43	44	44
Outdoor unit sound power (*)	Average climate low temperature application	dB	65	68	65	65	68
	Average climate medium temperature application	dB	64	67	64	64	67
Space cooling 7°C	Prated (declared cooling capacity) @ 35°C	[kW]	12.7	14.0	11.6	12.7	14.0
	Seasonal space cooling efficiency (ηs)	[%]	192.4	184.1	193.0	191.4	183.3
	Annual energy consumption	[kWh]	1,560	1,796	1,420	1,568	1,804
Space cooling 18°C	Prated (declared cooling capacity) @ 35°C	[kW]	13.5	14.2	12.0	13.5	14.2
	Seasonal space cooling efficiency (ηs)	[%]	274.4	266.8	280.1	272.5	265.0
	Annual energy consumption	[kWh]	1,168	1,263	1,017	1,176	1,271
Part load conditions space cooling：low temperature application@7°C							
(A) condition (35°C)	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

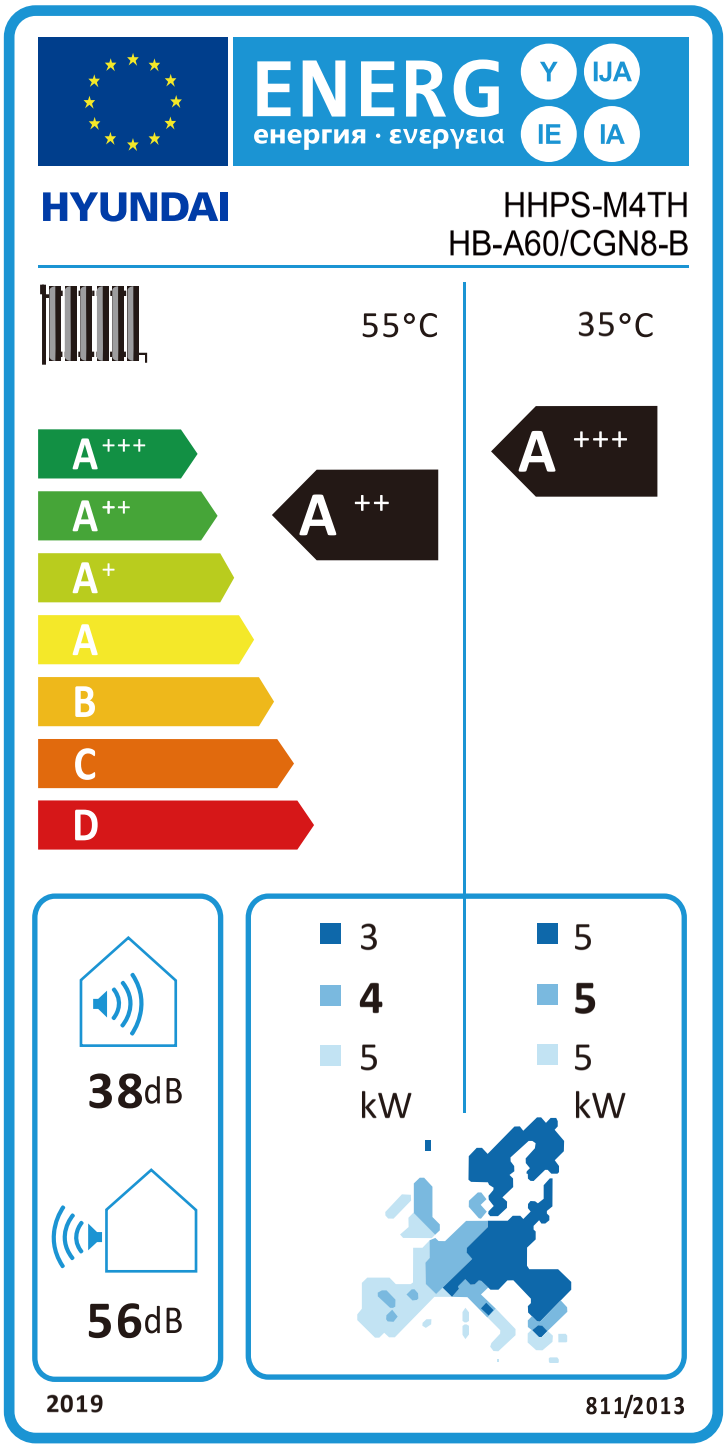
(*)Sound power measured according to the EN12102 under conditions of the EN14825.

Product fiche 8

Heat pump space cooling		Outdoor	HHPS-M4TH	HHPS-M6TH	HHPS-M8TH	HHPS-M10TH	HHPS-M12TH
		Indoor	HB-A60/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A60/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A100/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A100/C***GN8-B HBT-A100/190CD***GN8-B HBT-A100/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B
Part load conditions space cooling：medium temperature application@18°C							
(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)	[m^3/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		Outdoor	HHPS-M14TH	HHPS-M16TH	HHPS-M12TH3	HHPS-M14TH3	HHPS-M16TH3
		Indoor	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B	HB-A160/C***GN8-B HBT-A160/240CD***GN8-B
Part load conditions space cooling：medium temperature application@18°C							
(A) condition (35°C)	Pdc (declared cooling capacity)	[kW]	13.50	14.20	12.00	13.50	14.20
	EERd (declared EER)	-	3.61	3.61	4.00	3.61	3.61
	Cdc(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(B) condition (30°C)	Pdc (declared cooling capacity)	[kW]	10.20	11.42	9.21	10.20	11.42
	EERd (declared EER)	-	5.26	5.14	5.50	5.26	5.14
	Cdc(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(C) condition (25°C)	Pdc (declared cooling capacity)	[kW]	6.57	7.27	5.74	6.57	7.27
	EERd (declared EER)	-	8.45	7.83	8.66	8.45	7.83
	Cdc(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
(D) condition (20°C)	Pdc (declared cooling capacity)	[kW]	3.33	3.40	3.33	3.33	3.40
	EERd (declared EER)	-	10.07	10.35	10.07	10.07	10.35
	Cdc(degradation coefficient)	-	0.90	0.90	0.90	0.90	0.90
Air to water unit	Rated airflow (outdoor)	[m^3/h]	4060	4650	4060	4060	4650
Brine/water to water unit	Rated water/brine flow (outdoor H/E)	-	/	/	/	/	/
Other	Capacity control	-	Inverter	Inverter	Inverter	Inverter	Inverter
	Poff (Power consumption Off mode)	[kW]	0.014	0.014	0.020	0.020	0.020
	Pto (Power consumption Thermostat off mode)	[kW]	0.010	0.010	0.010	0.010	0.010
	Psb (Power consumption Standby mode)	[kW]	0.014	0.014	0.020	0.020	0.020
	Pck (Power crankcase heater mode)	[kW]	0.000	0.000	0.000	0.000	0.000
	Qelec (Daily electricity consumption)	[kWh]	/	/	/	/	/
	Qfuel (Daily fuel consumption)	[kWh]	/	/	/	/	/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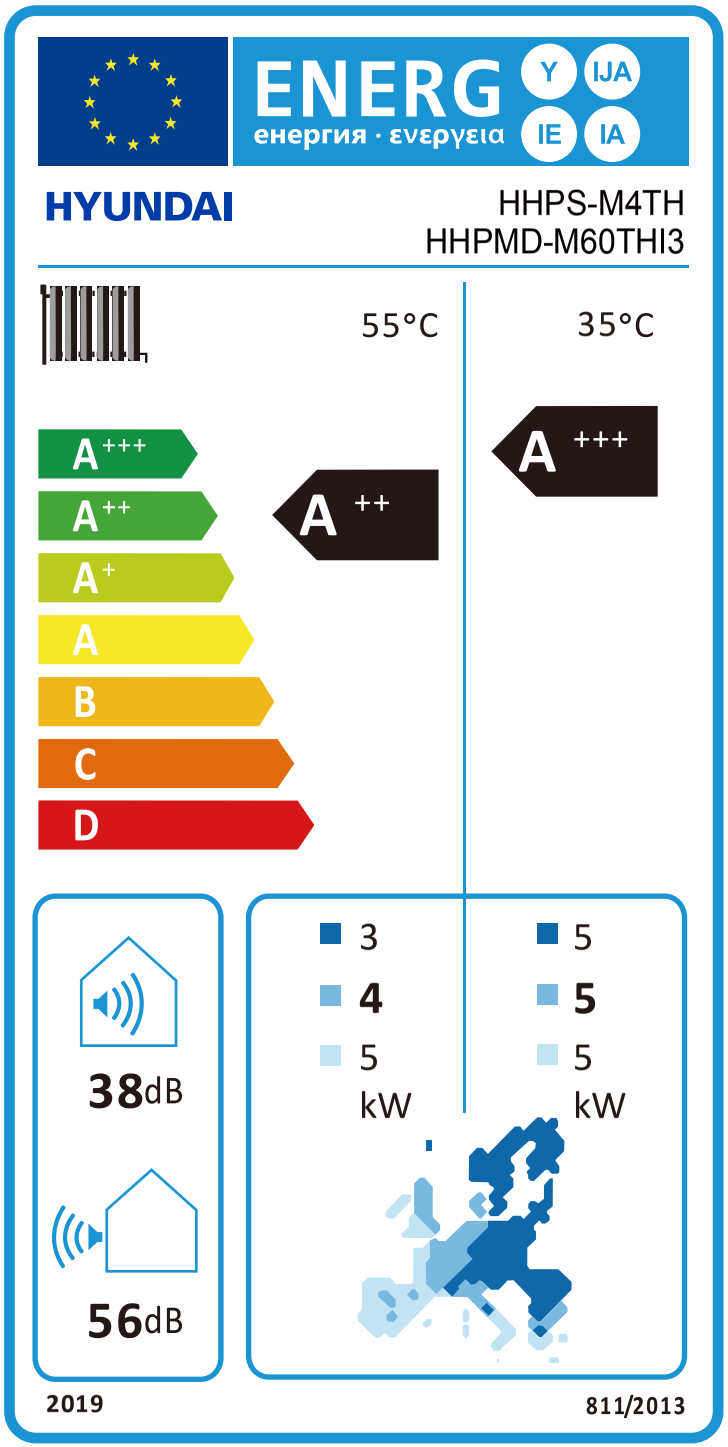
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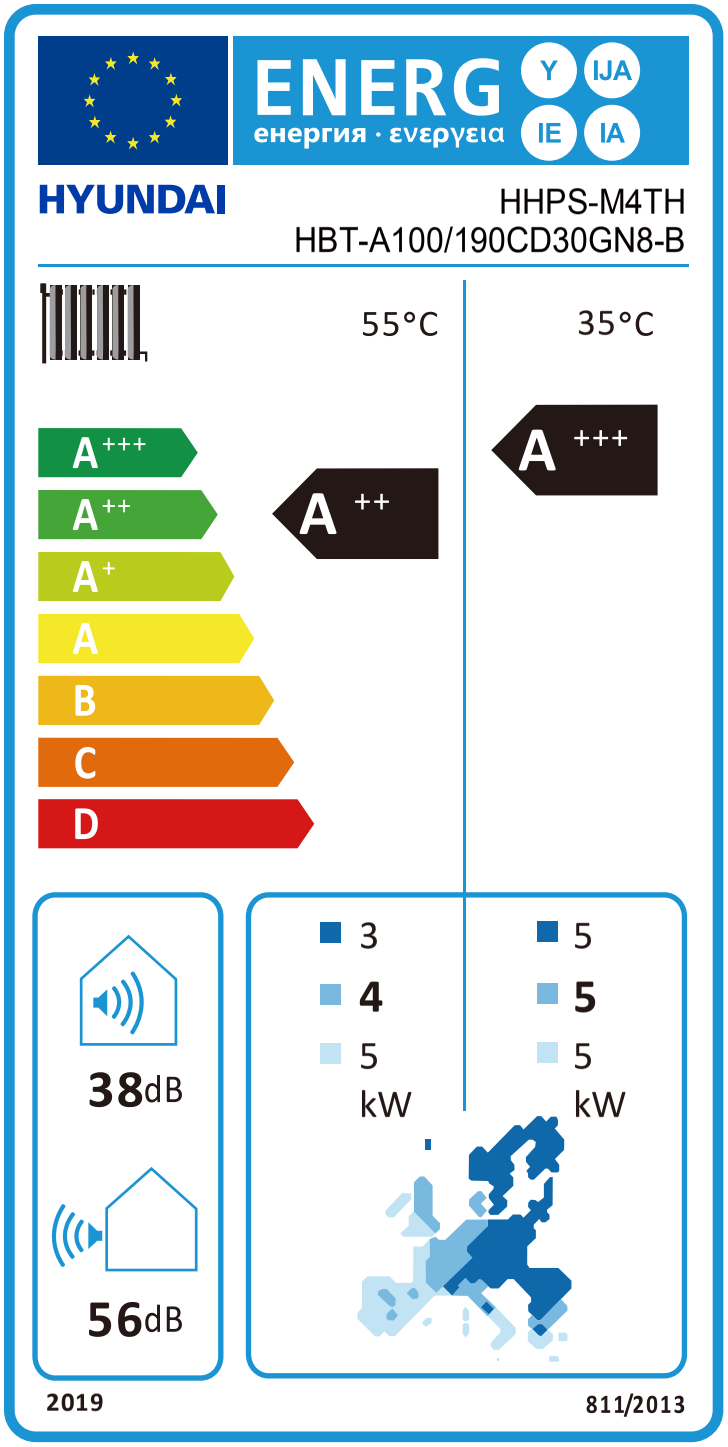
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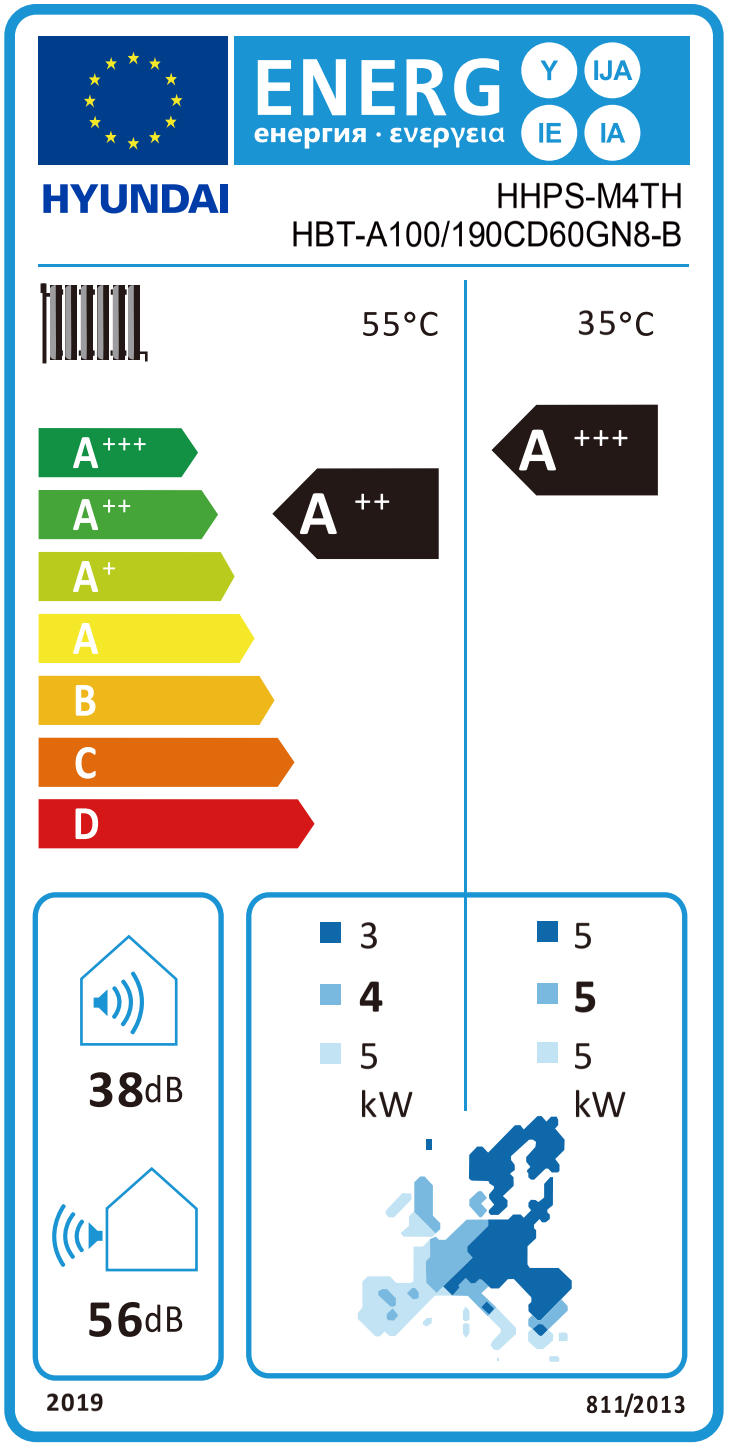
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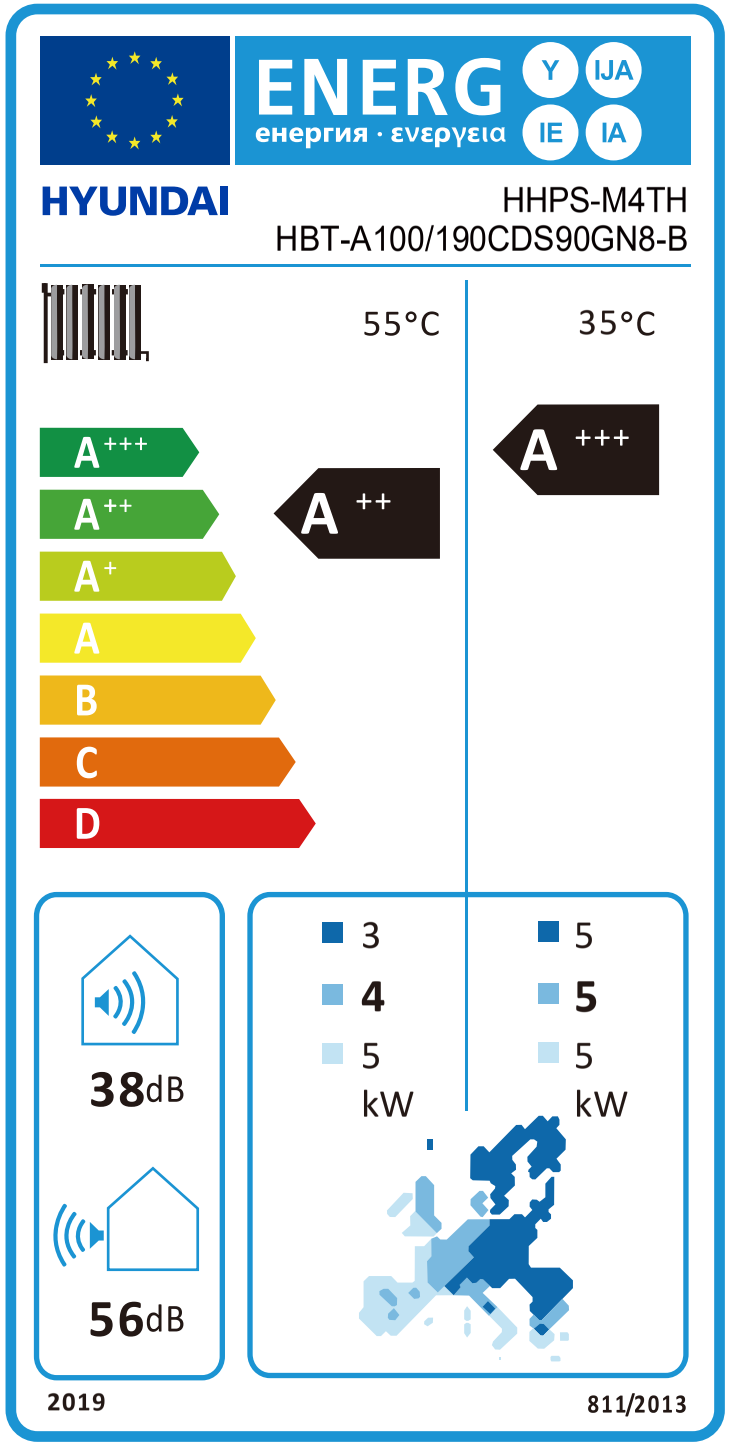
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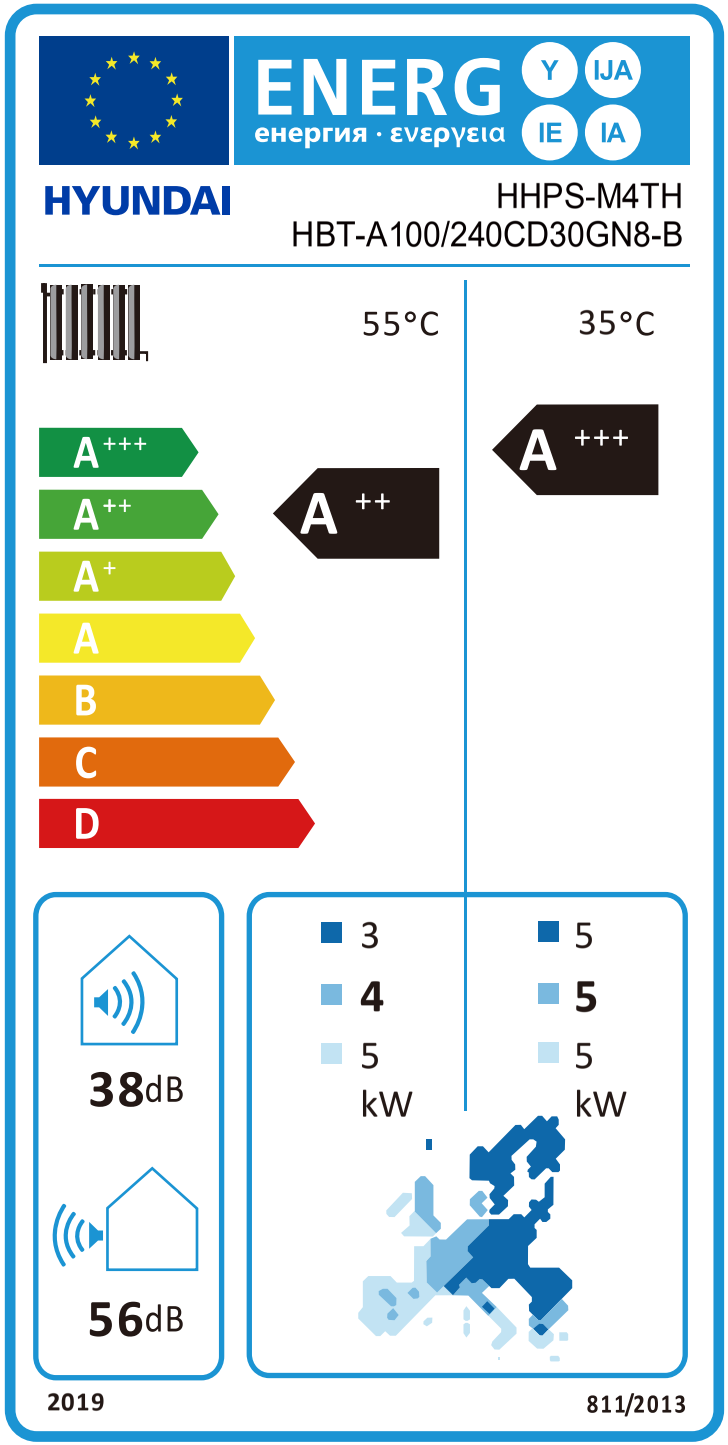
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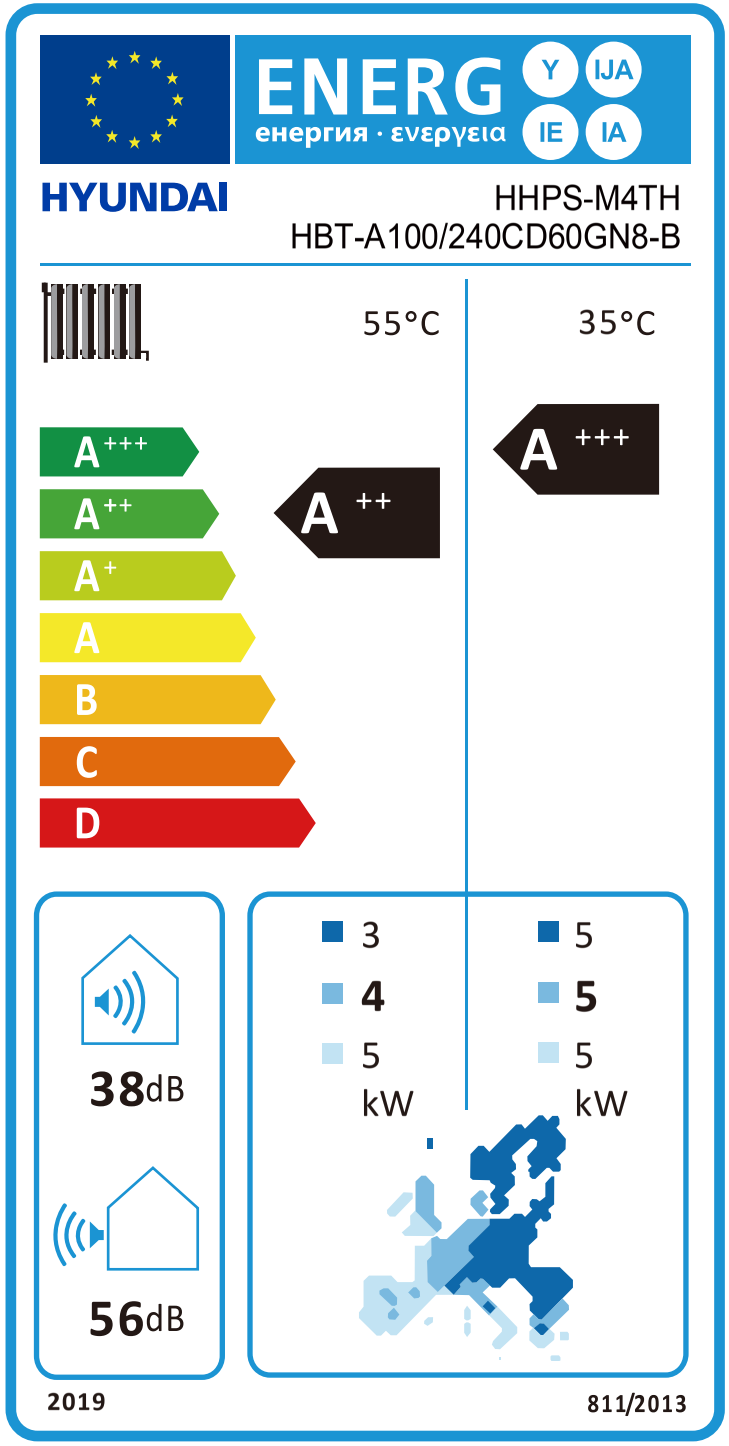
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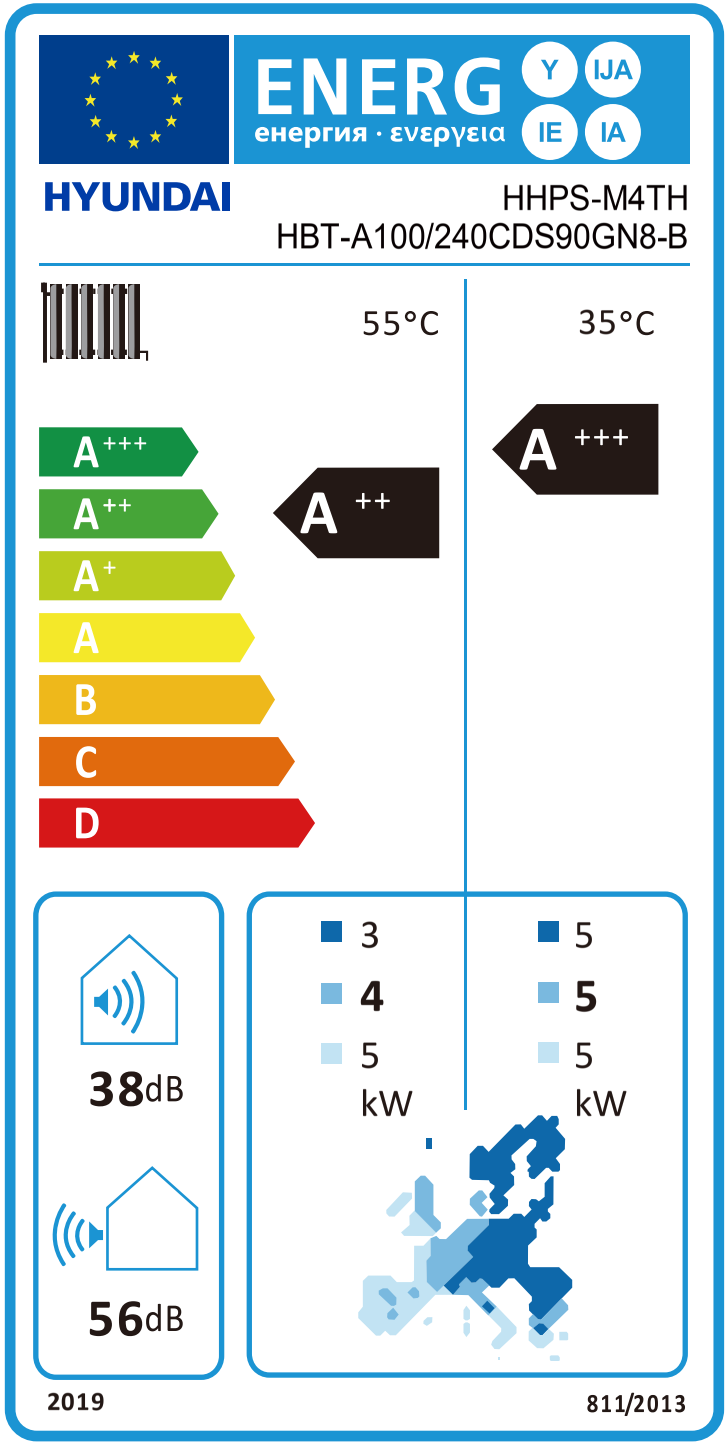
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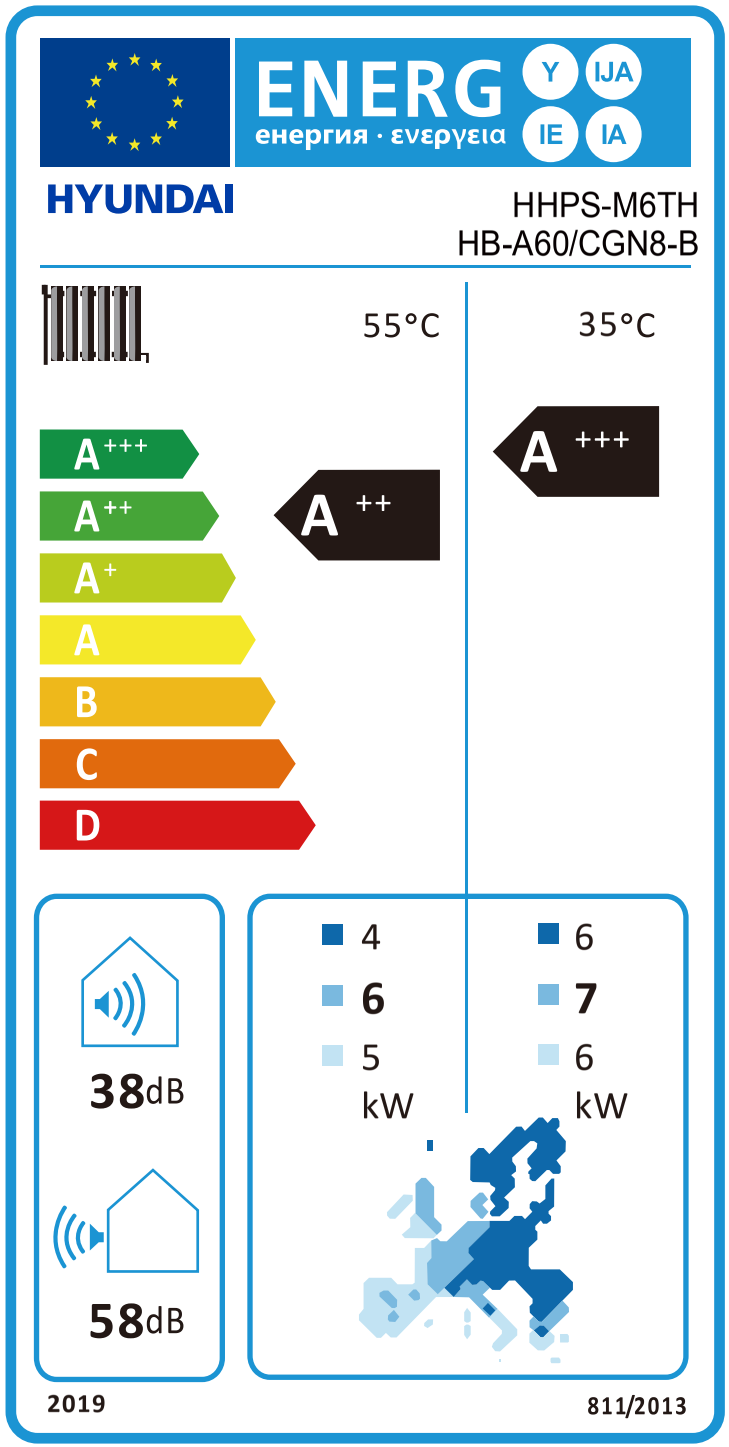
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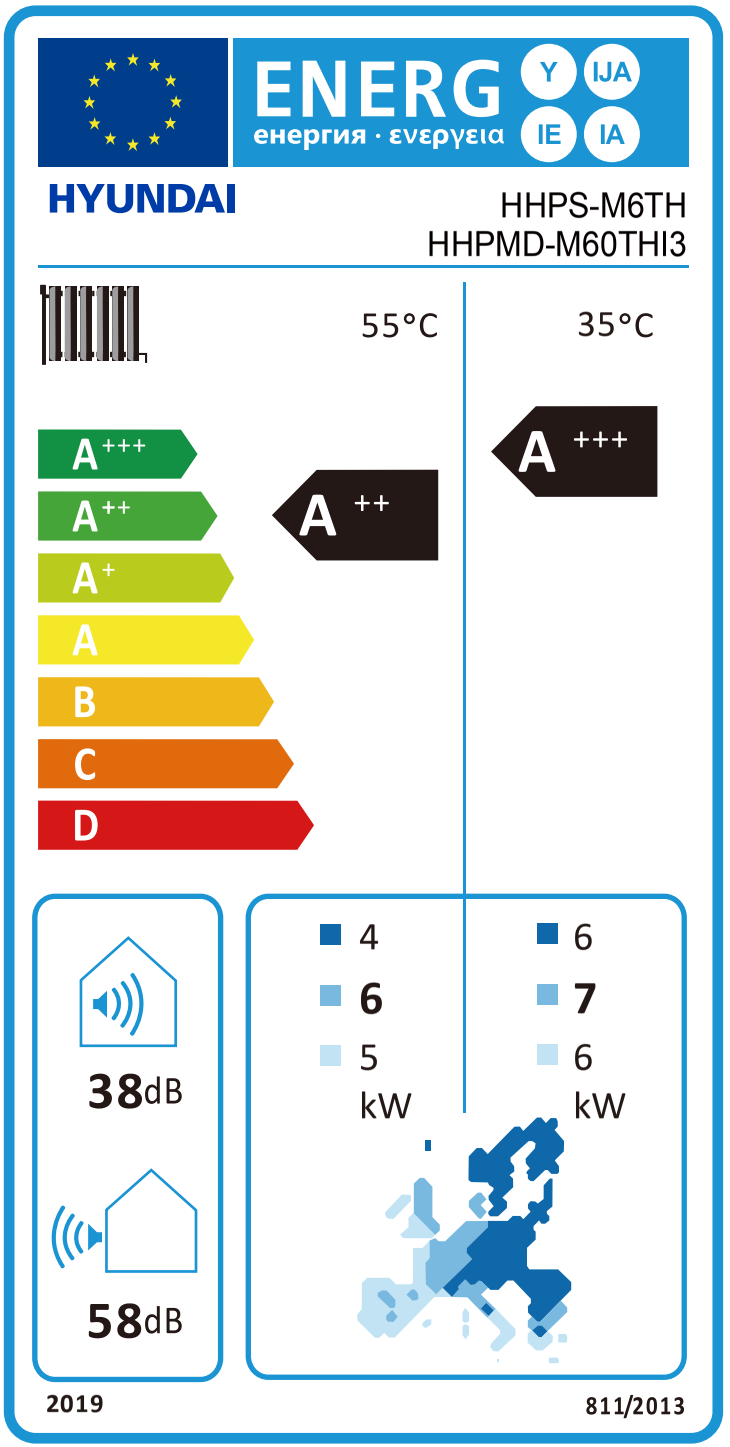
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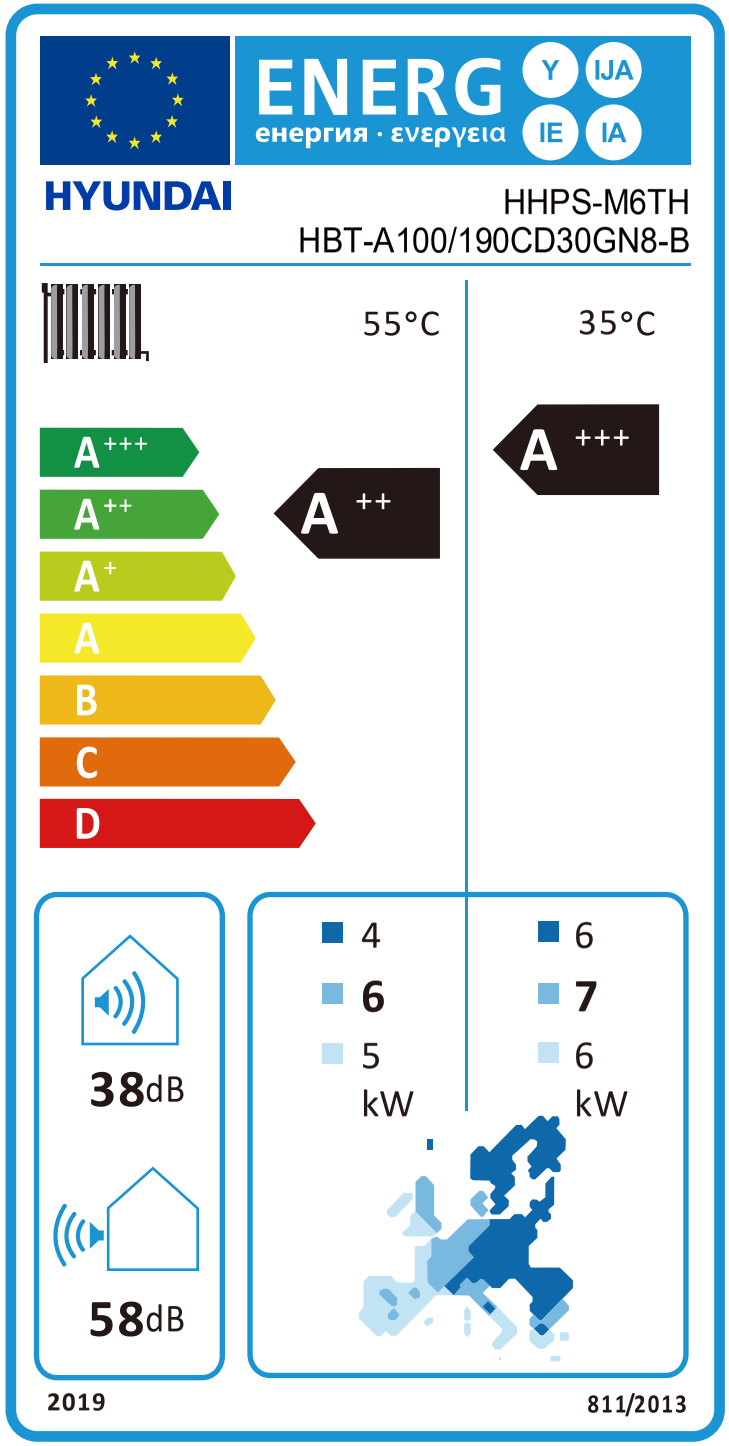
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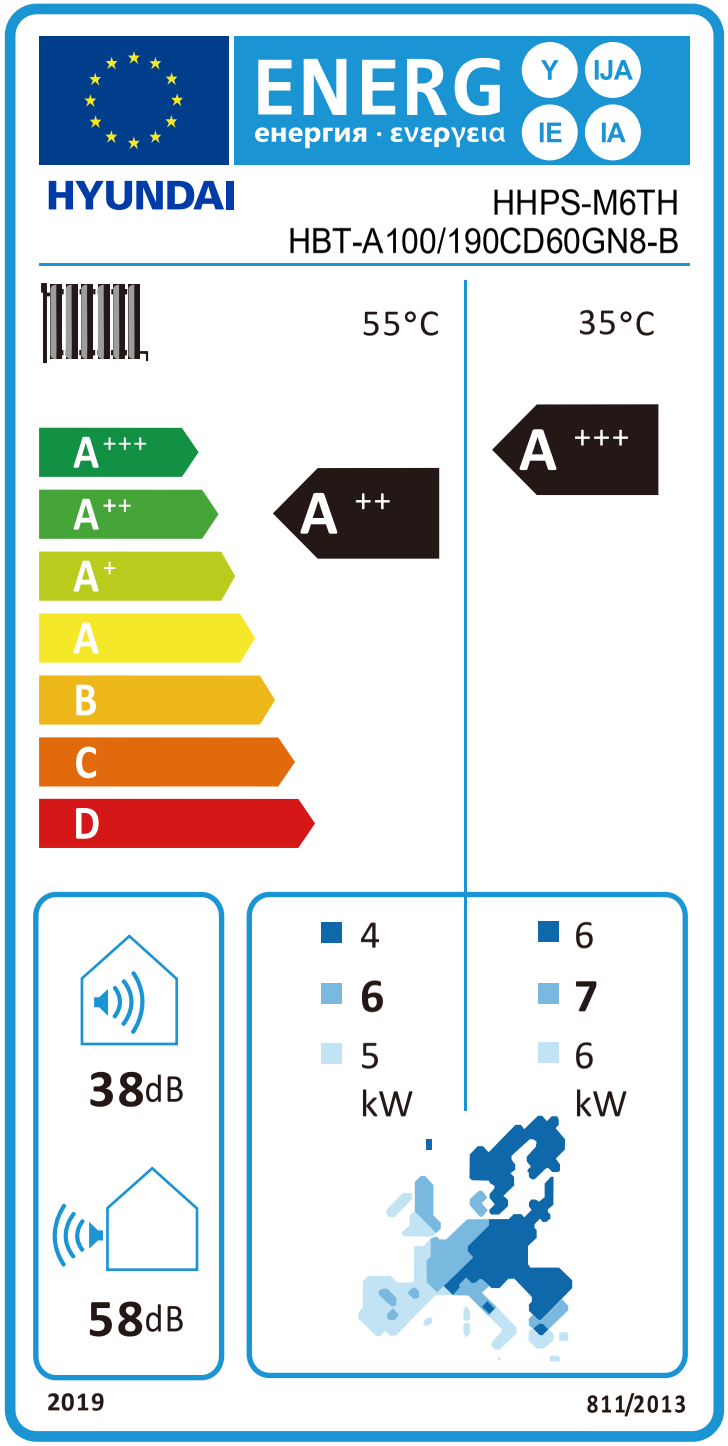
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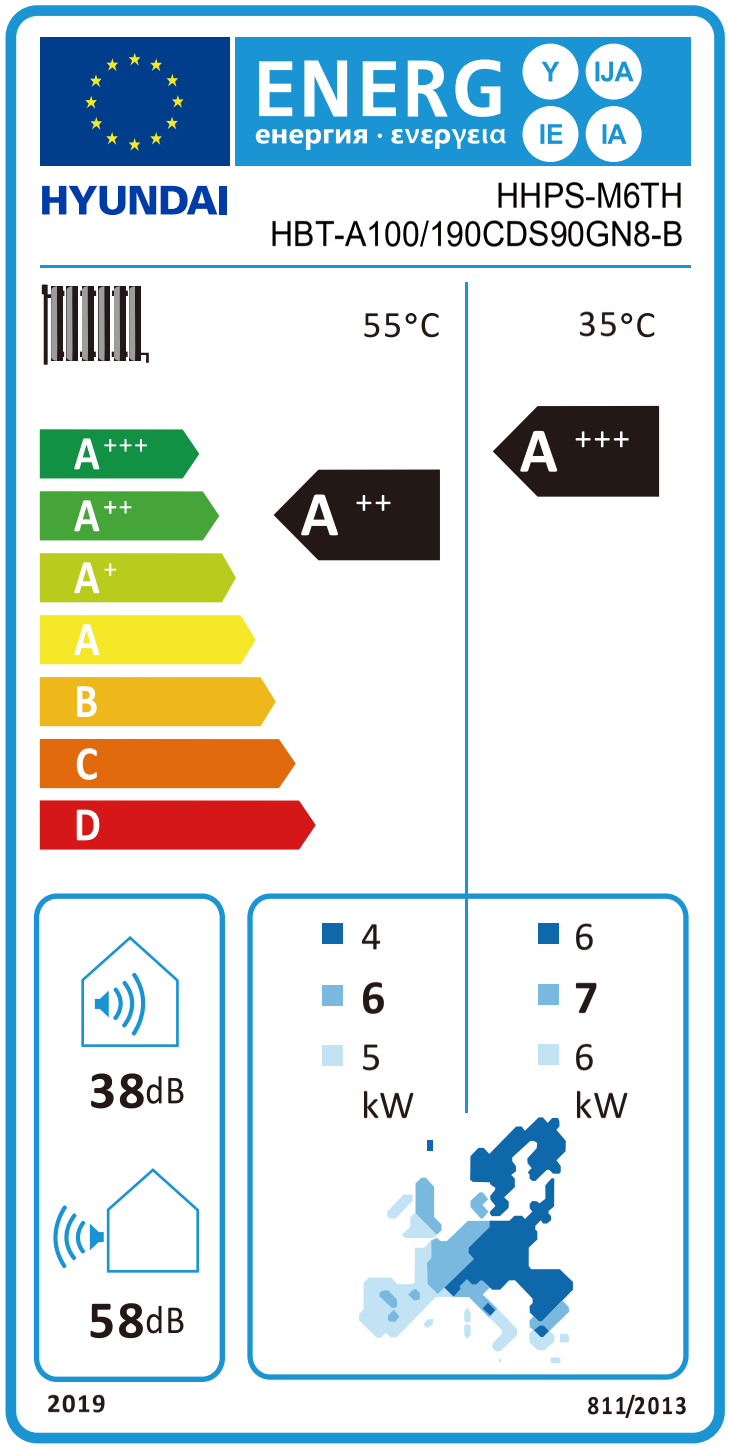
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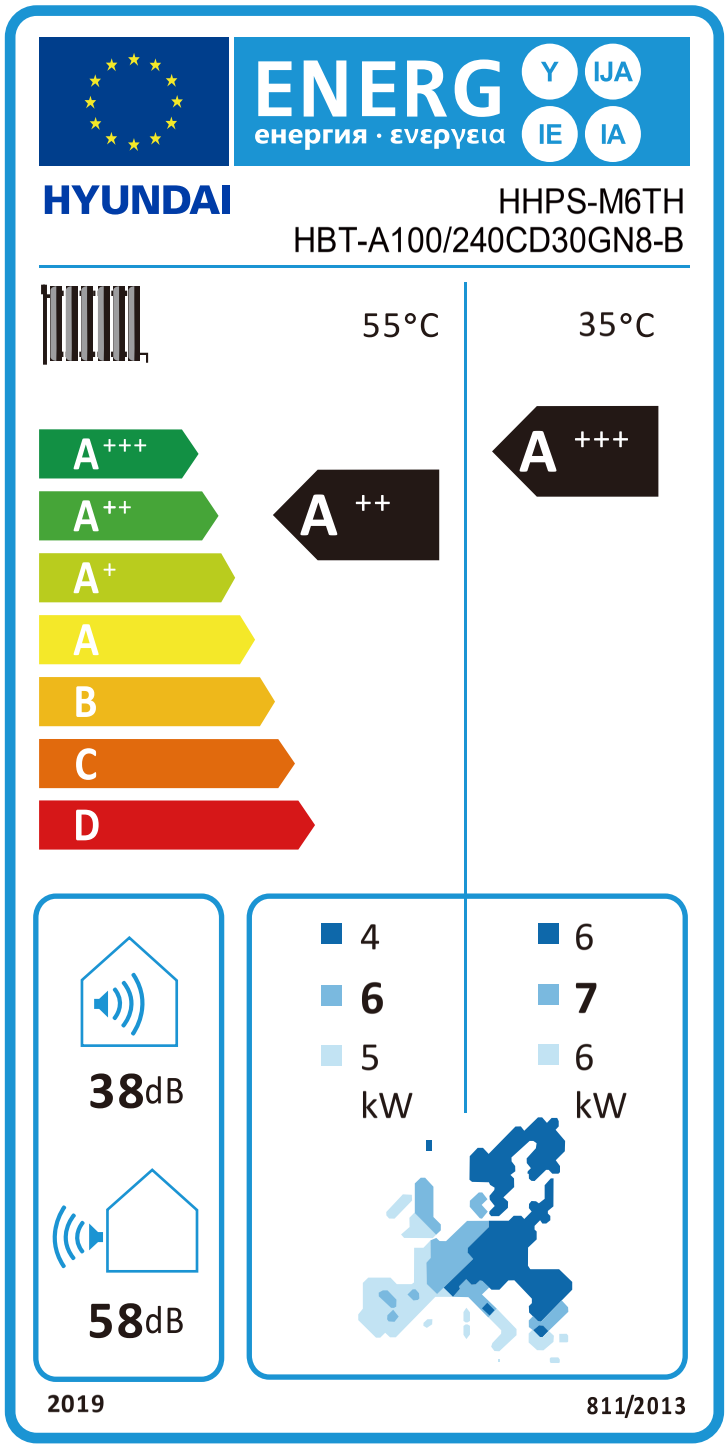
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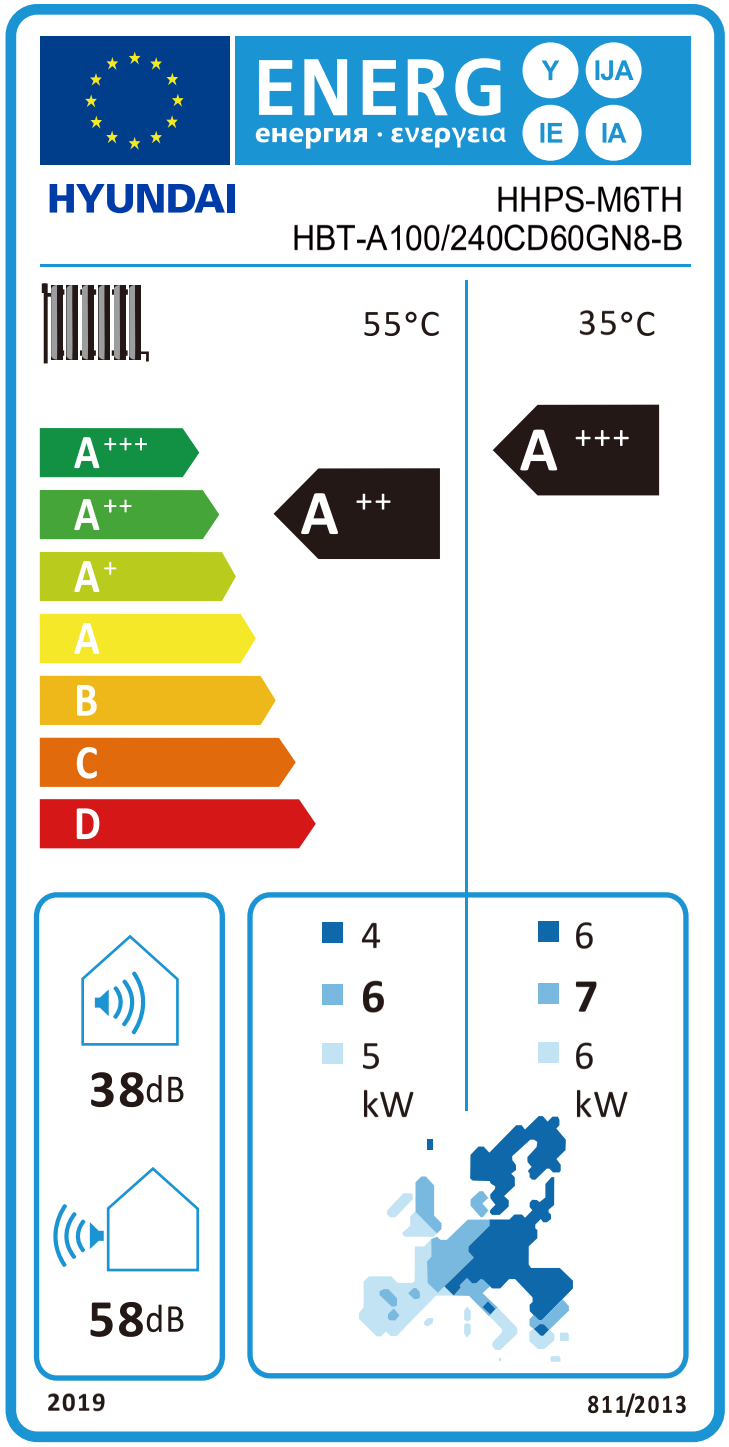
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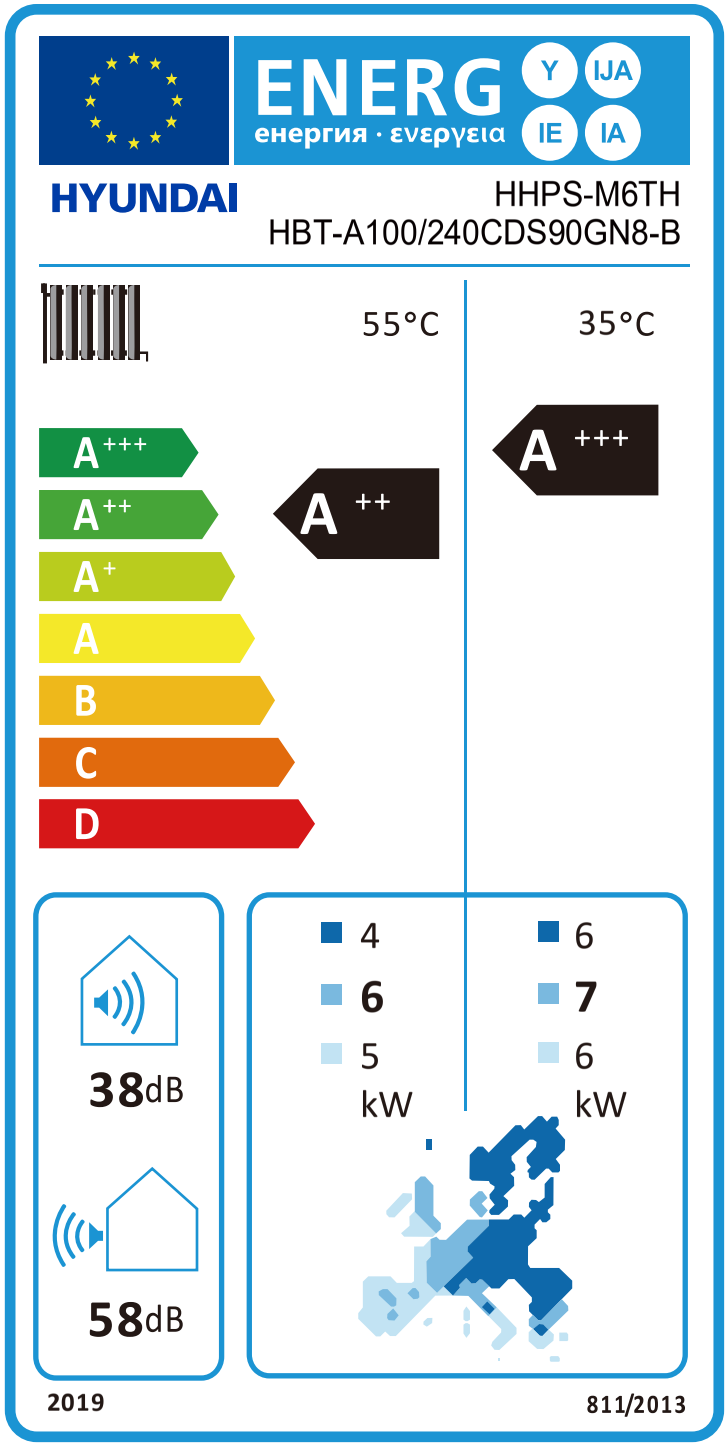
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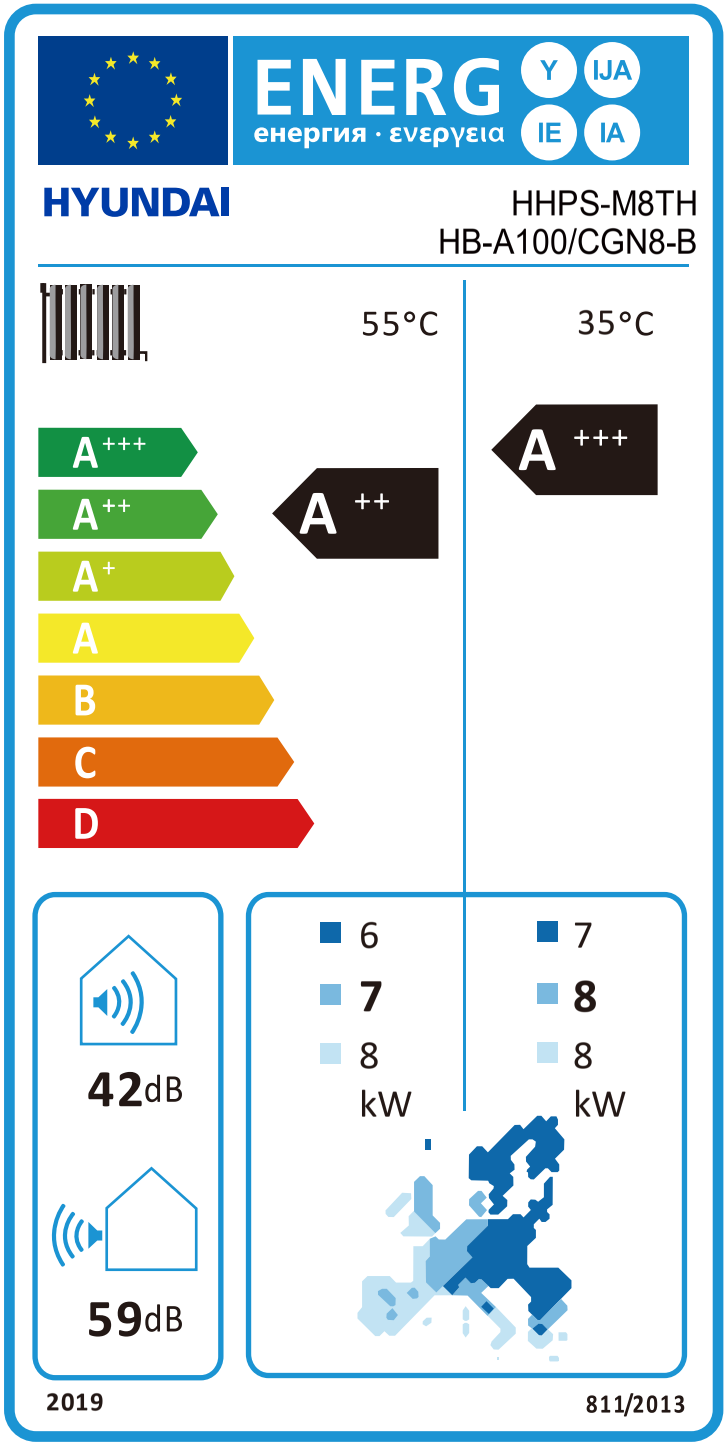
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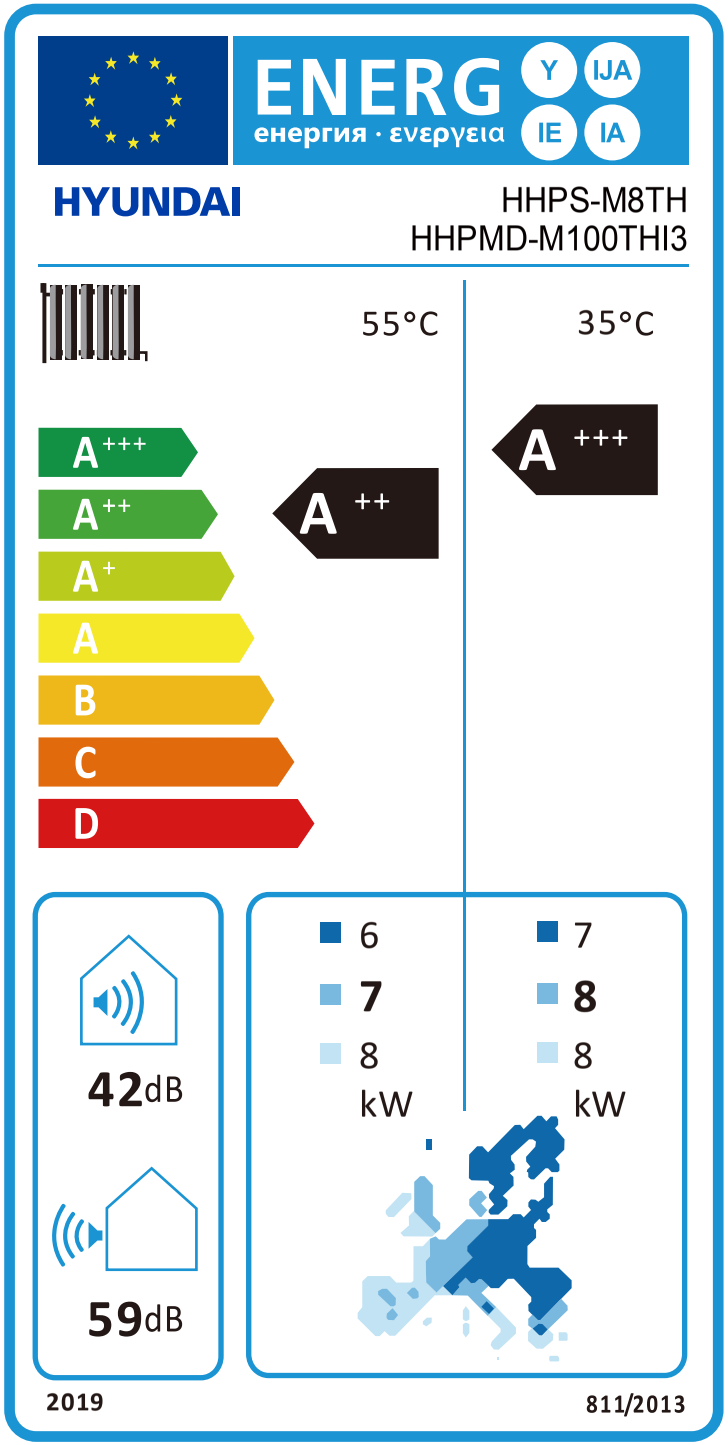
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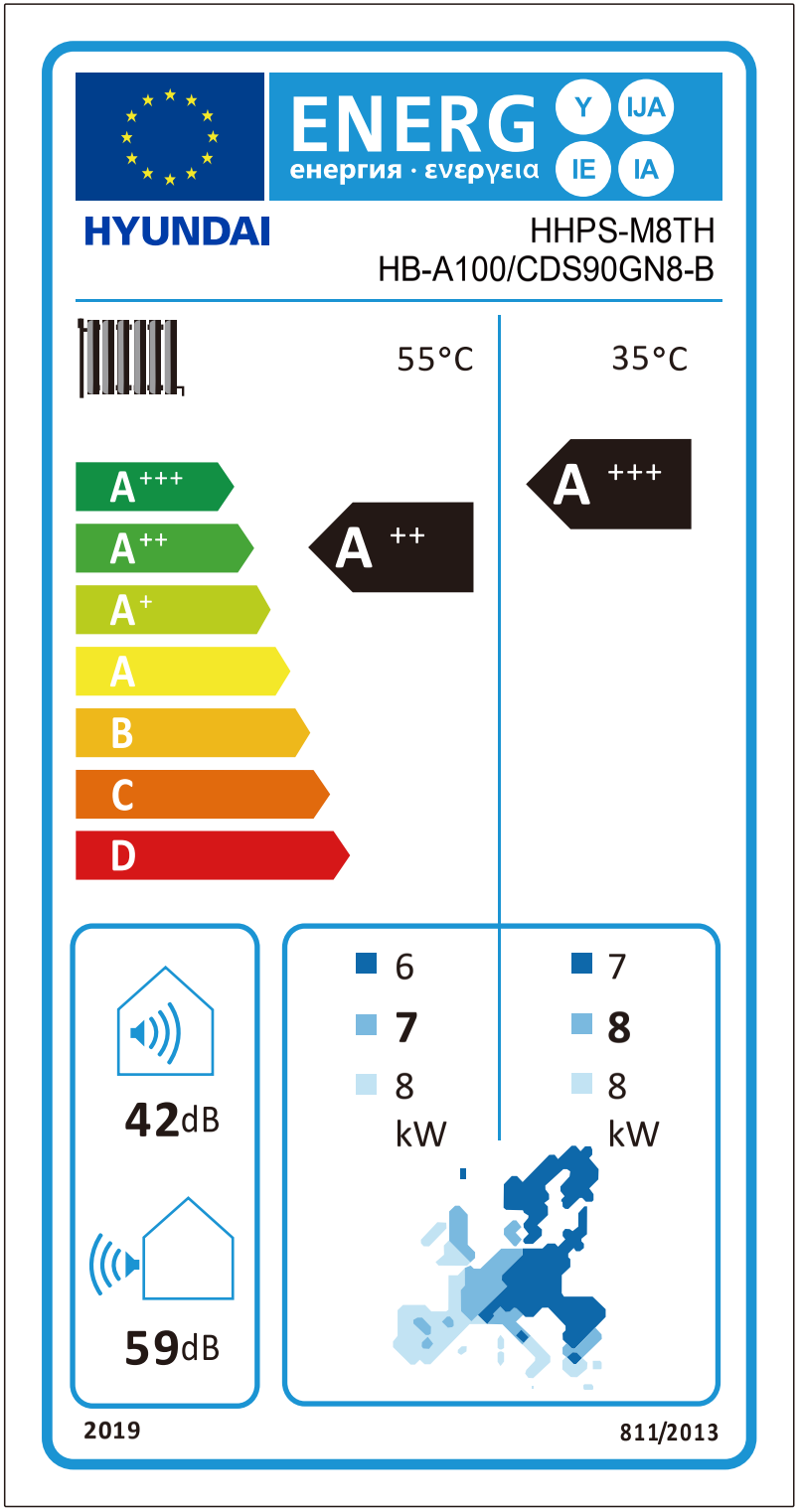
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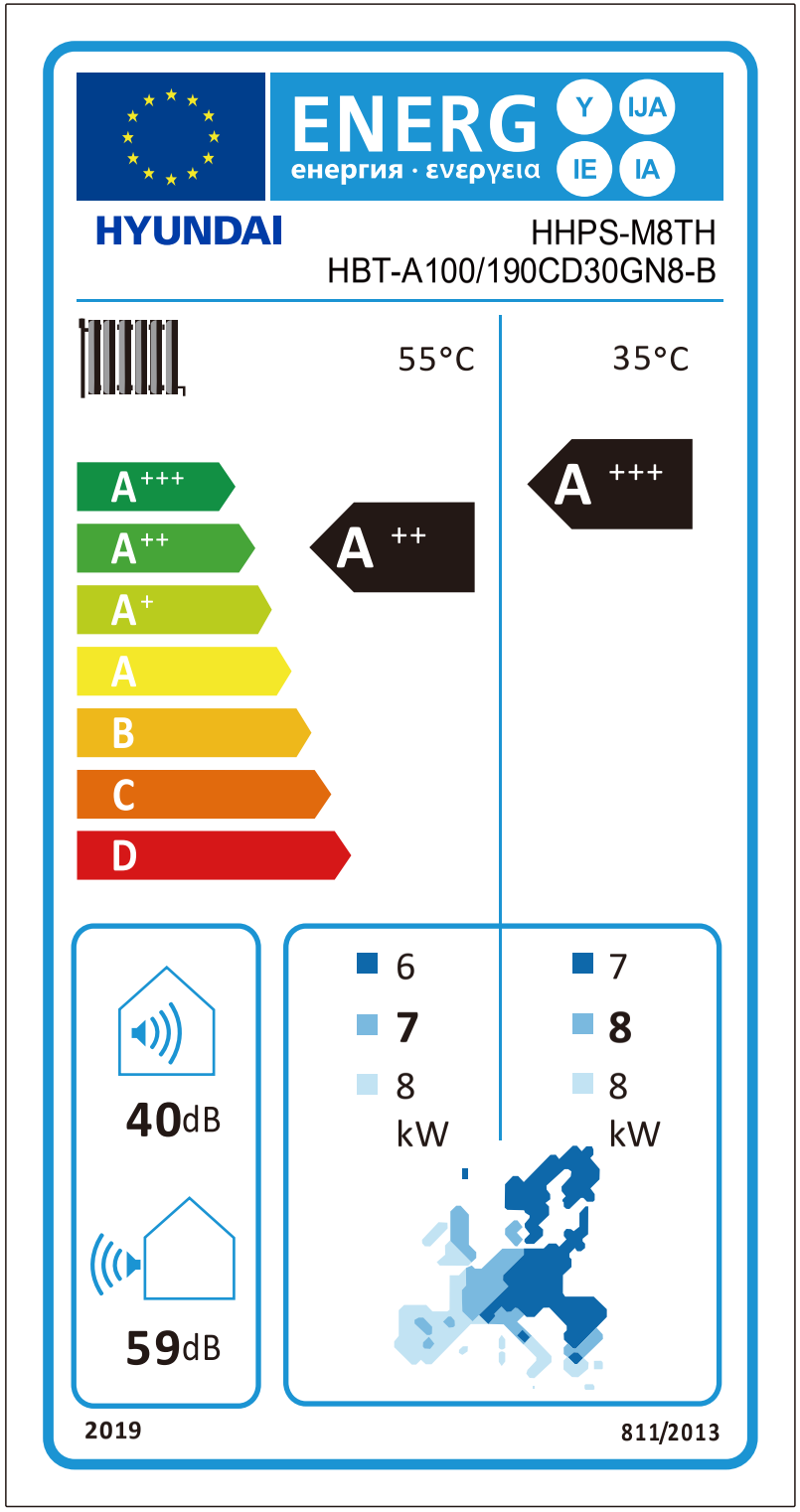
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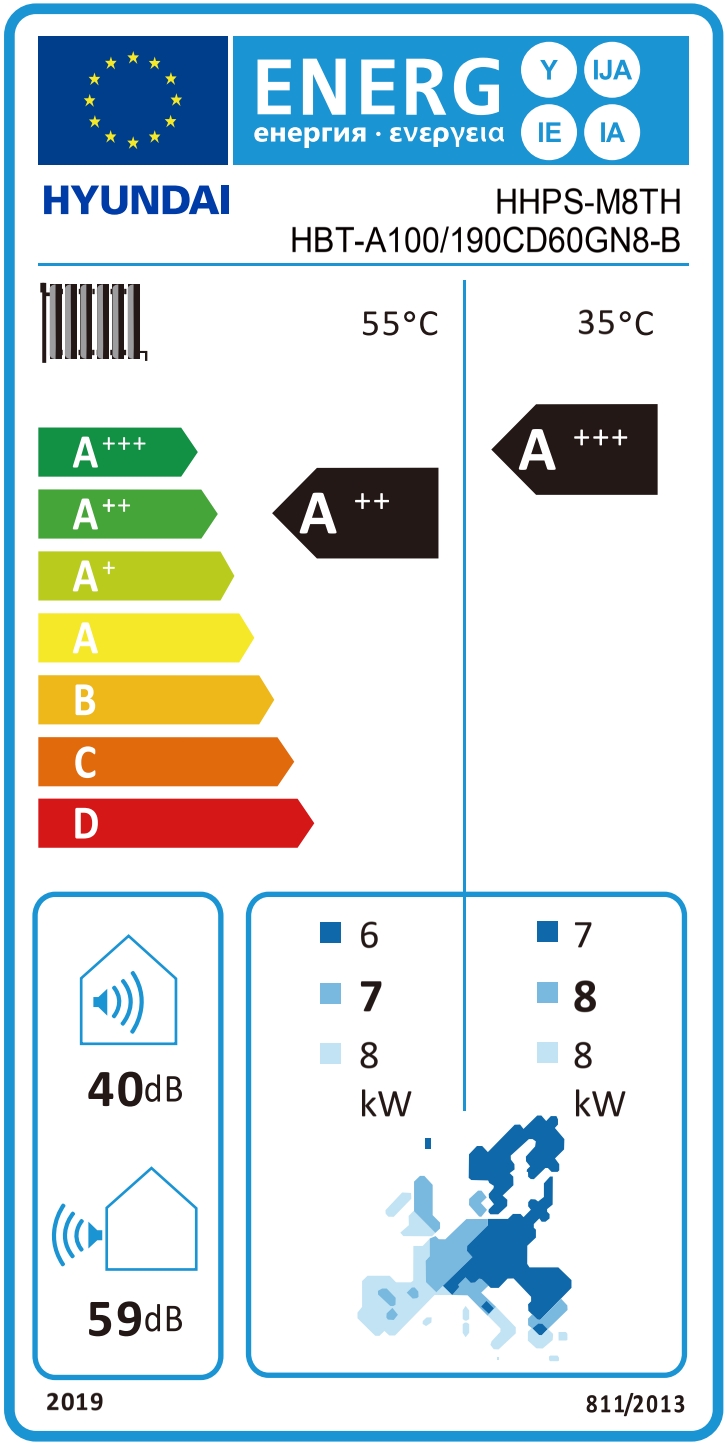
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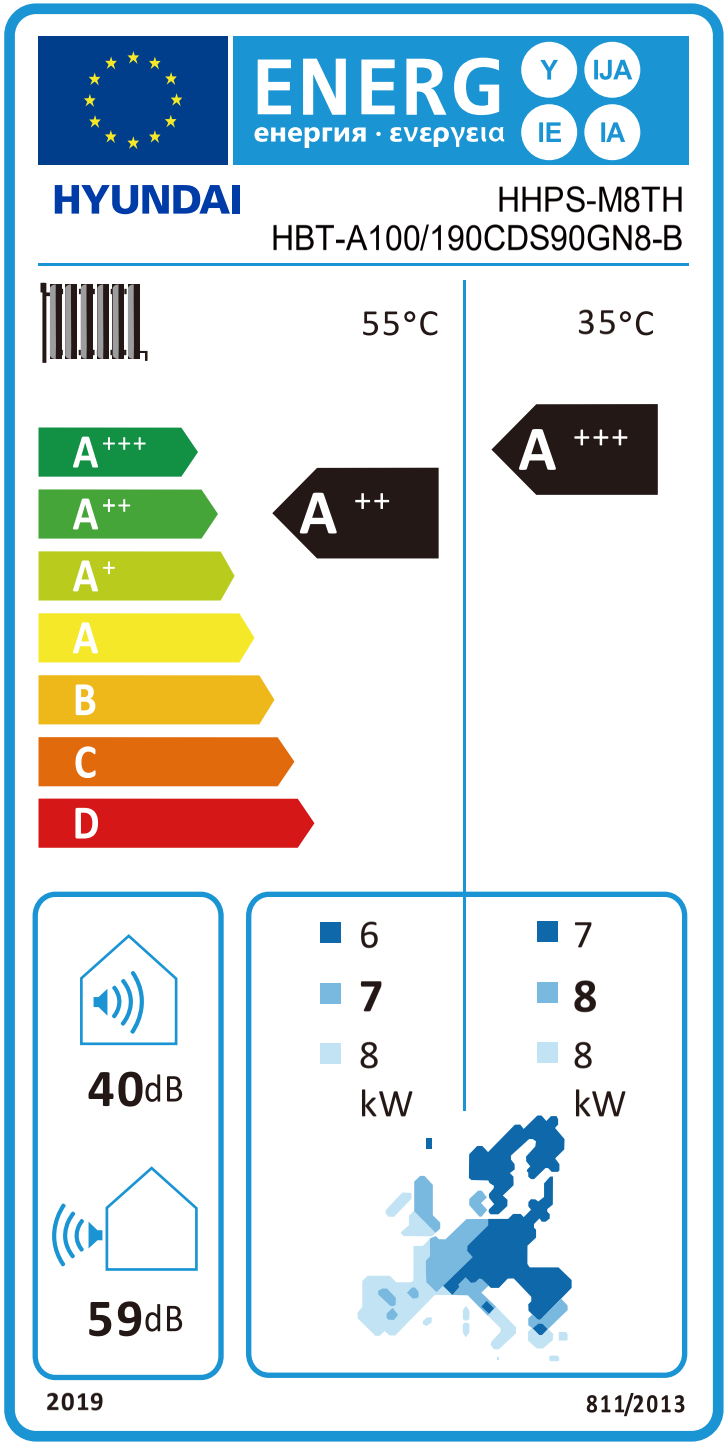
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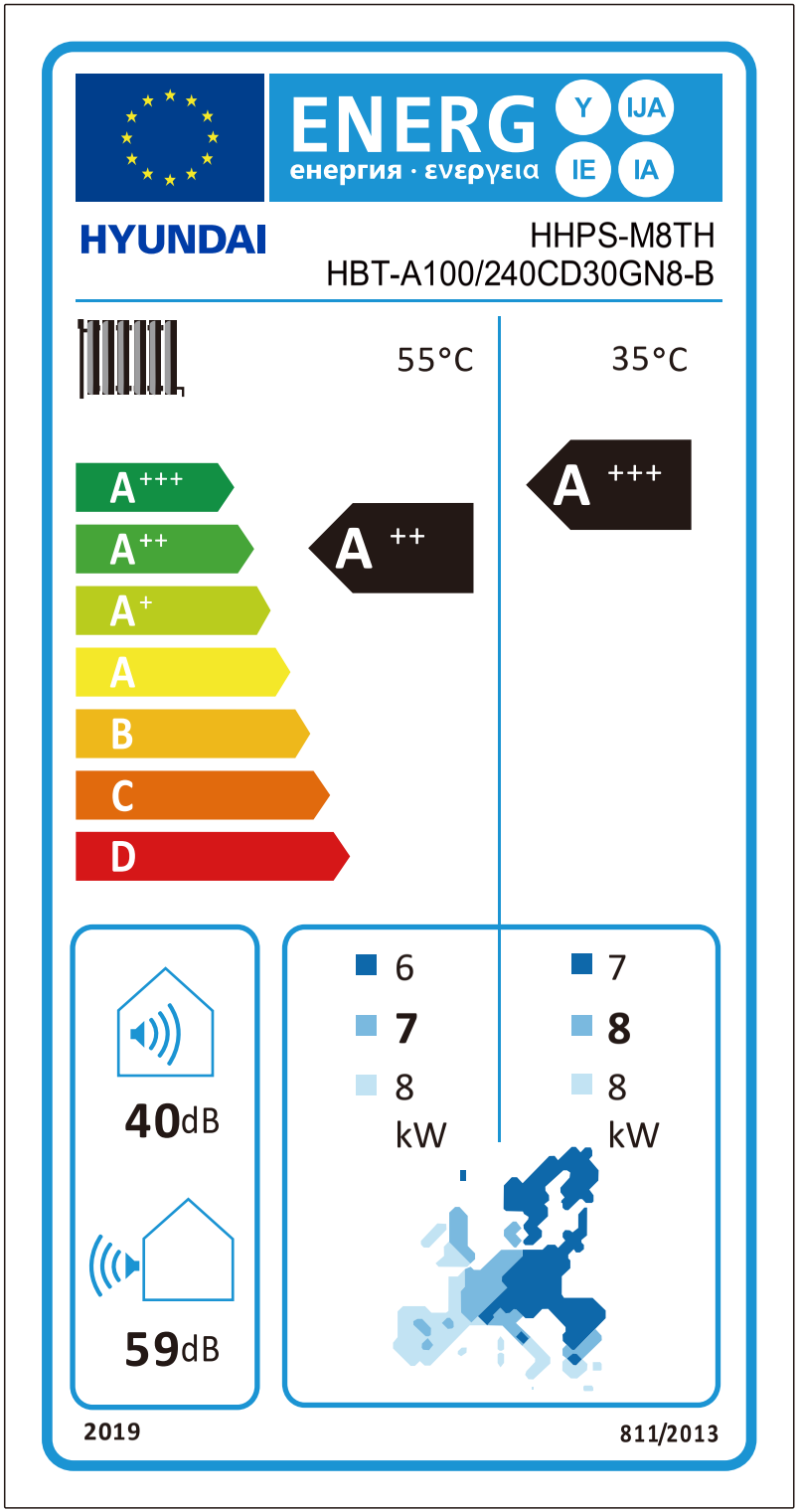
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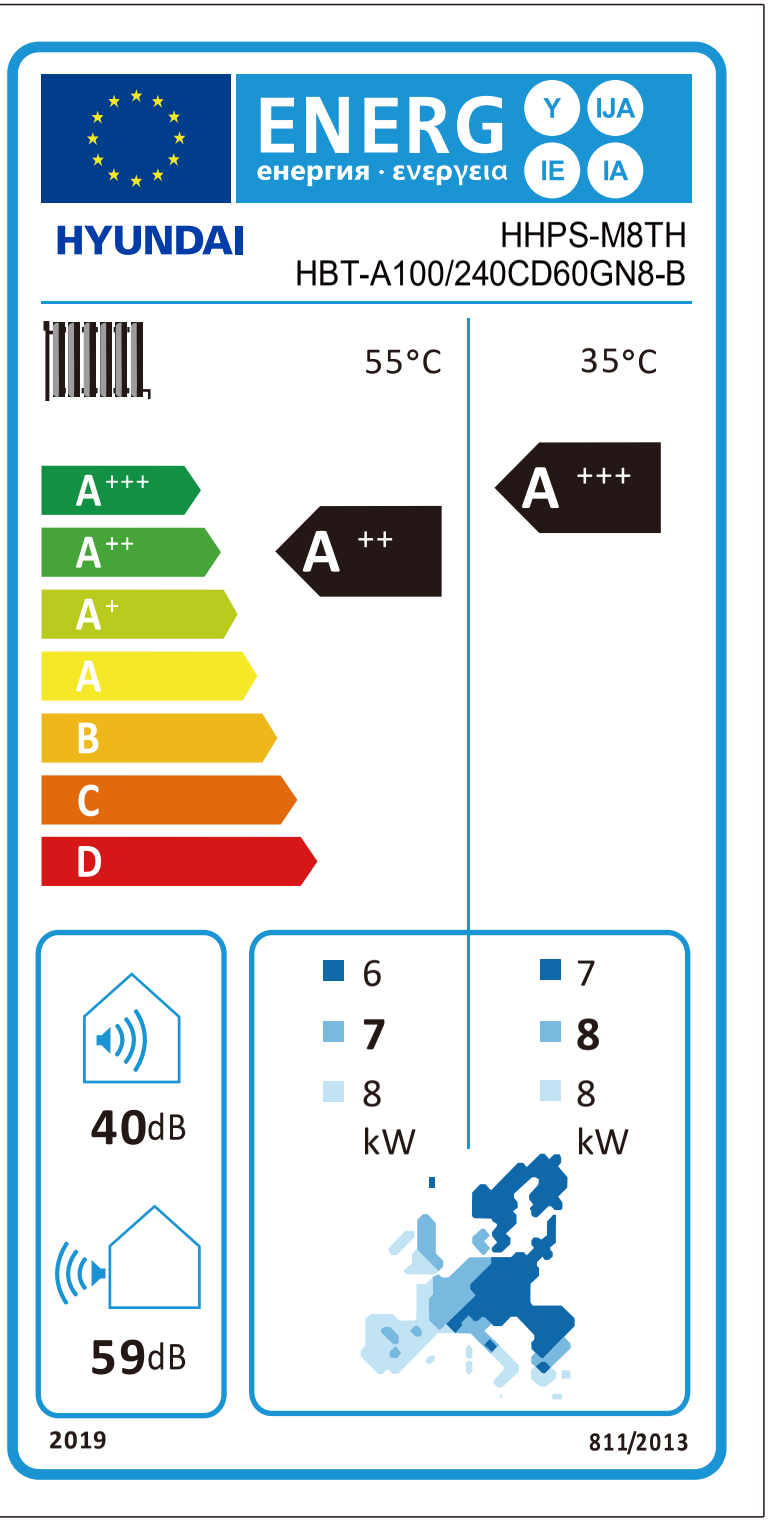
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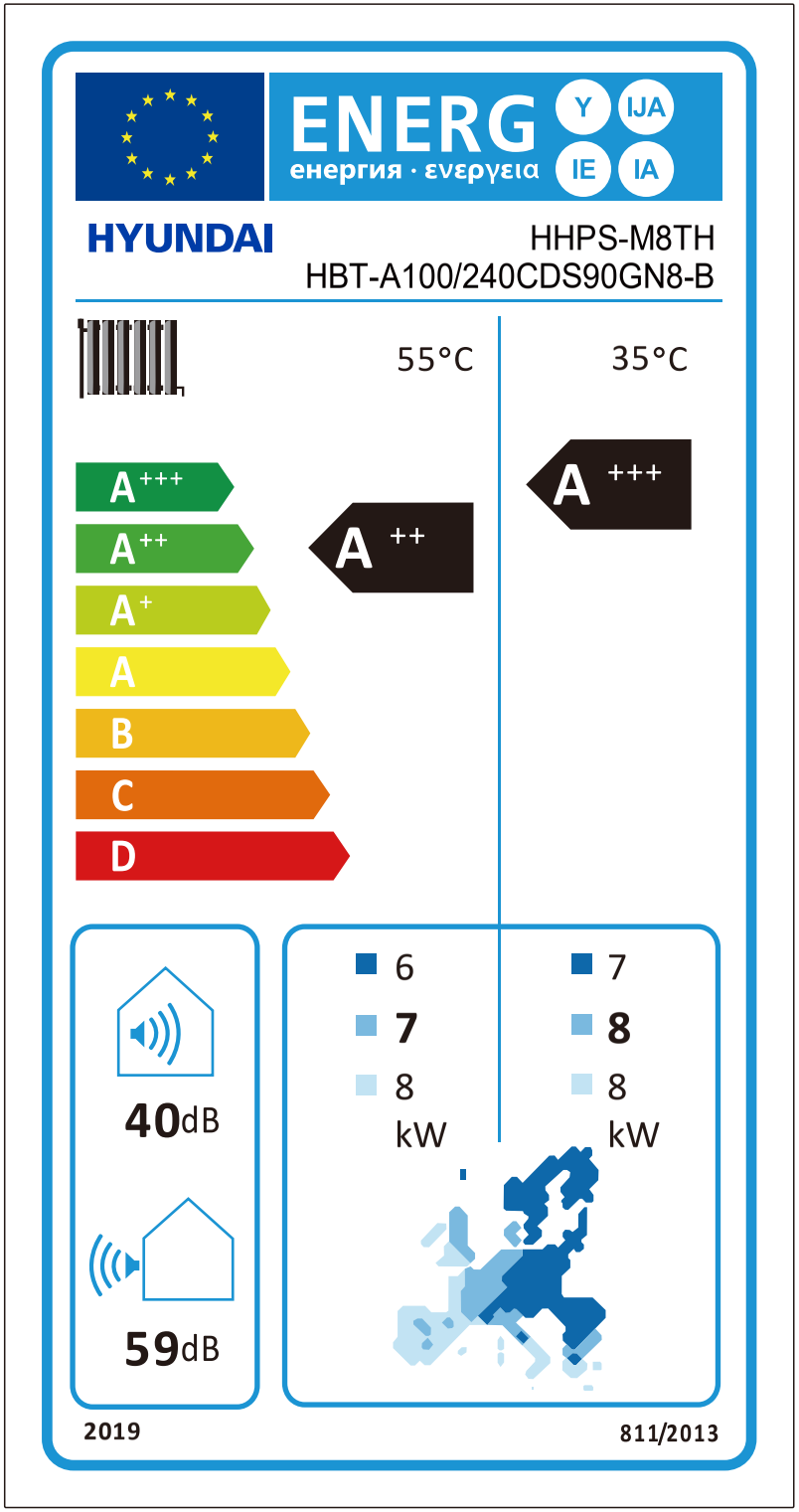
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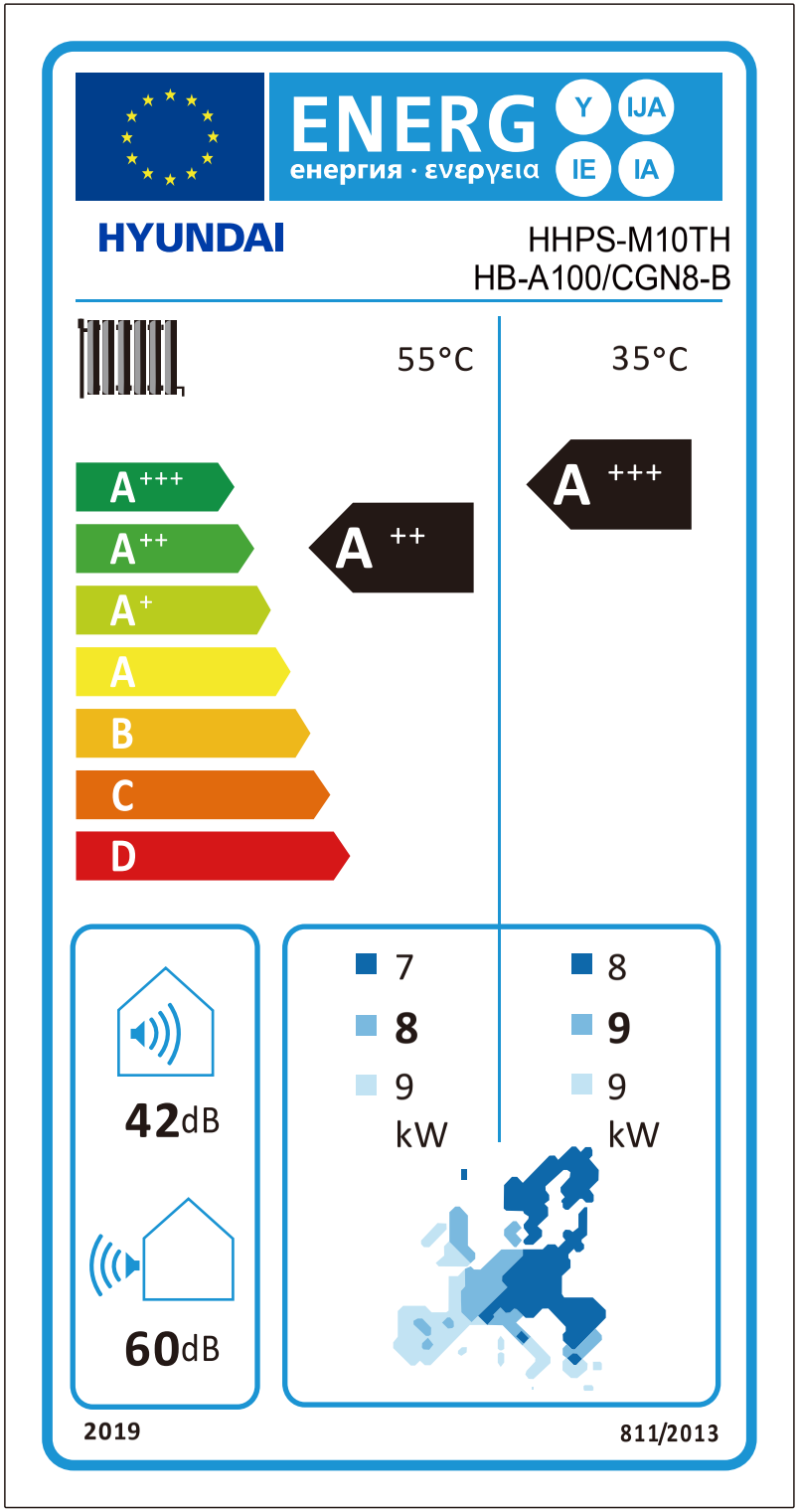
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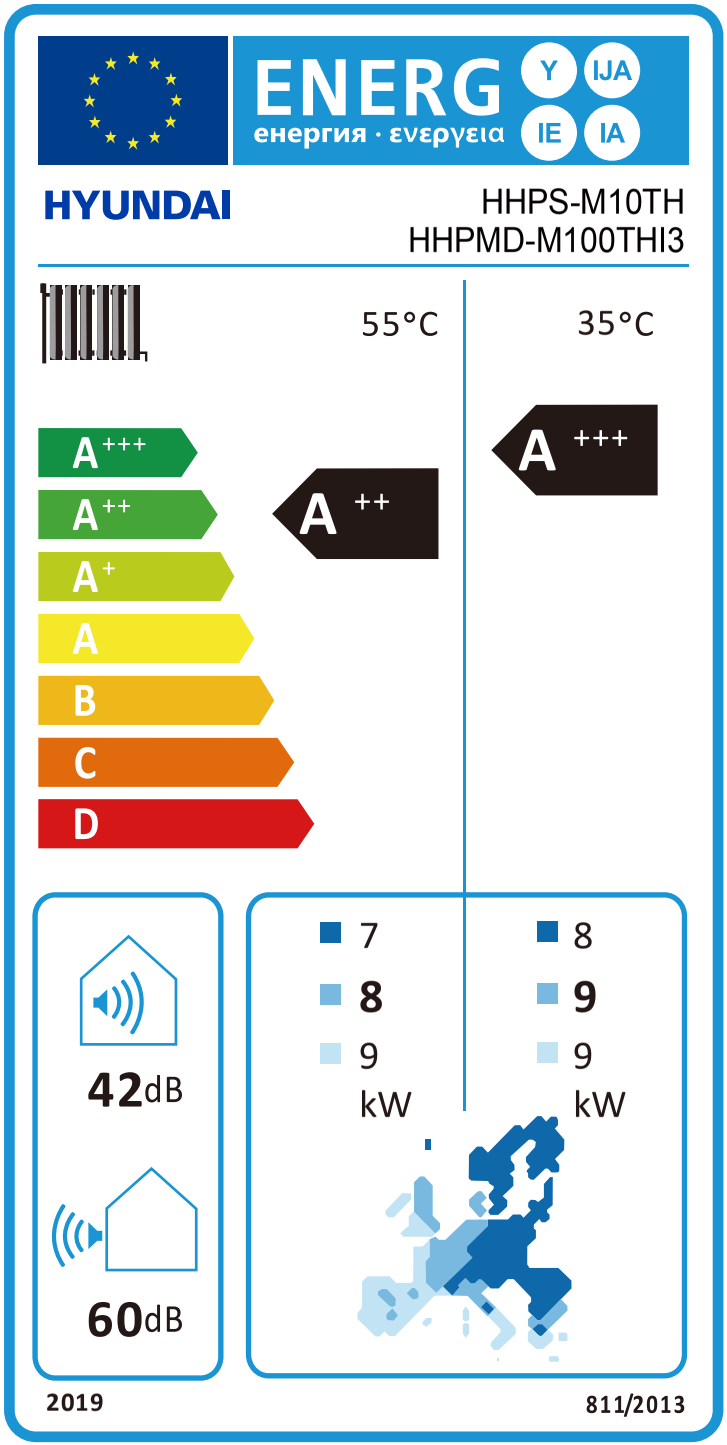
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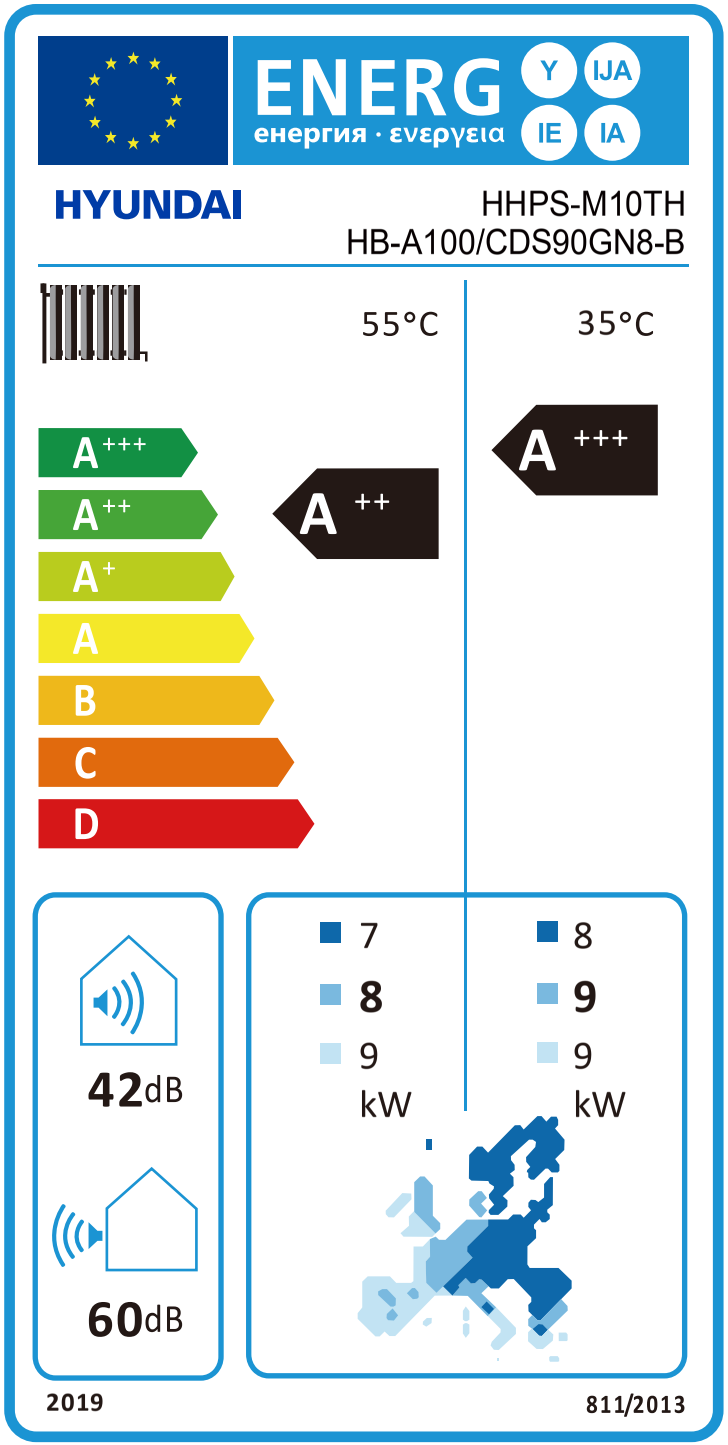
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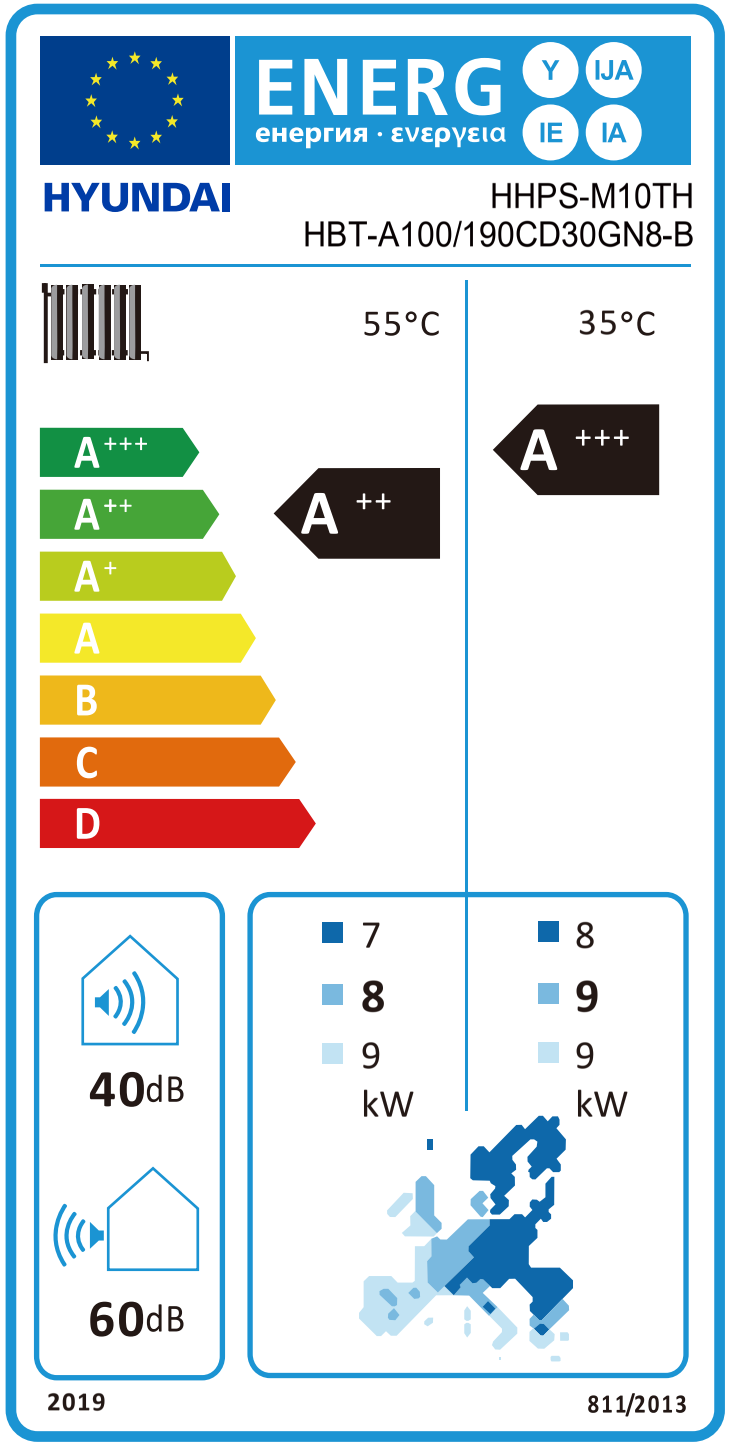
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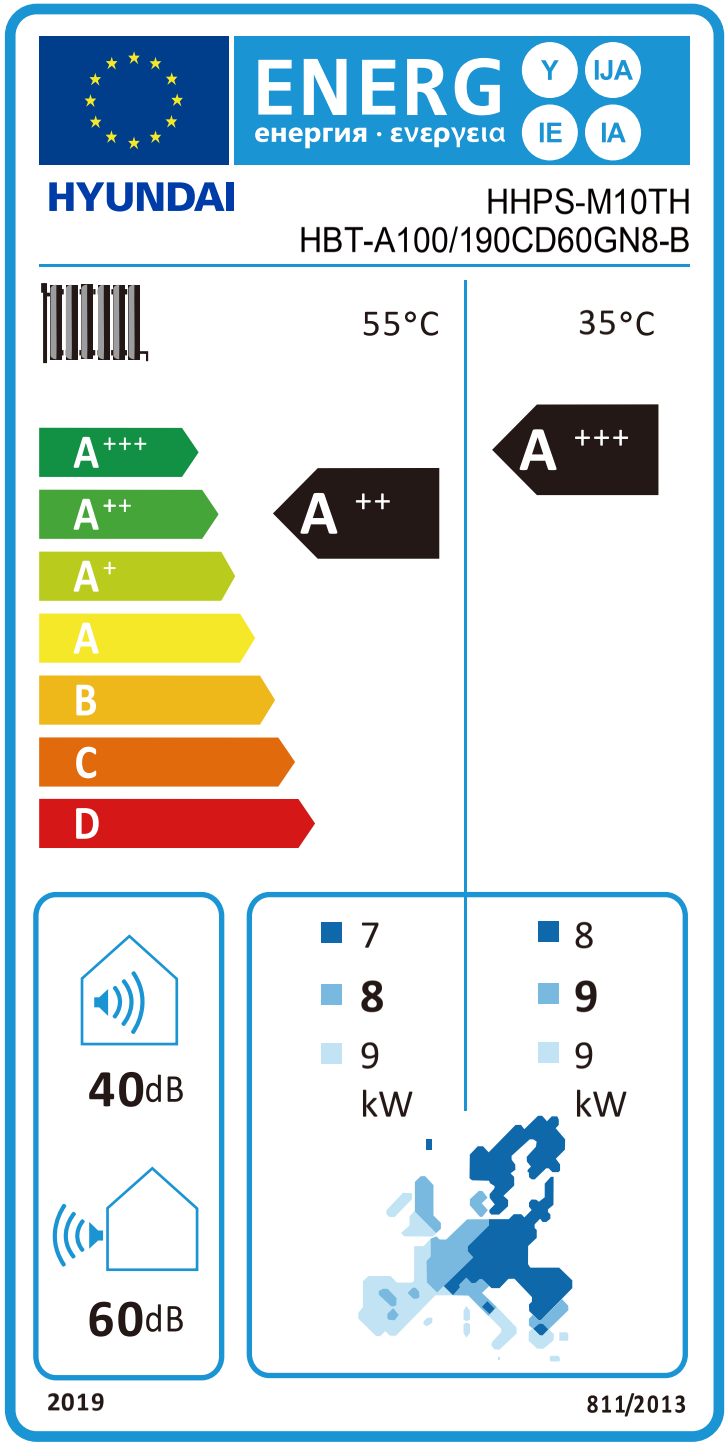
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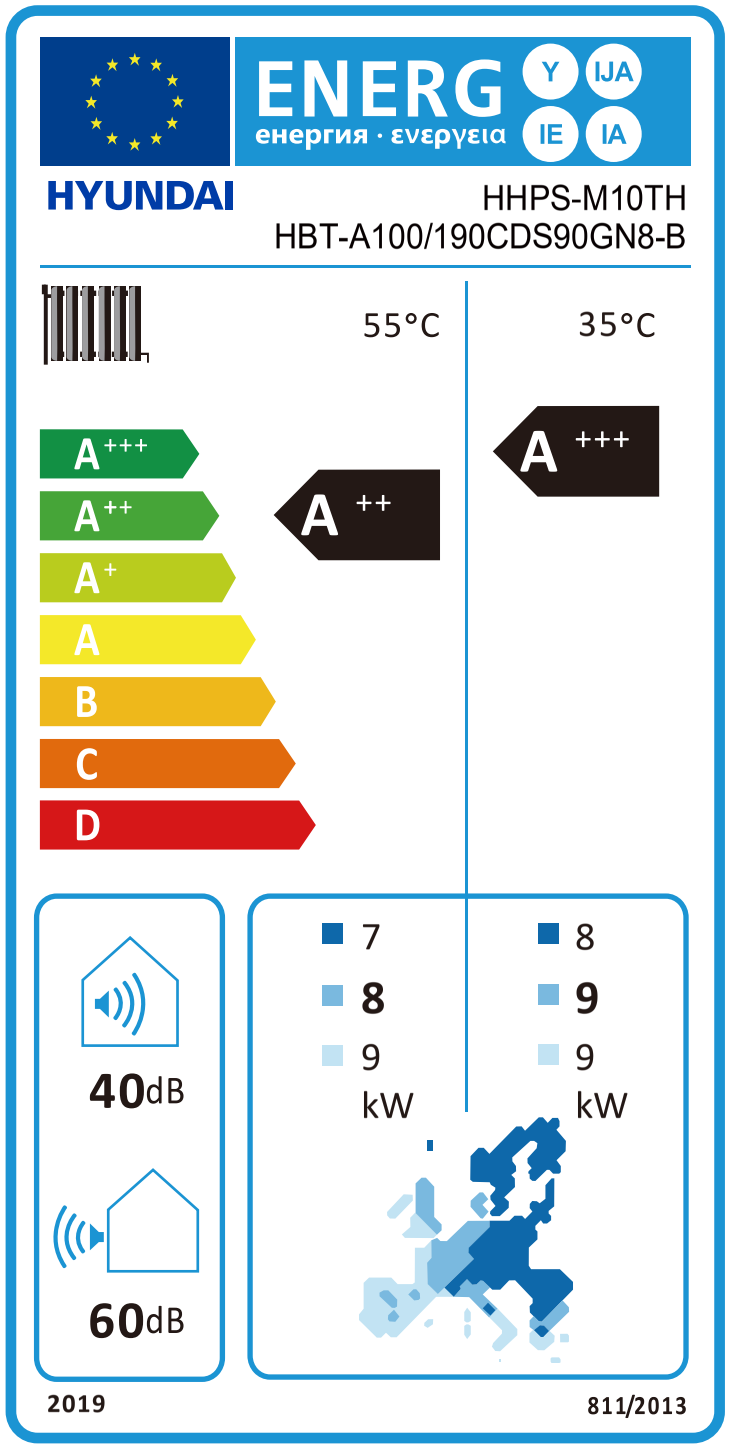
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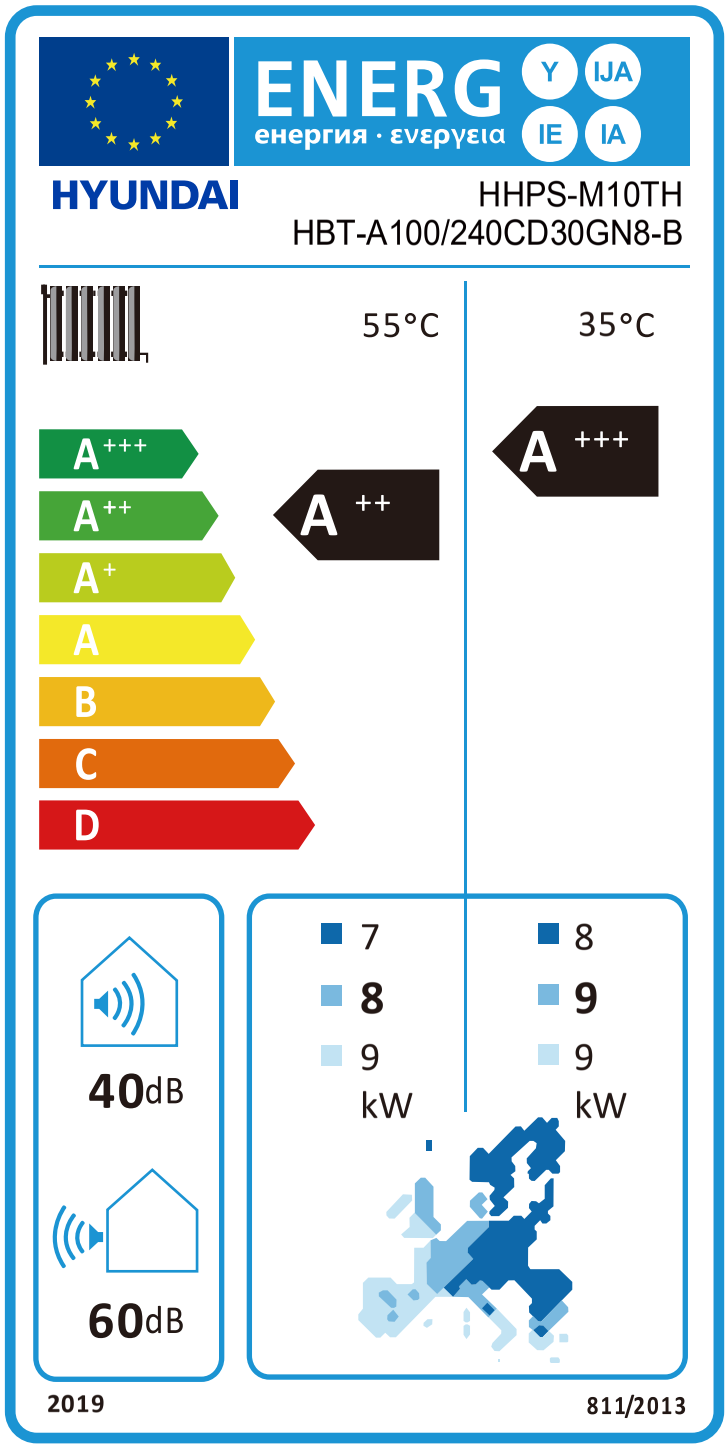
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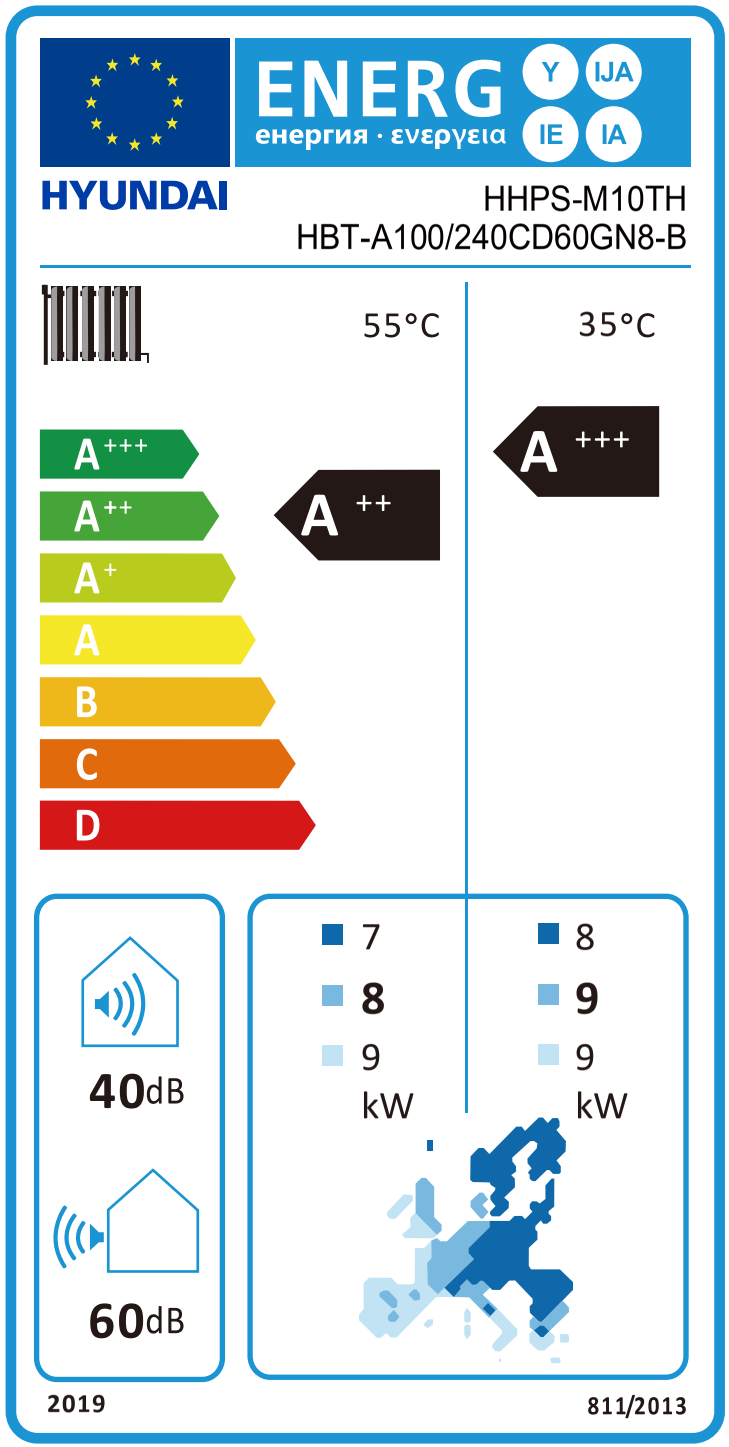
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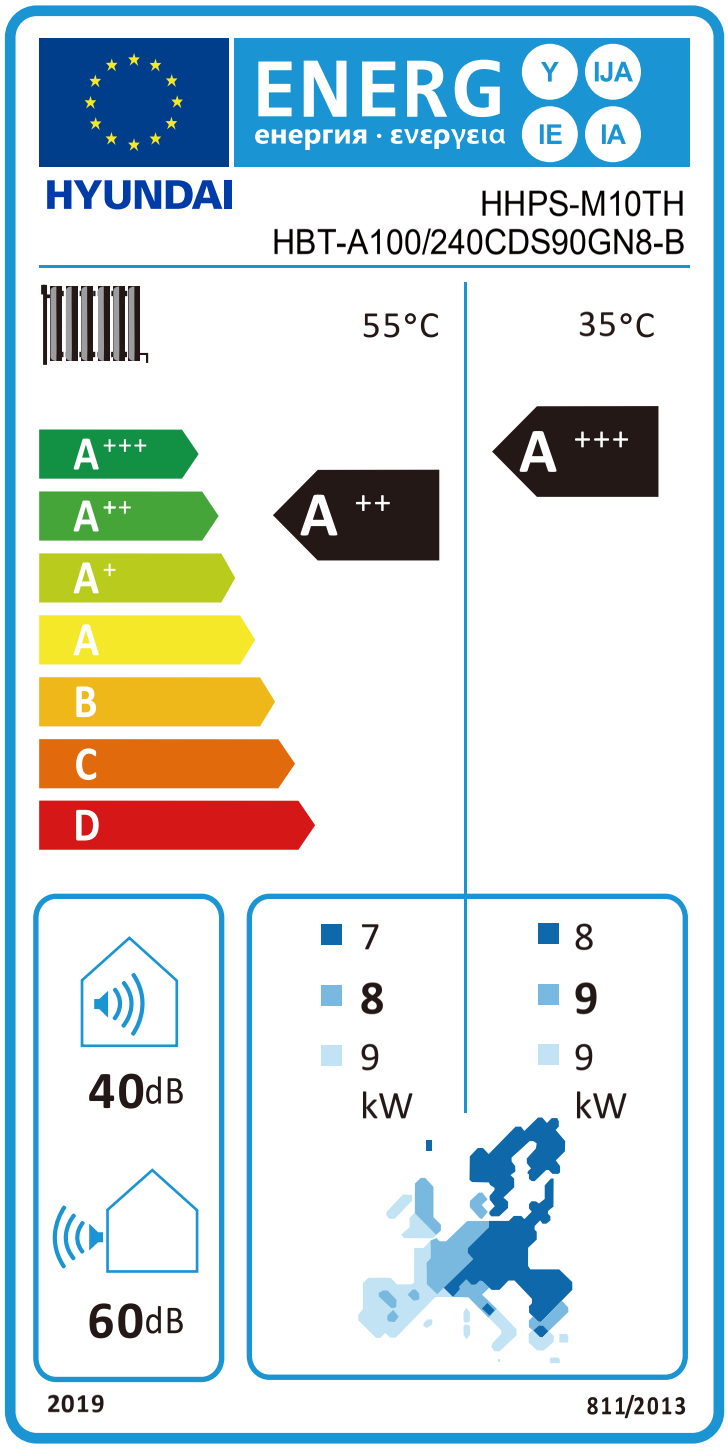
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HYUNDAI
HHPS-M10TH
HBT-A100/240CDS90GN8-B
55°C
35°C
A+++
A++
A+
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A+++
40dB
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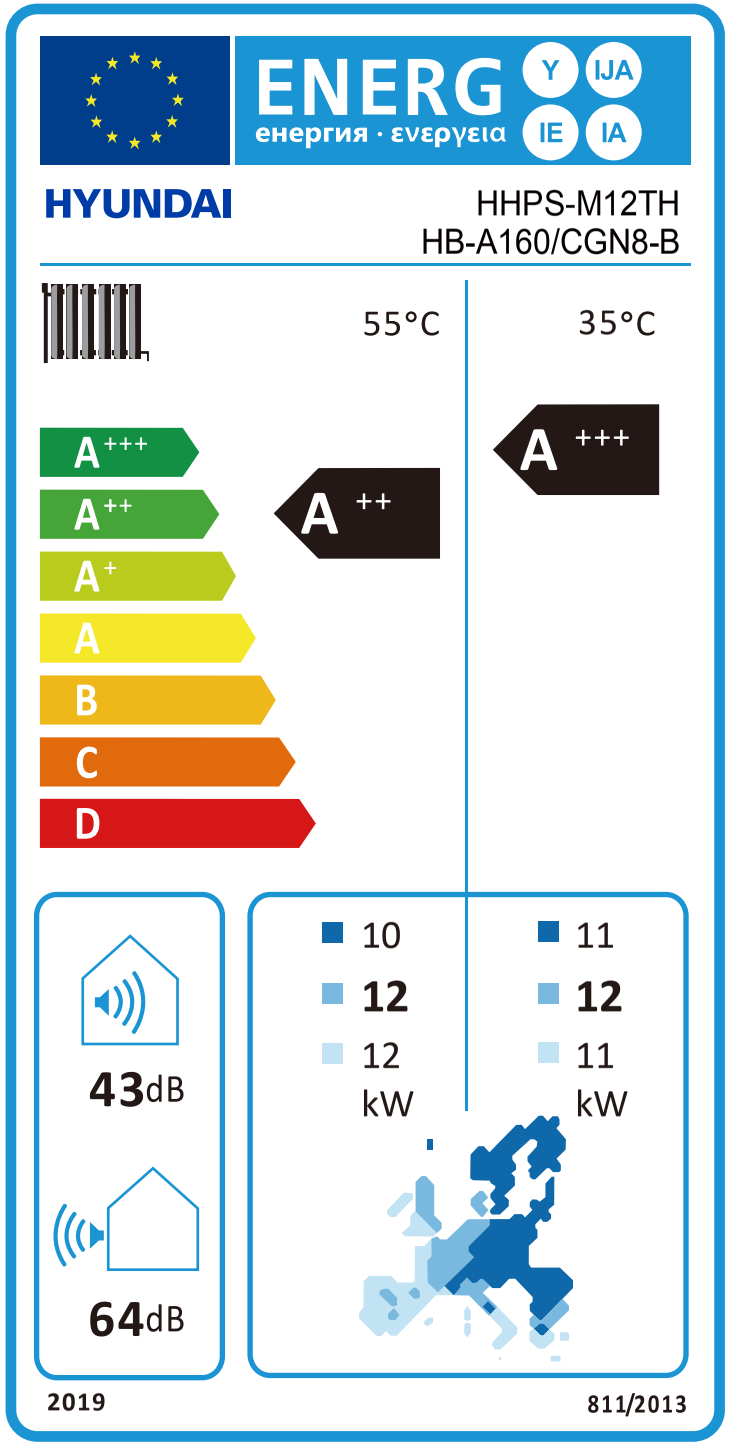
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55°C
35°C
A +++
A ++
A +
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A +++
43dB
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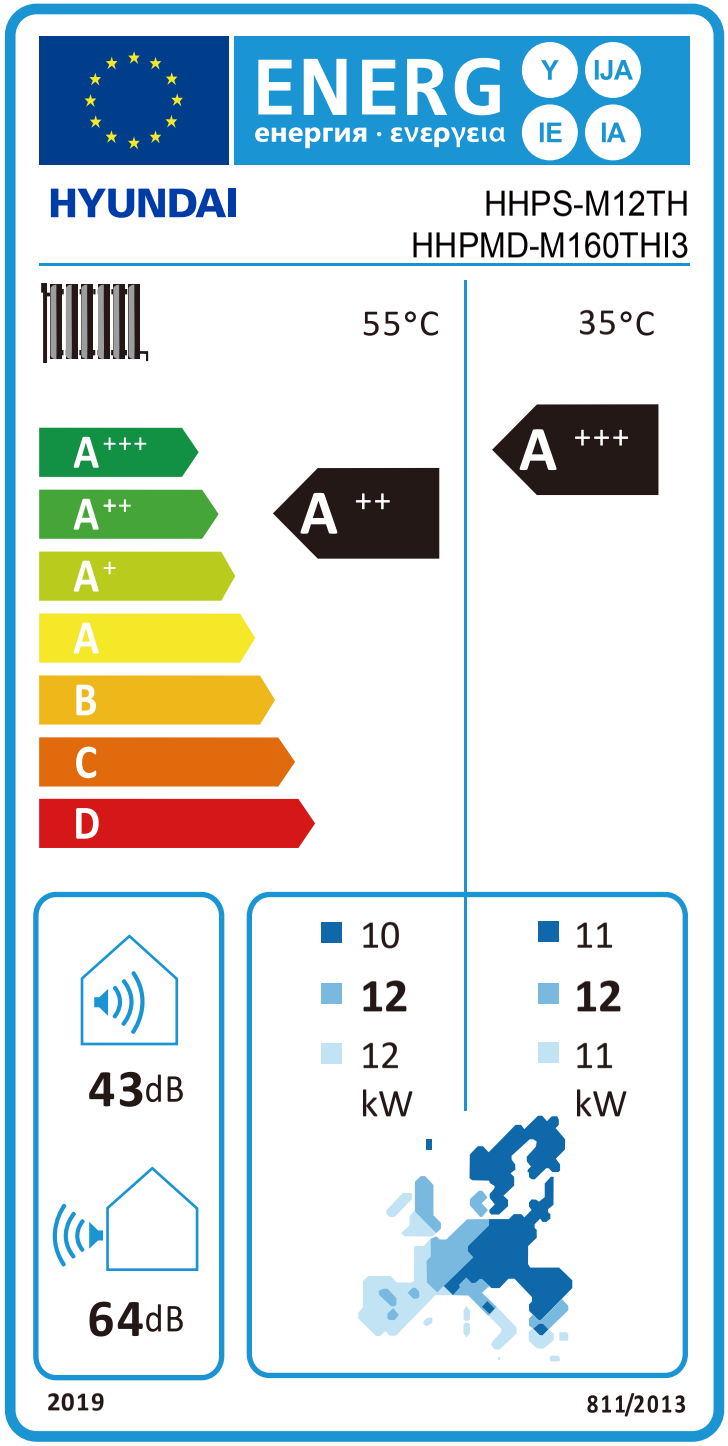
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A +++
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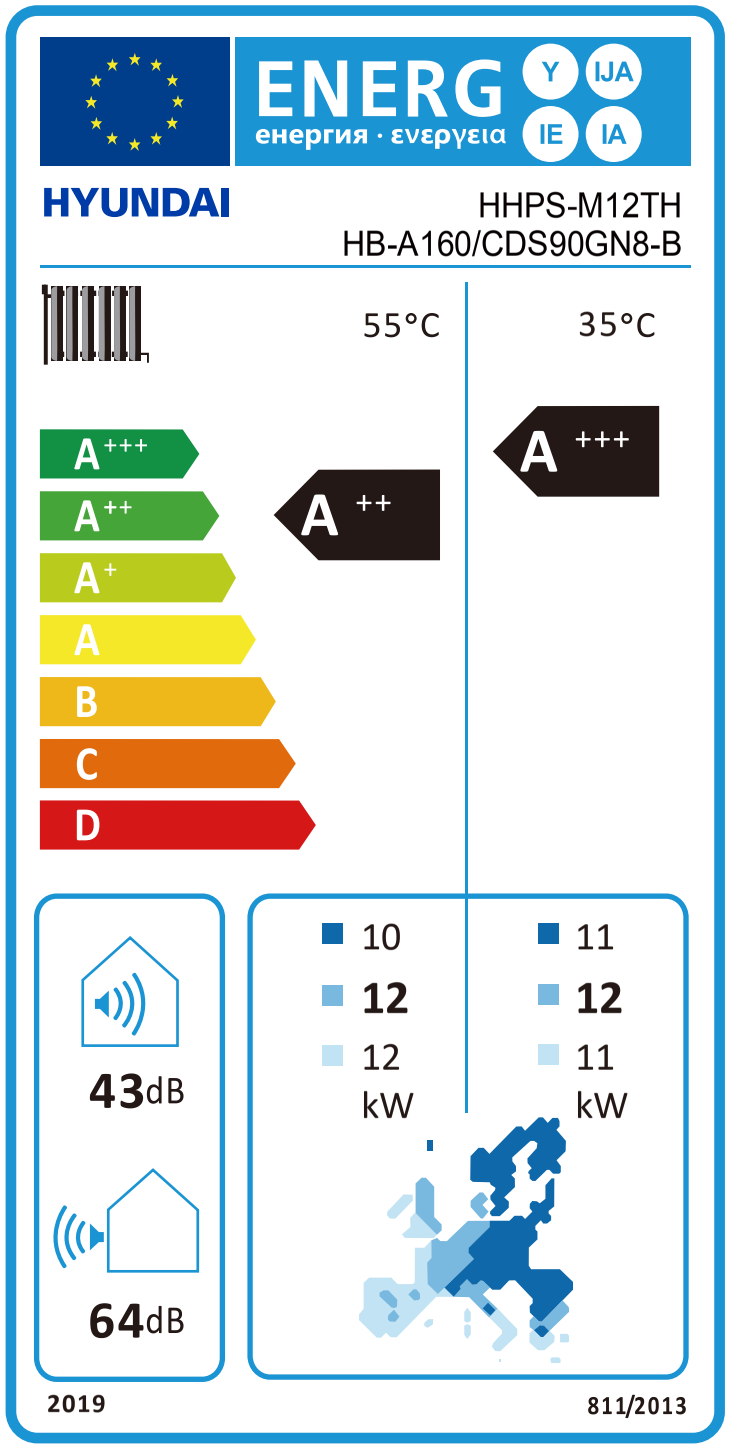
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HB-A160/CDS90GN8-B
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35°C
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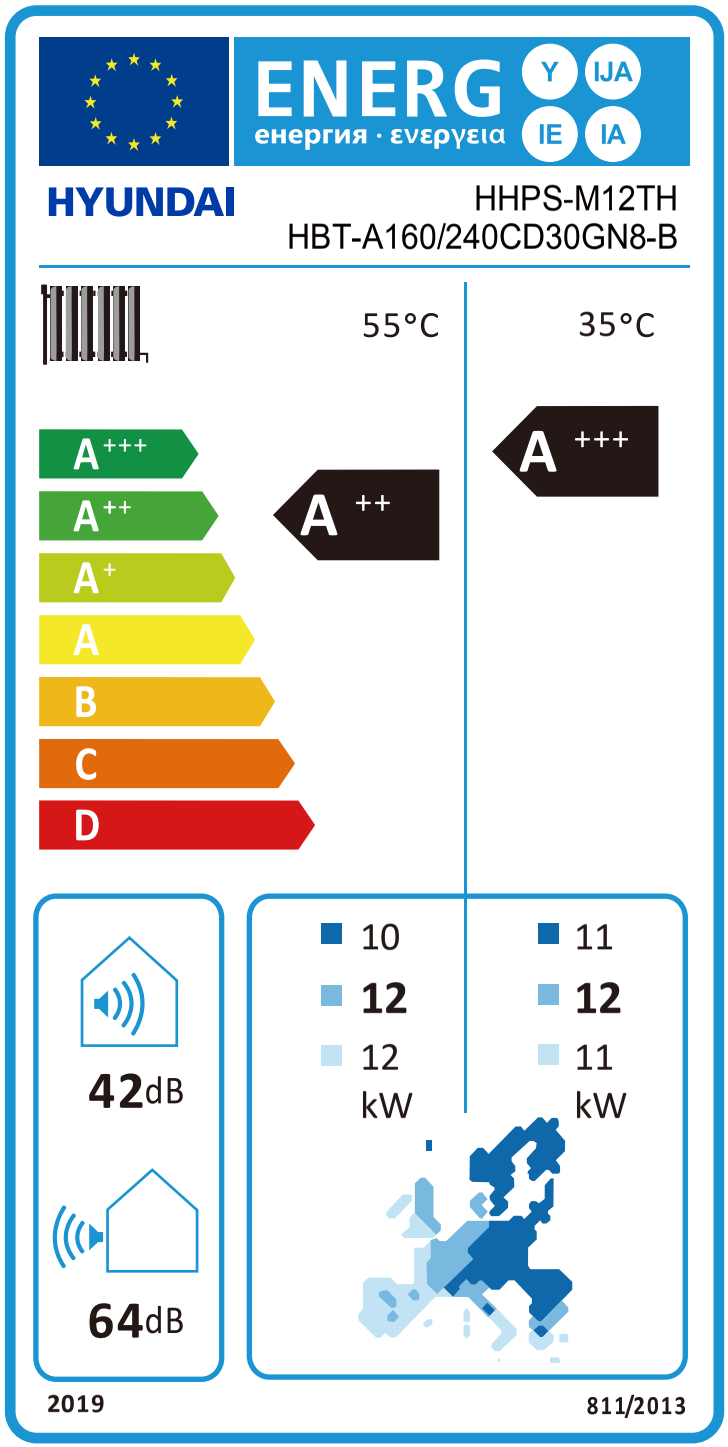
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55°C
35°C
A +++
A ++
A +
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A +++
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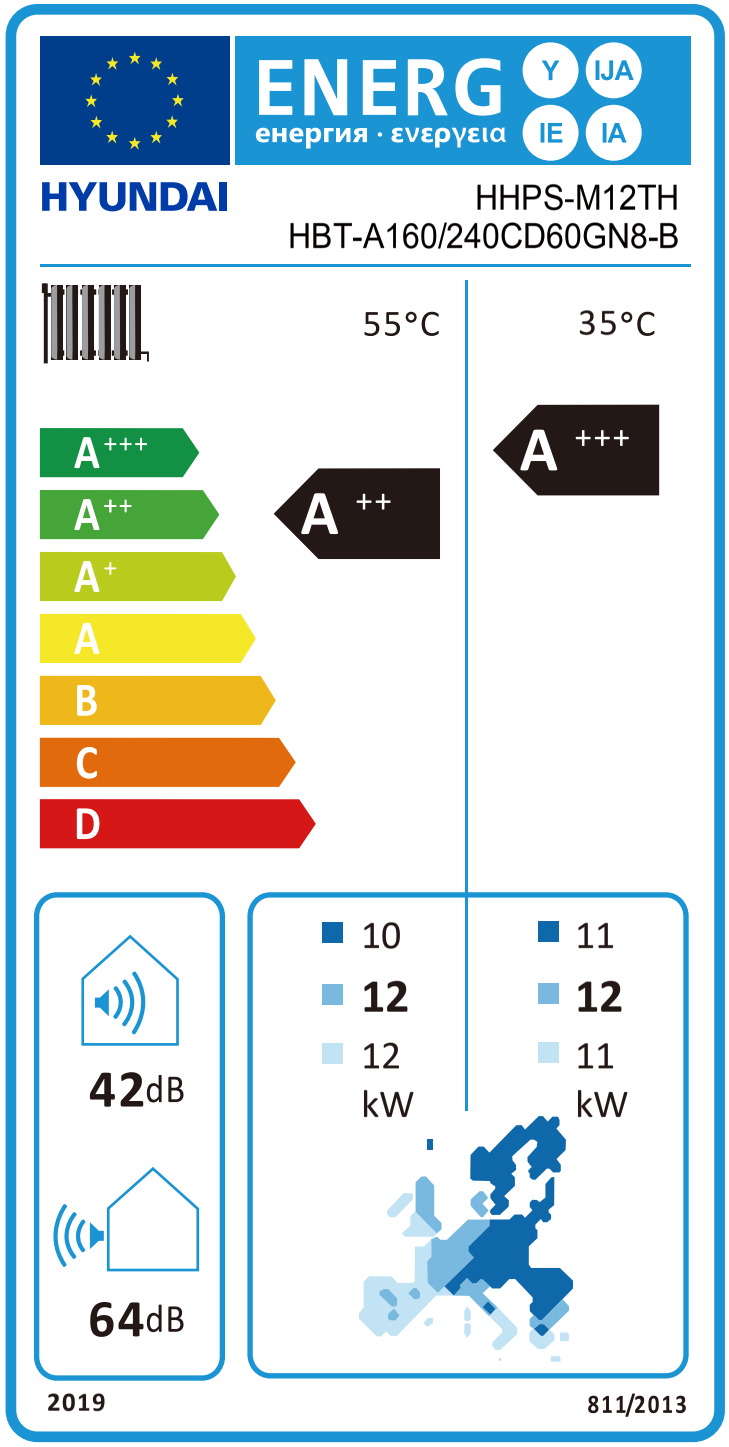
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A+++
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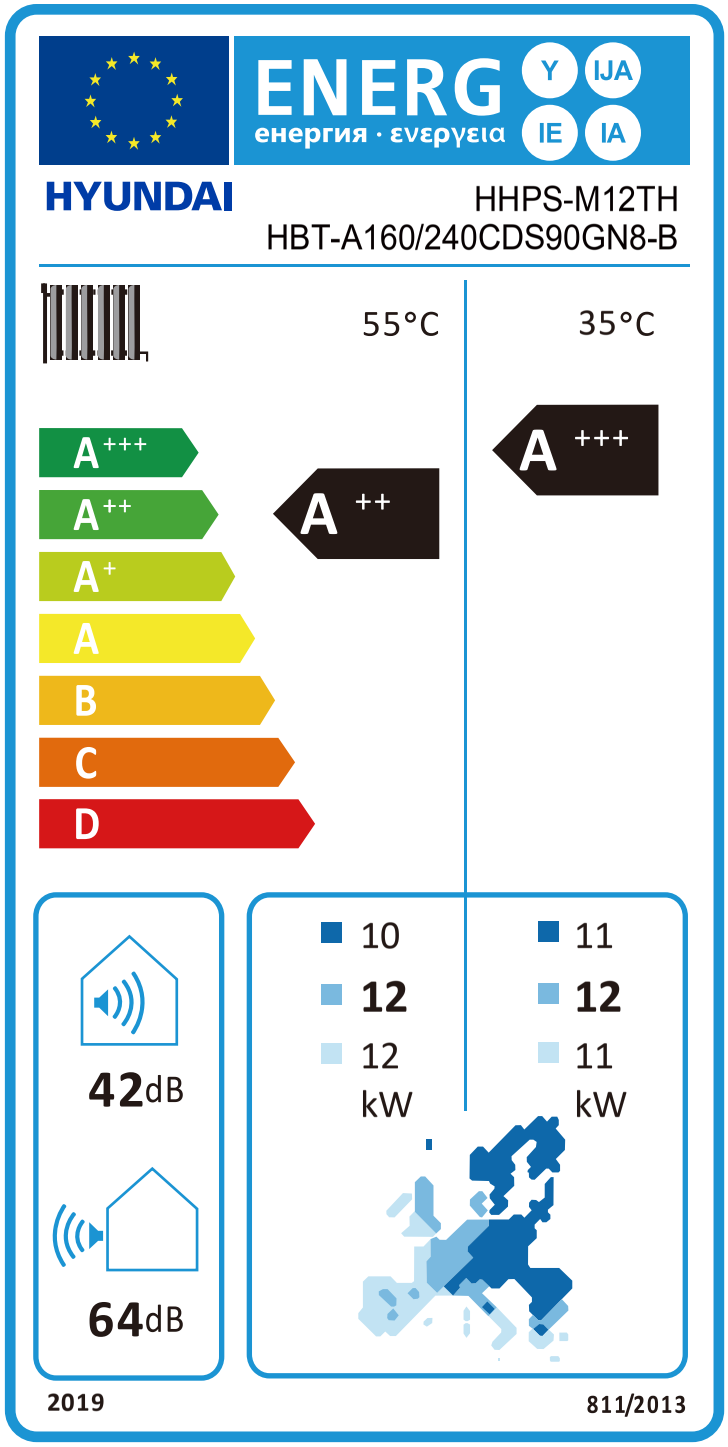
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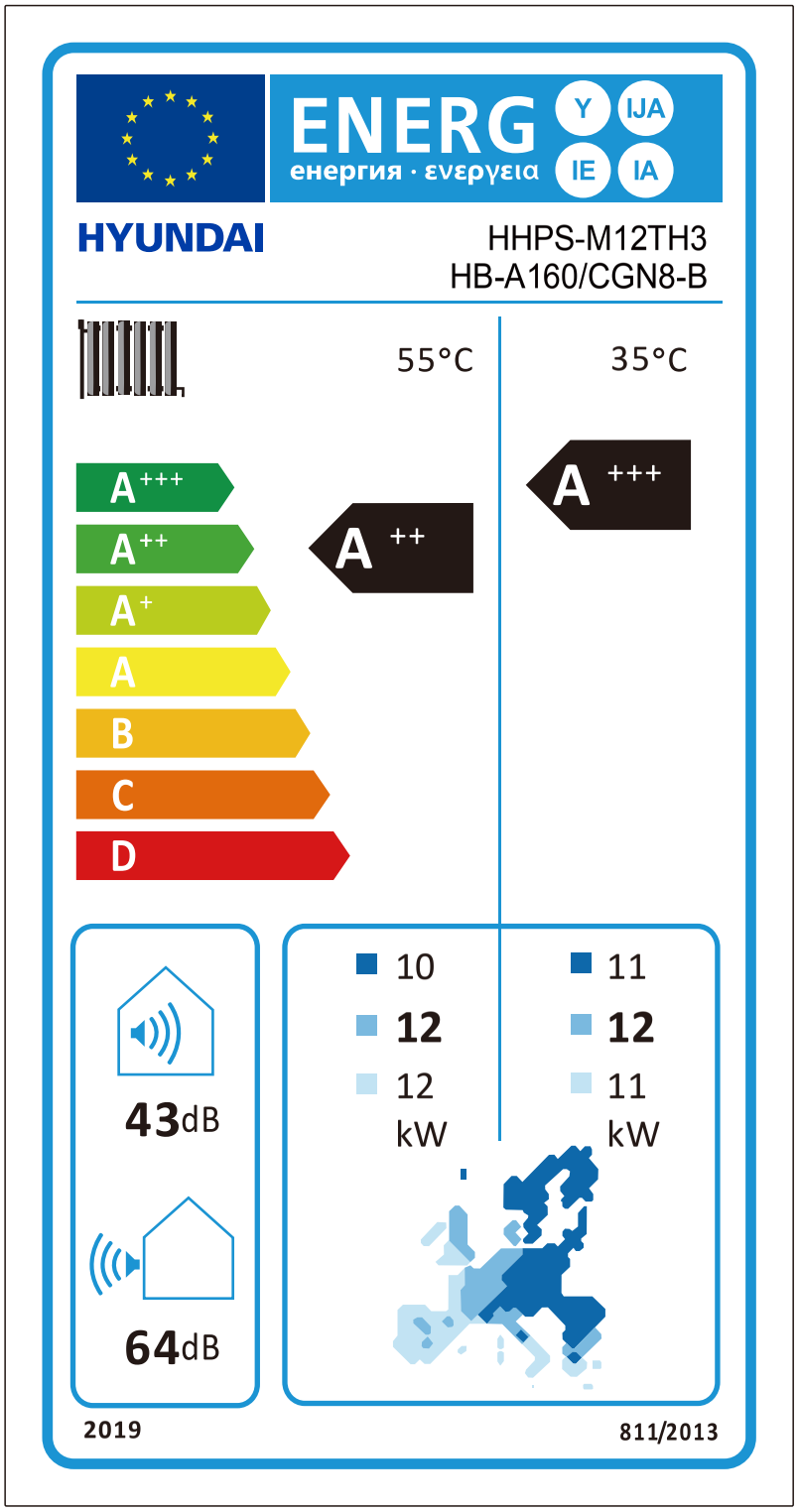
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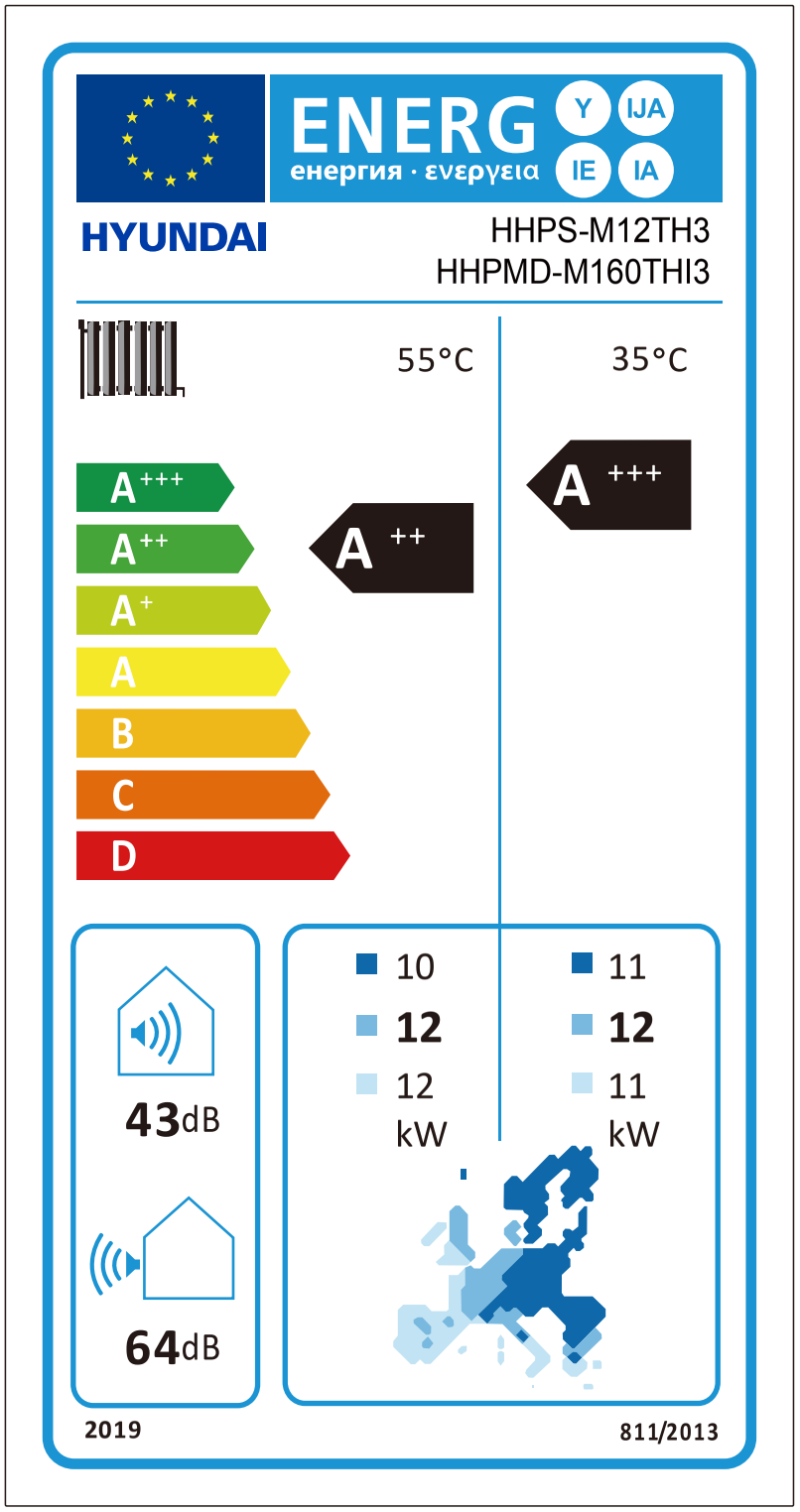
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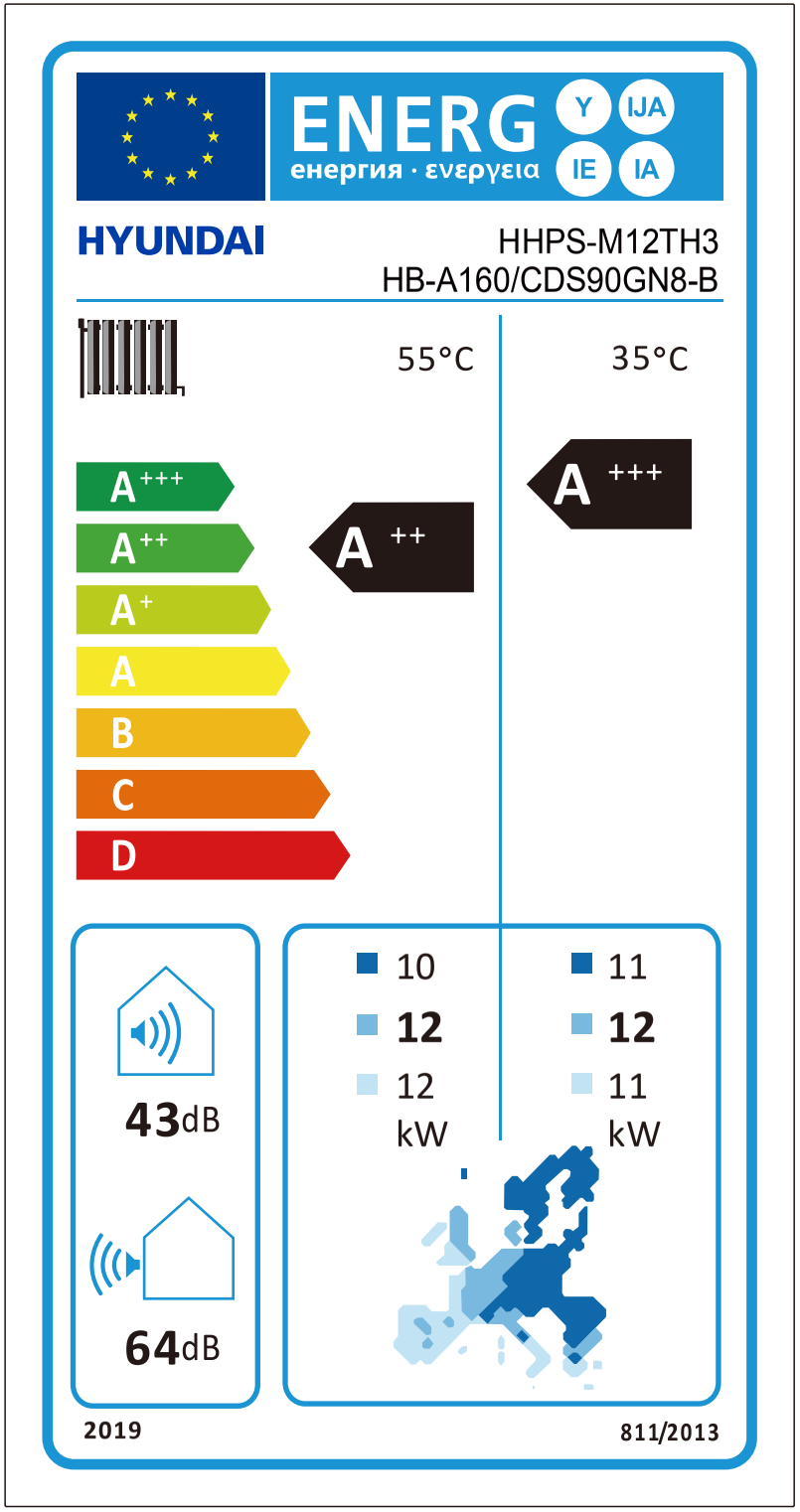
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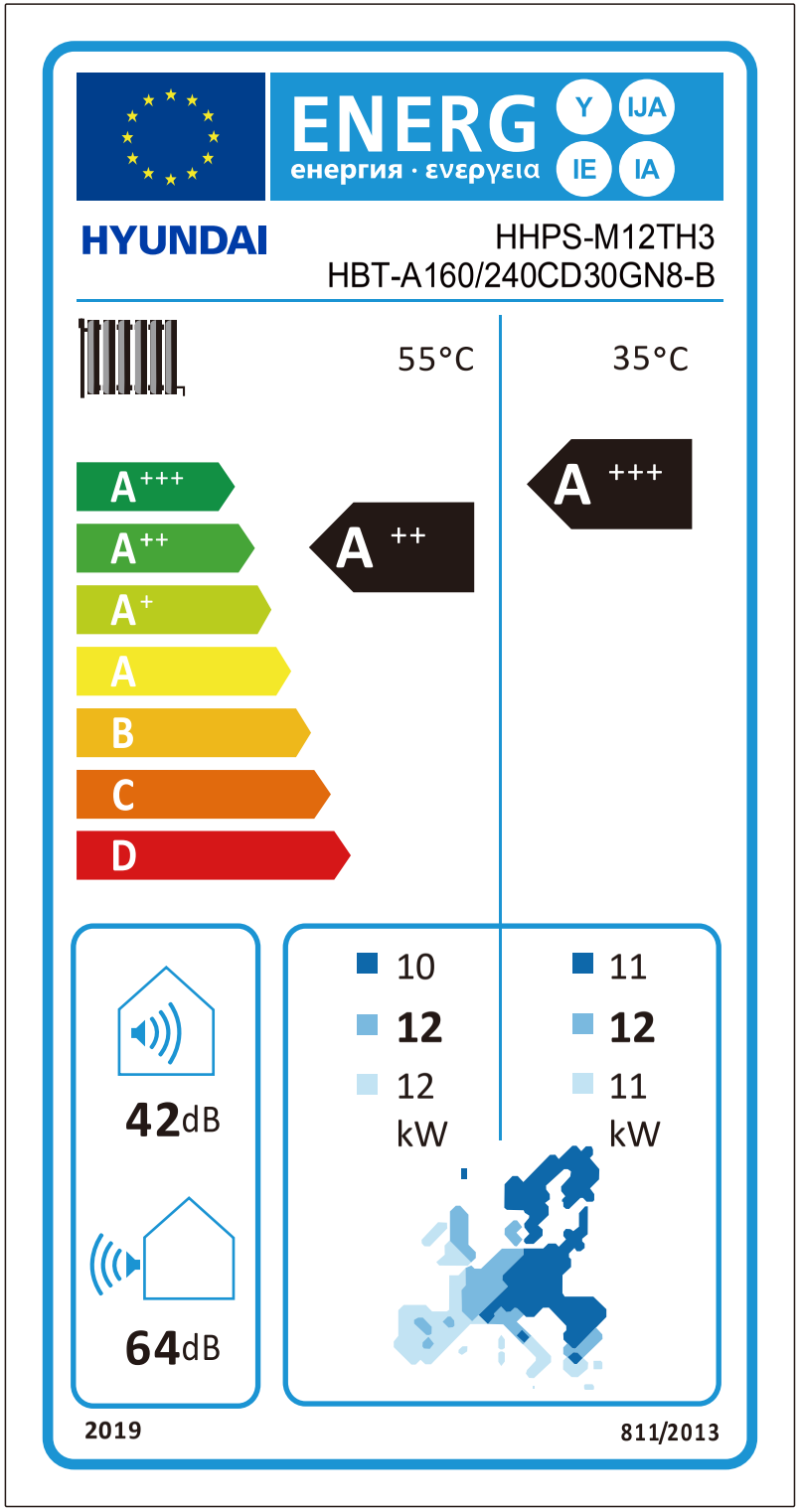
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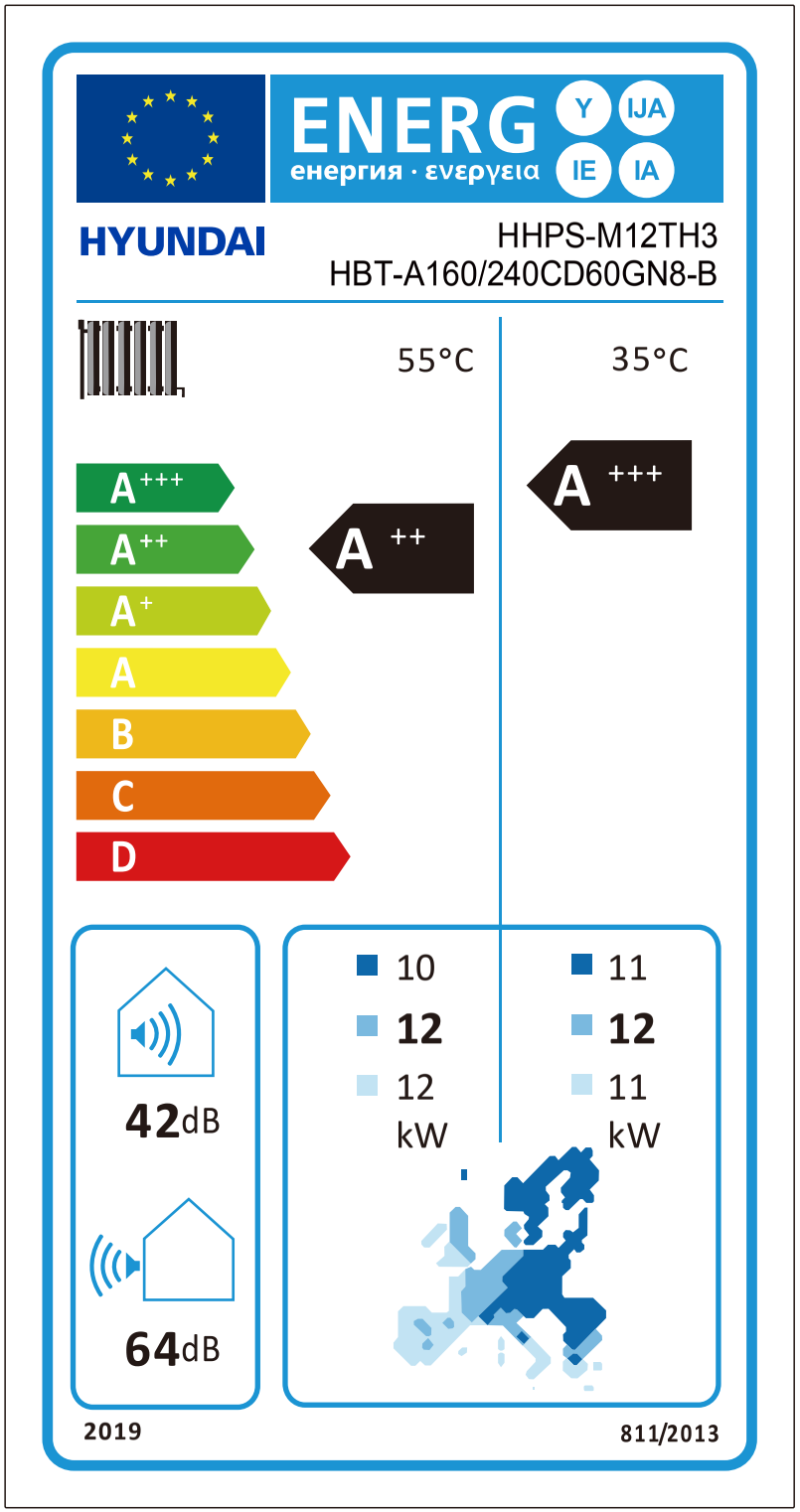
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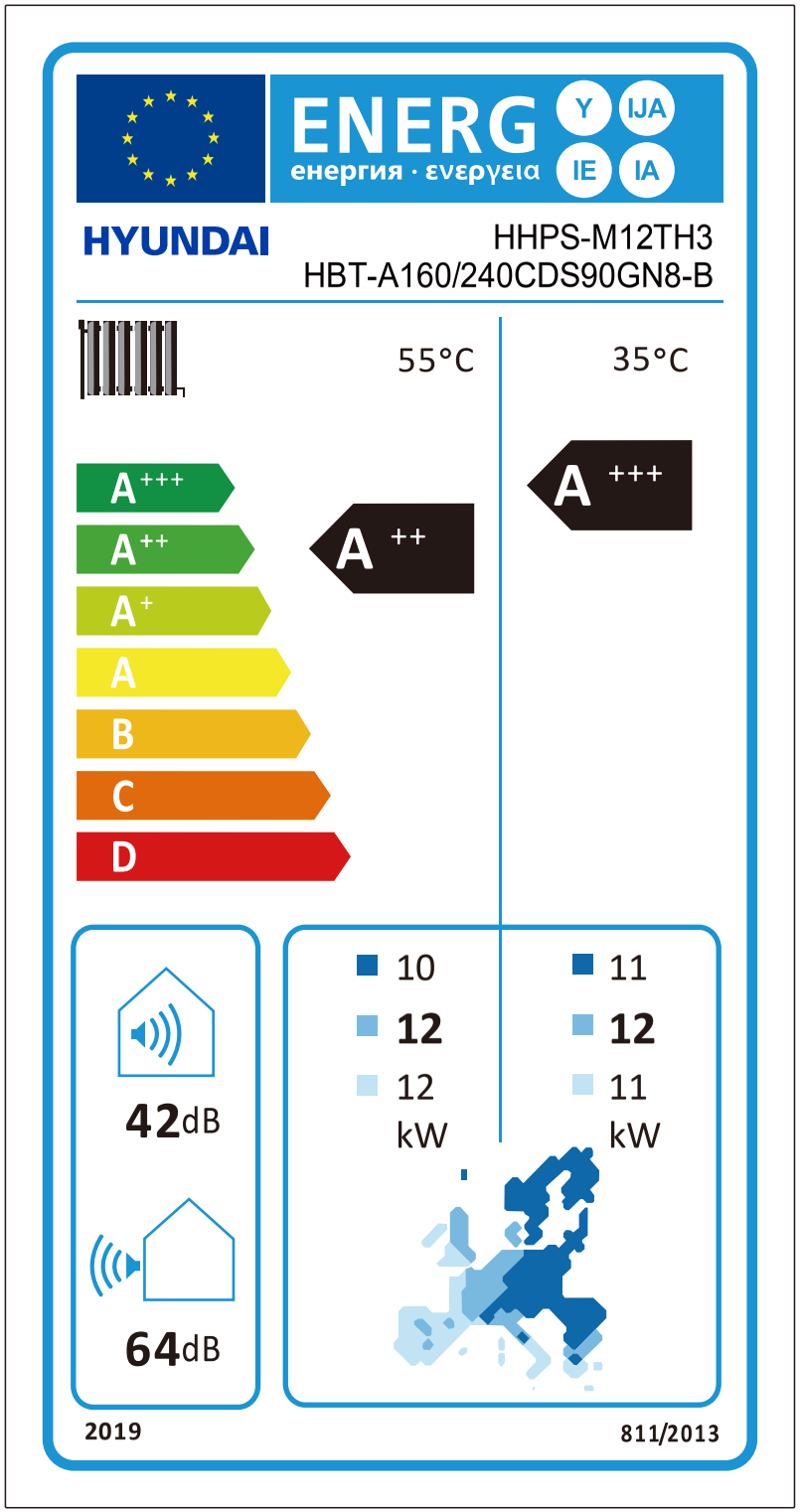
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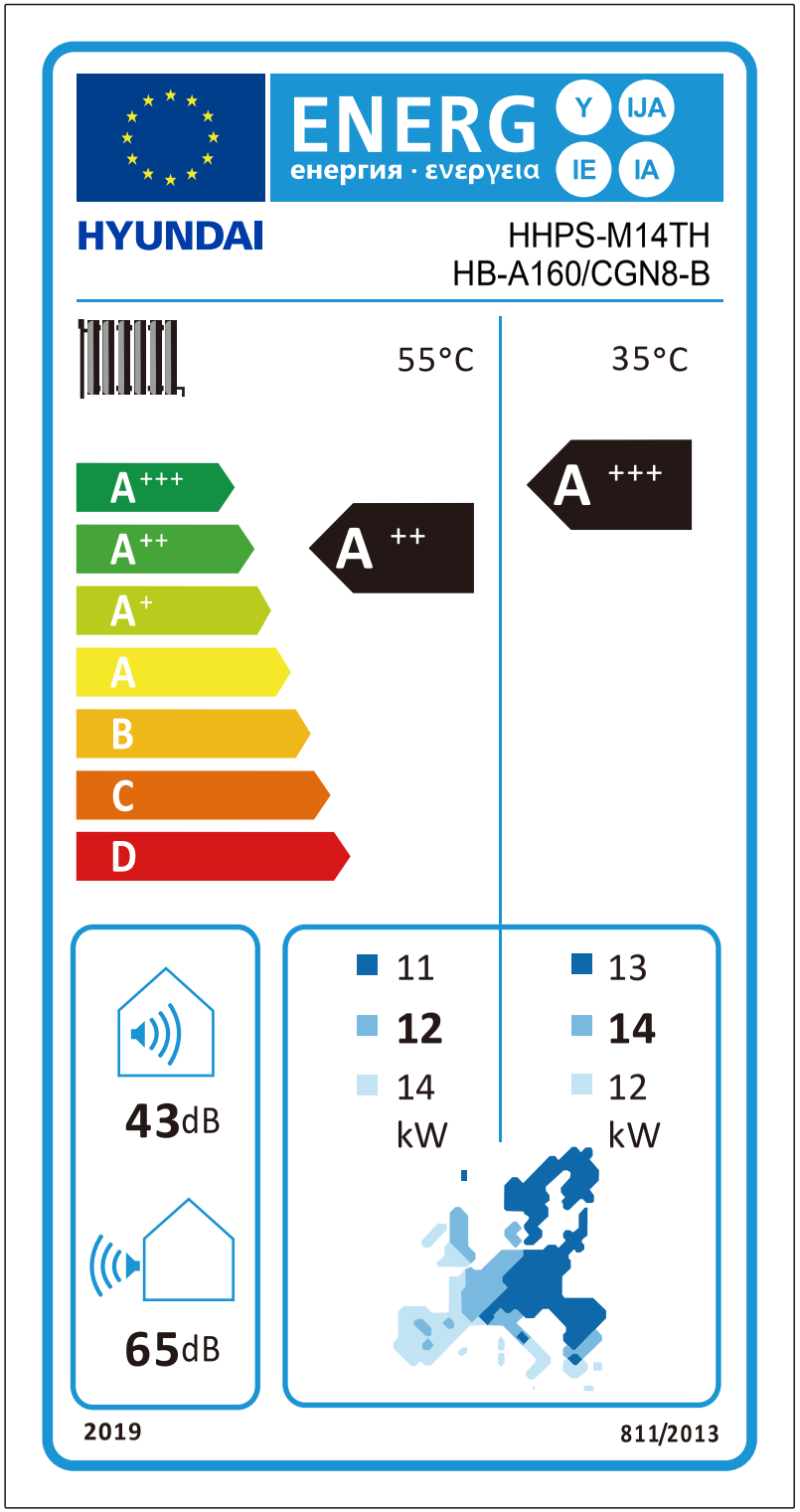
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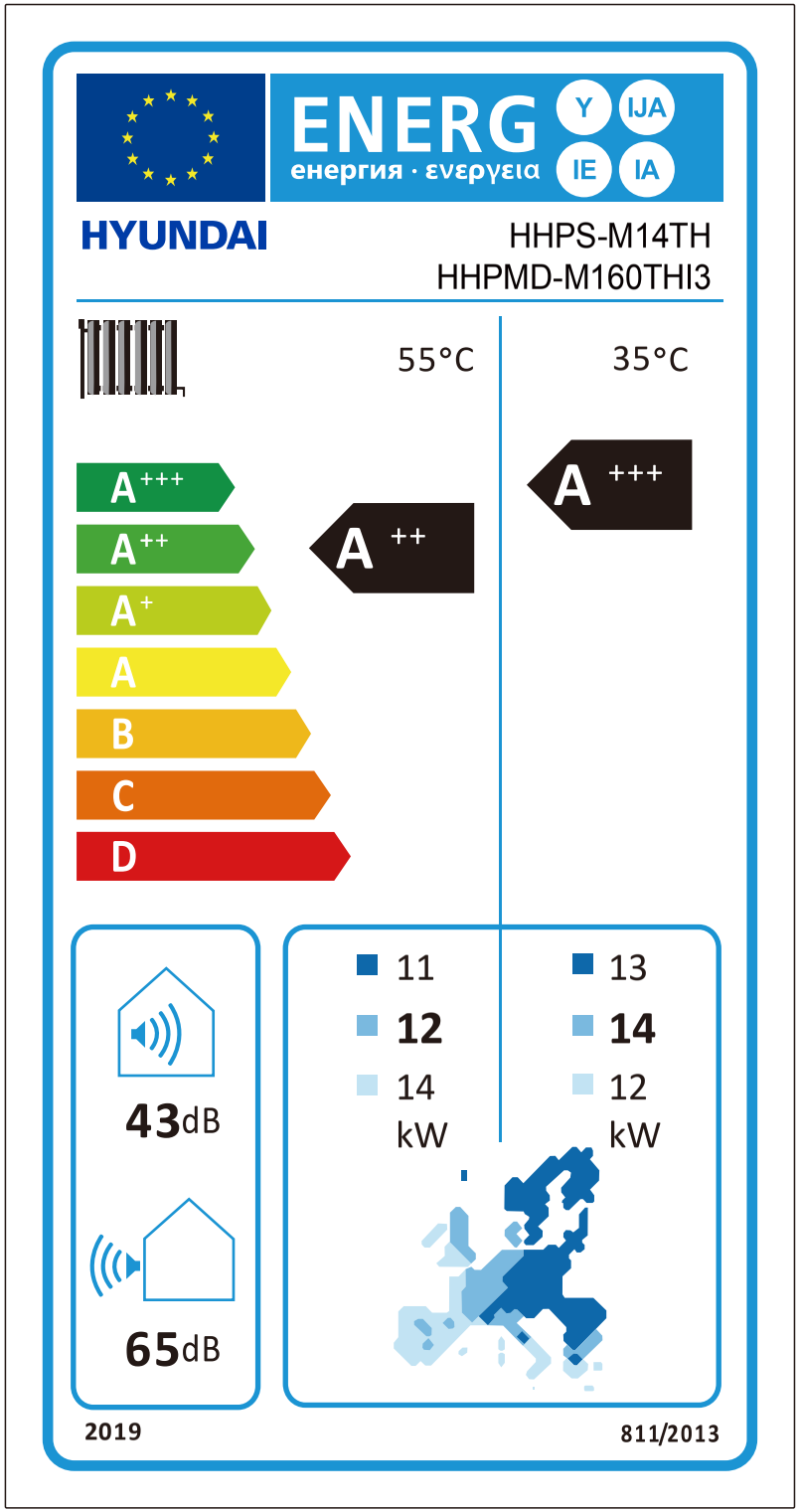
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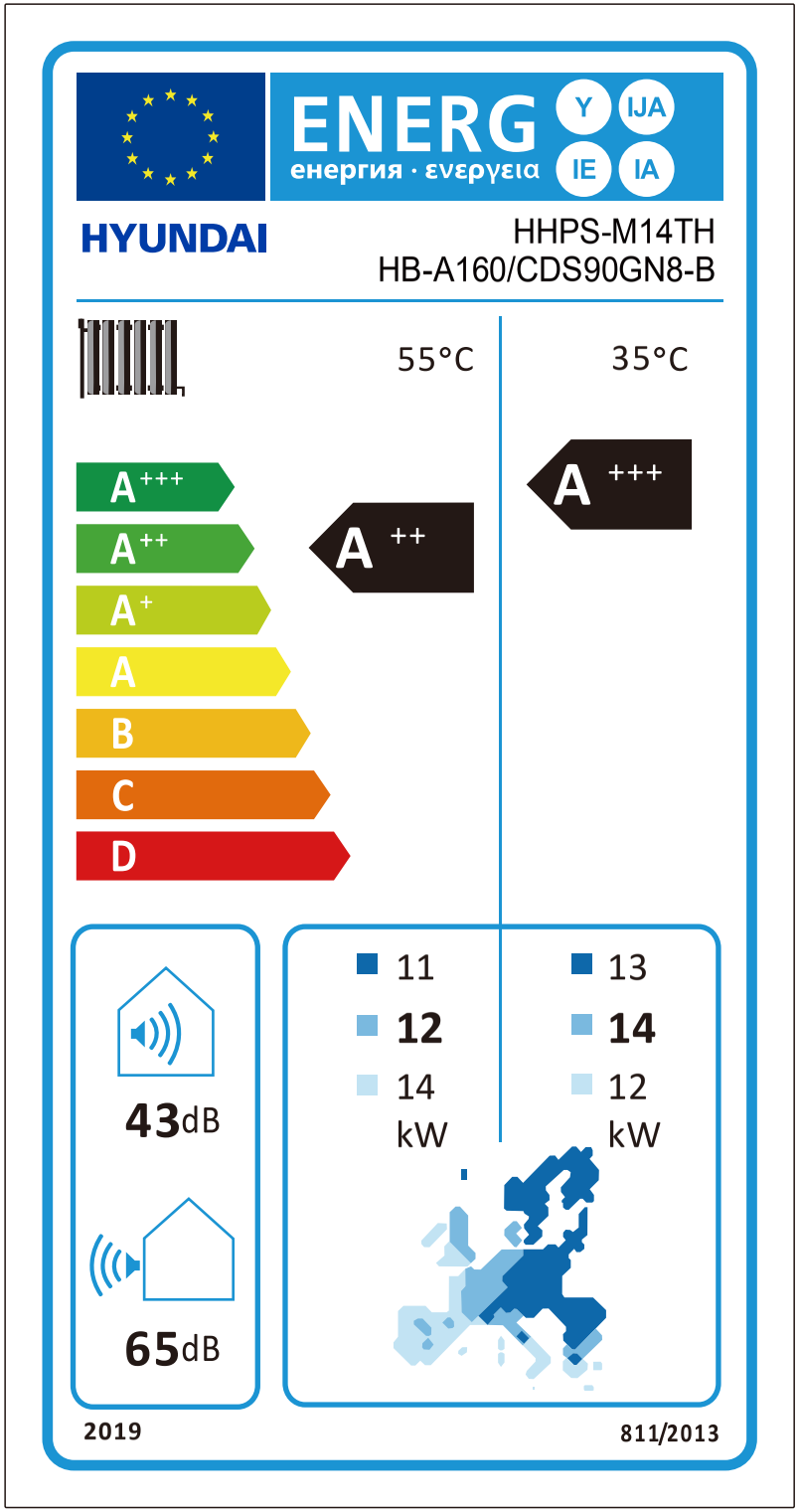
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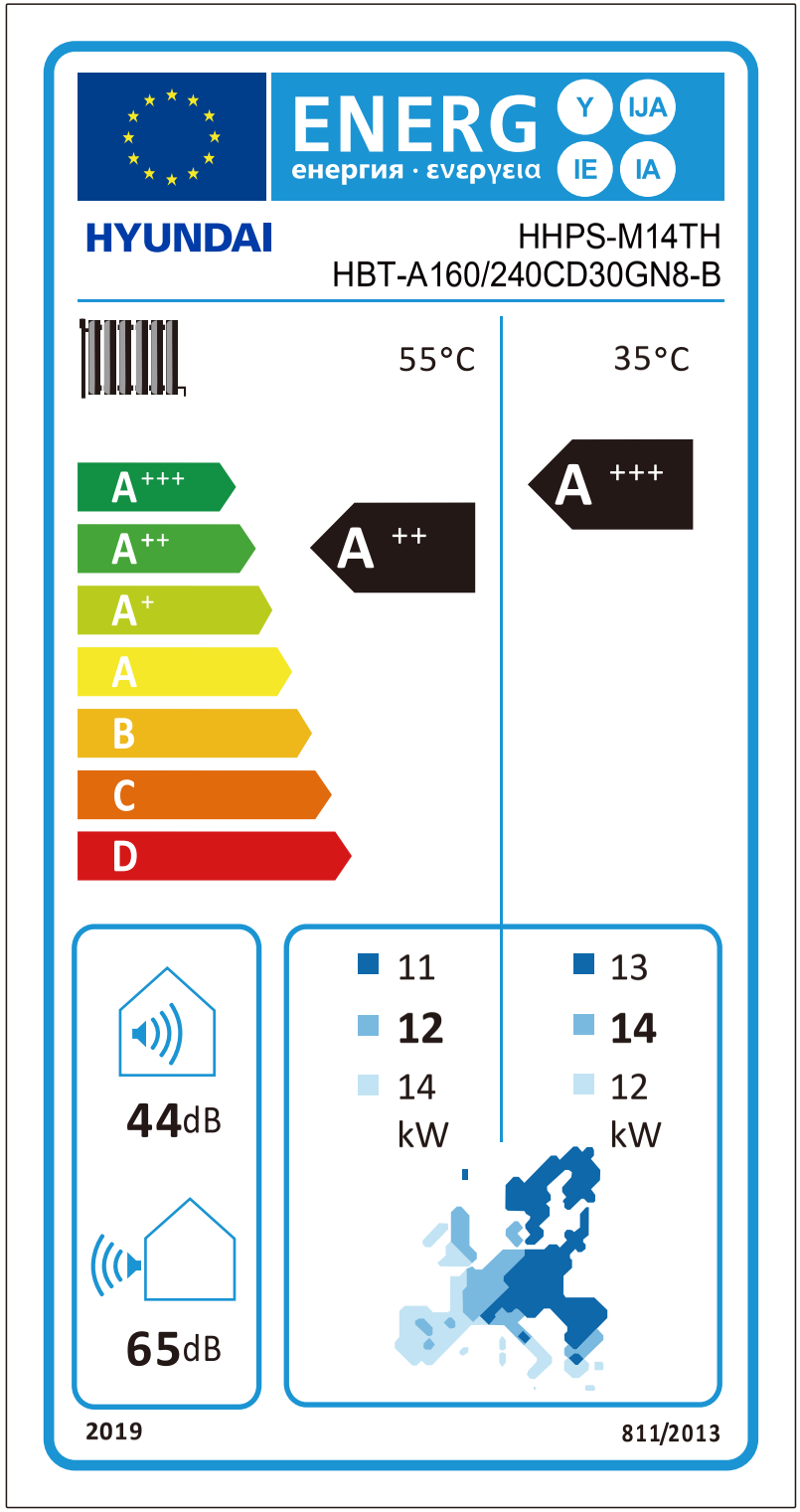
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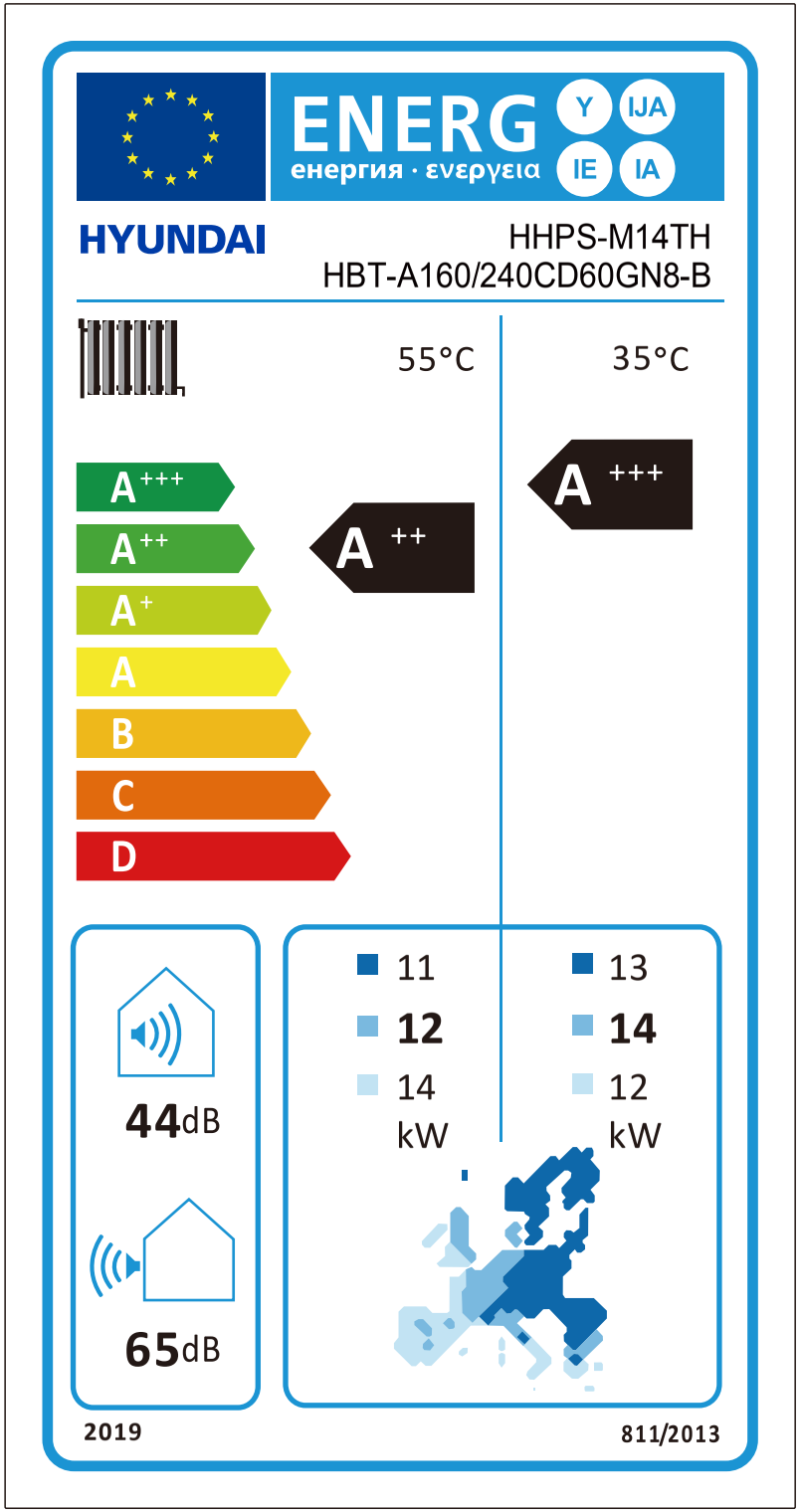
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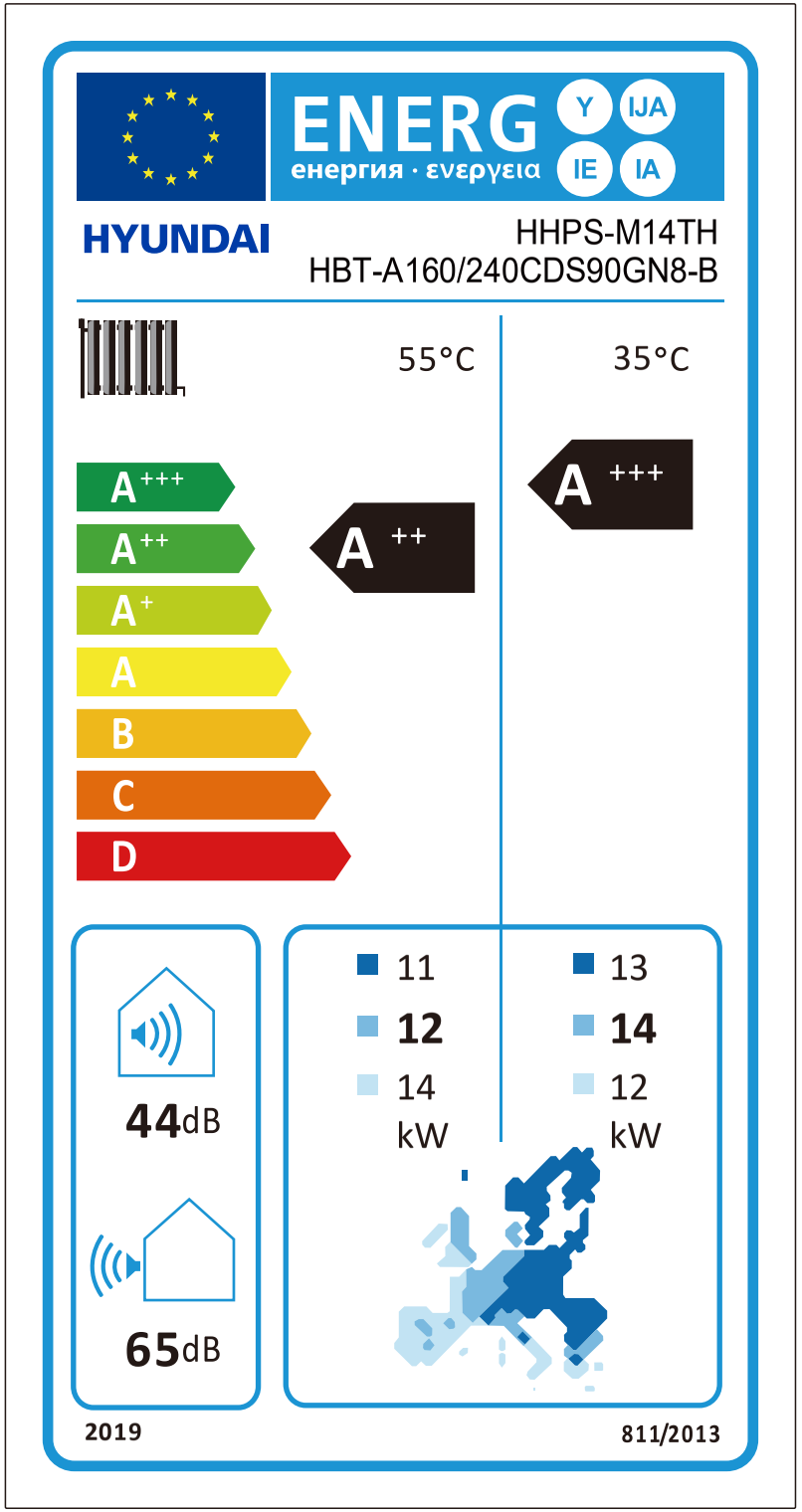
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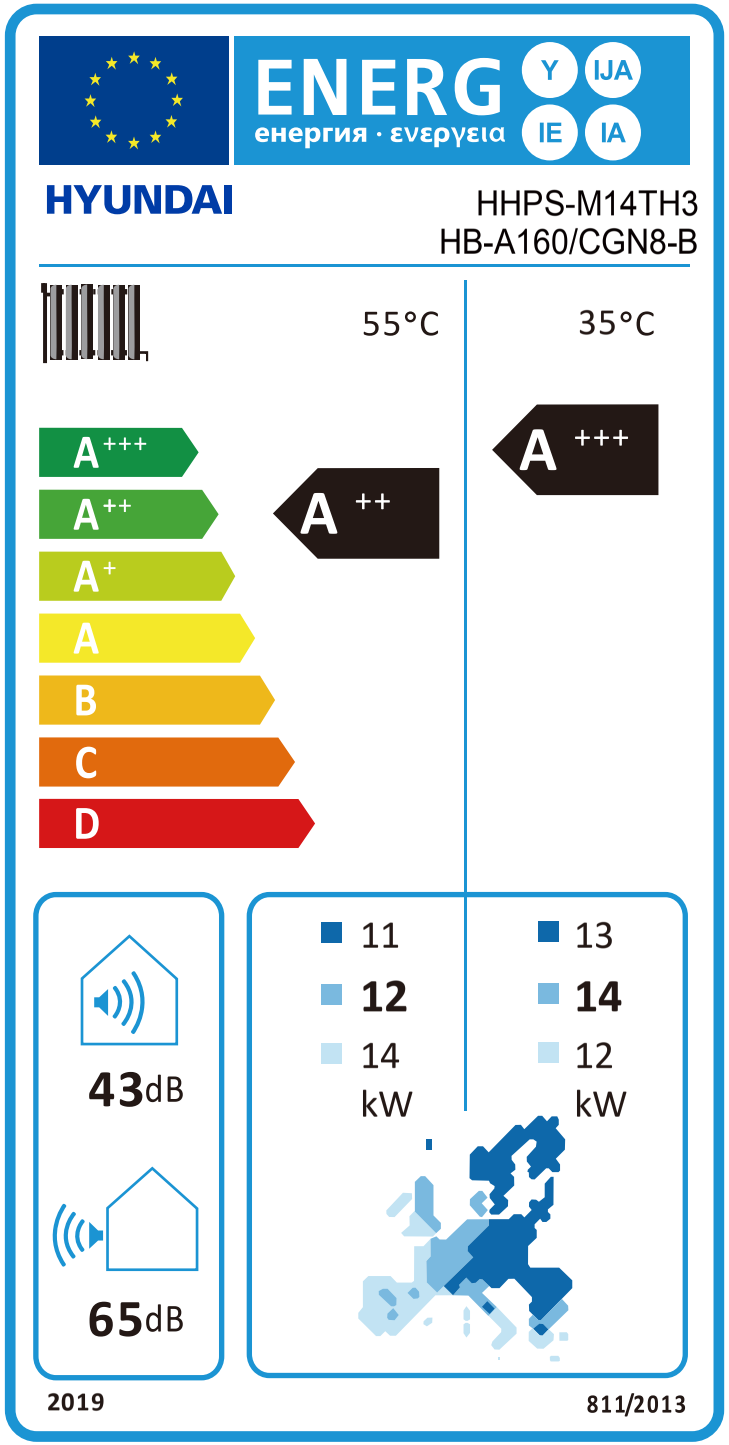
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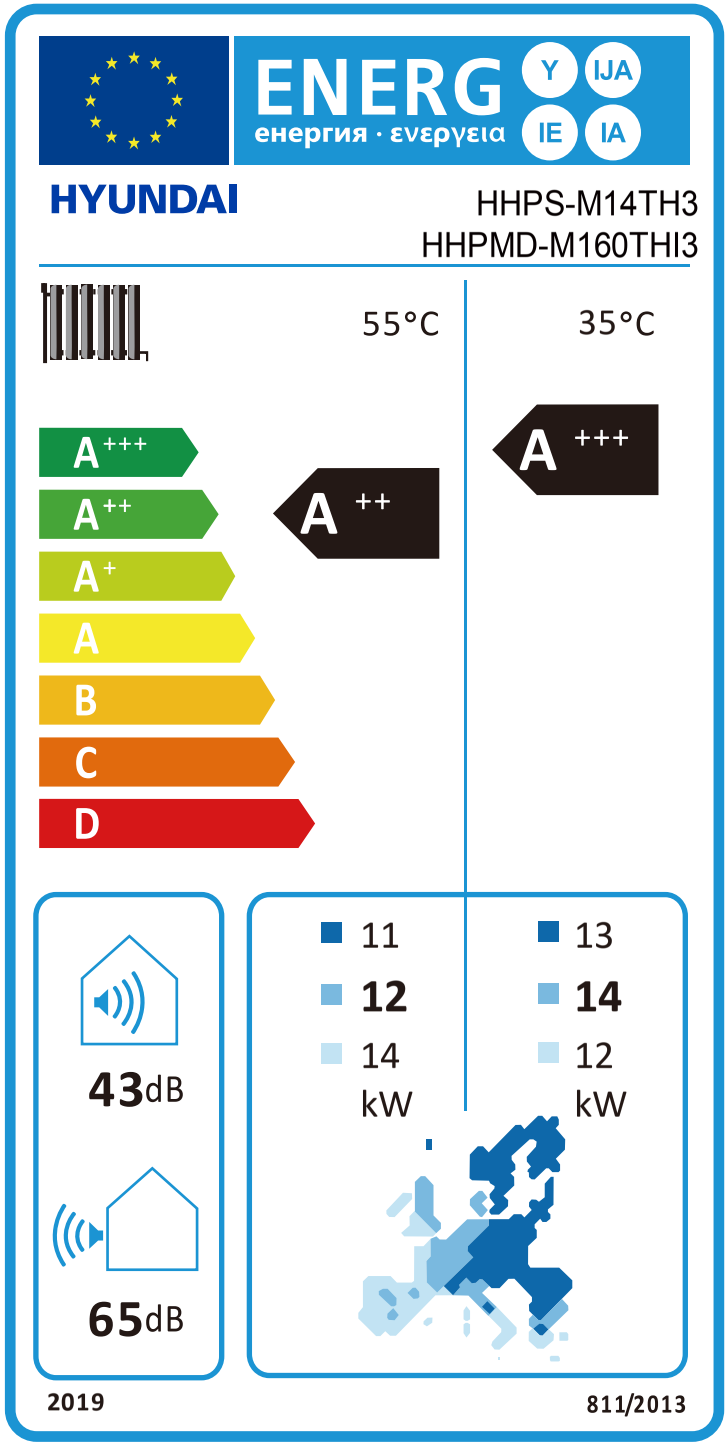
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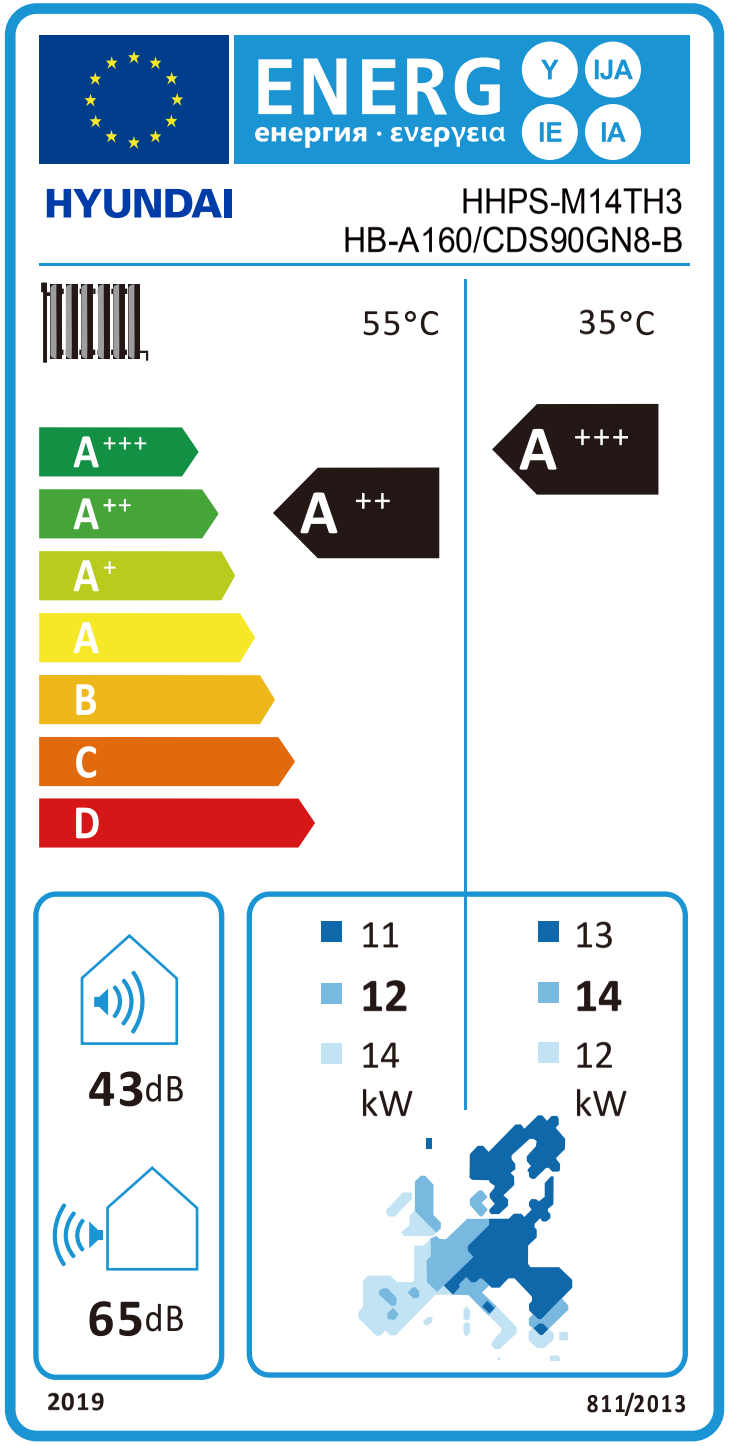
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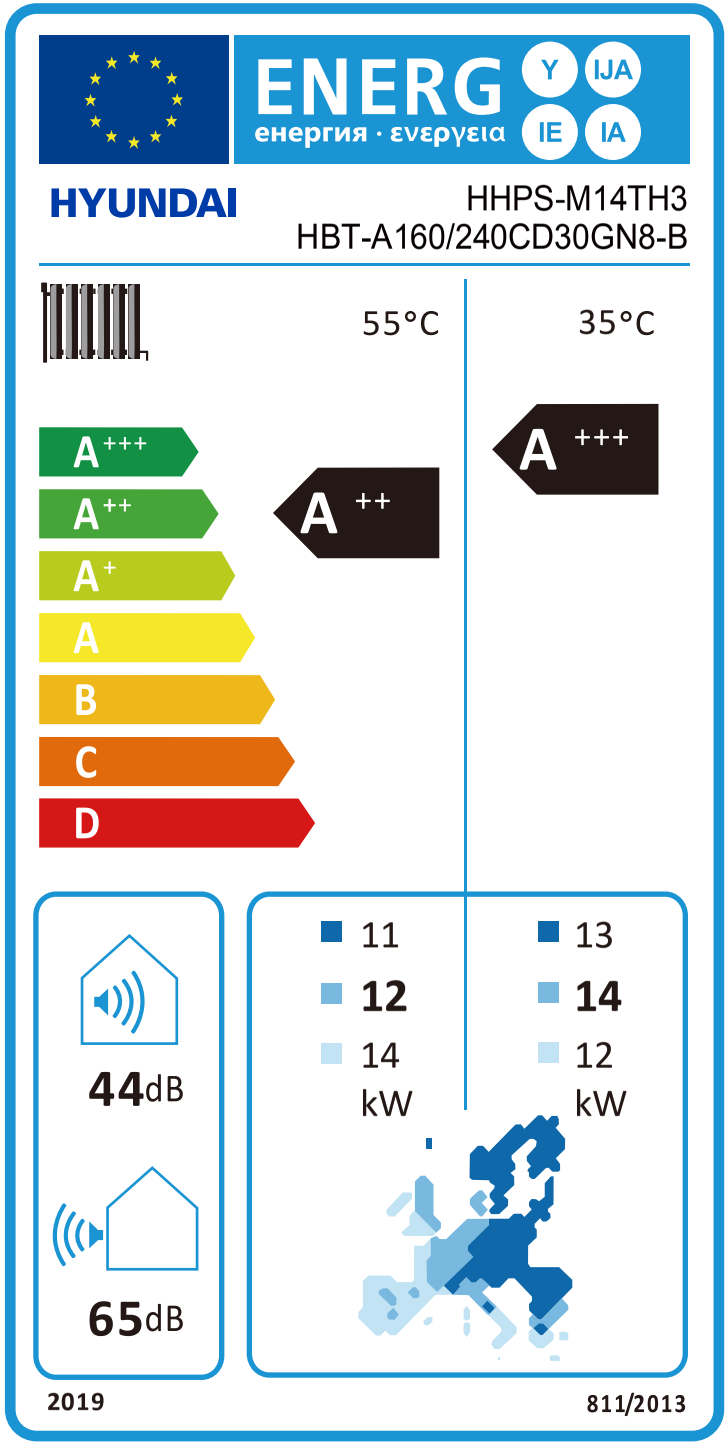
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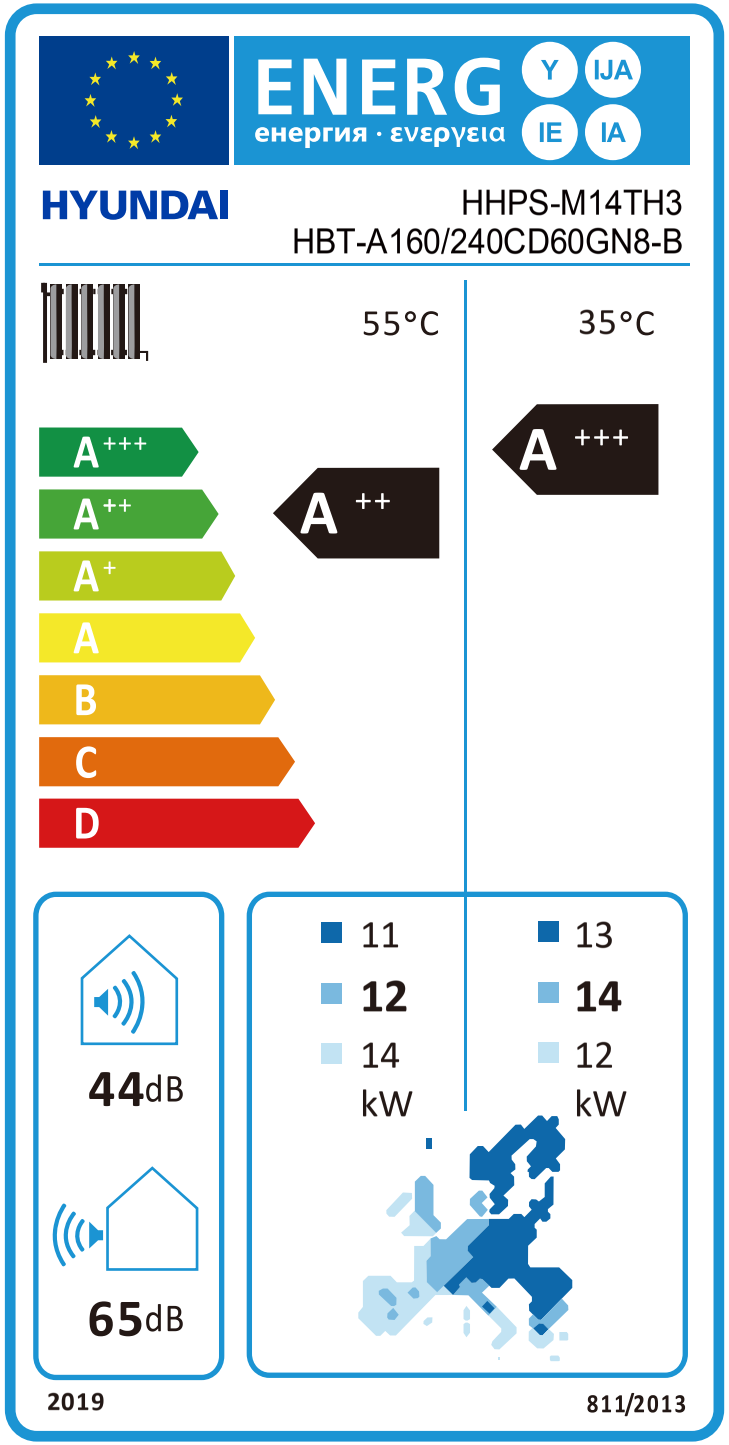
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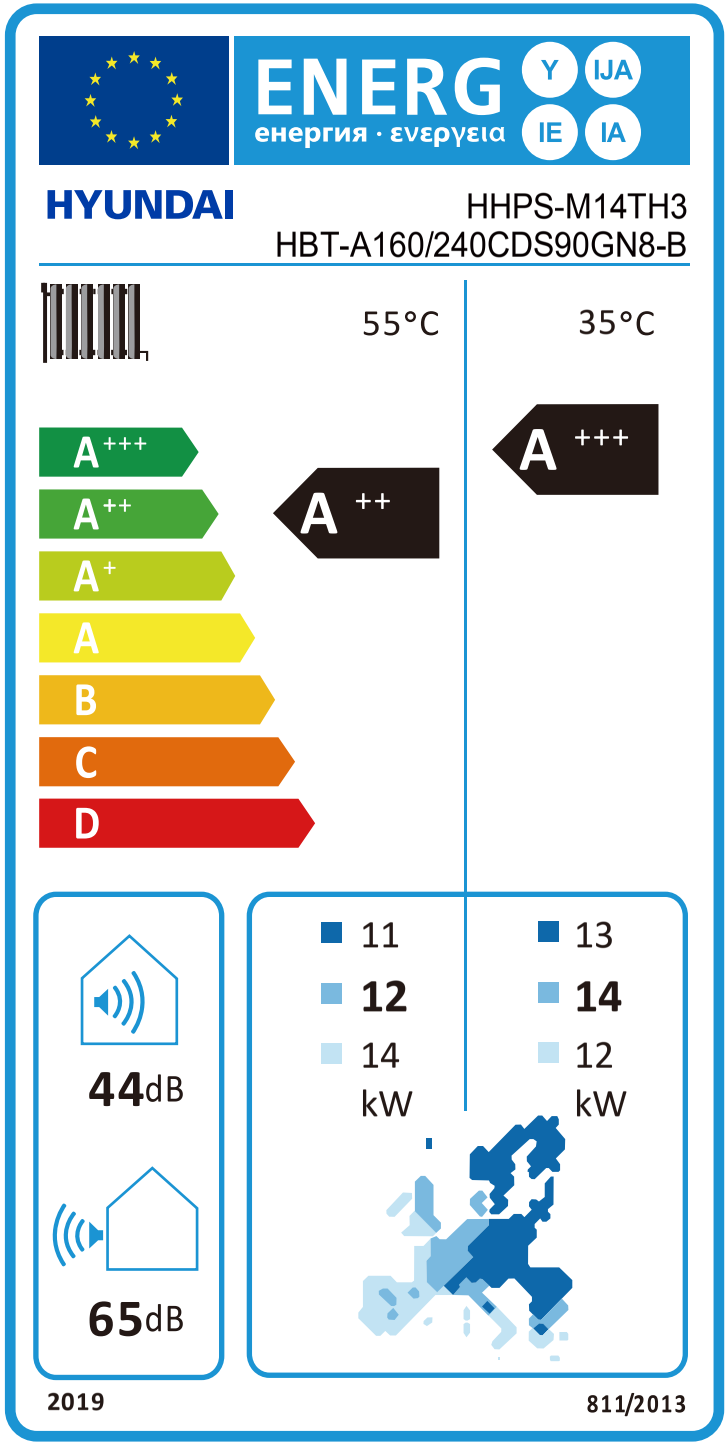
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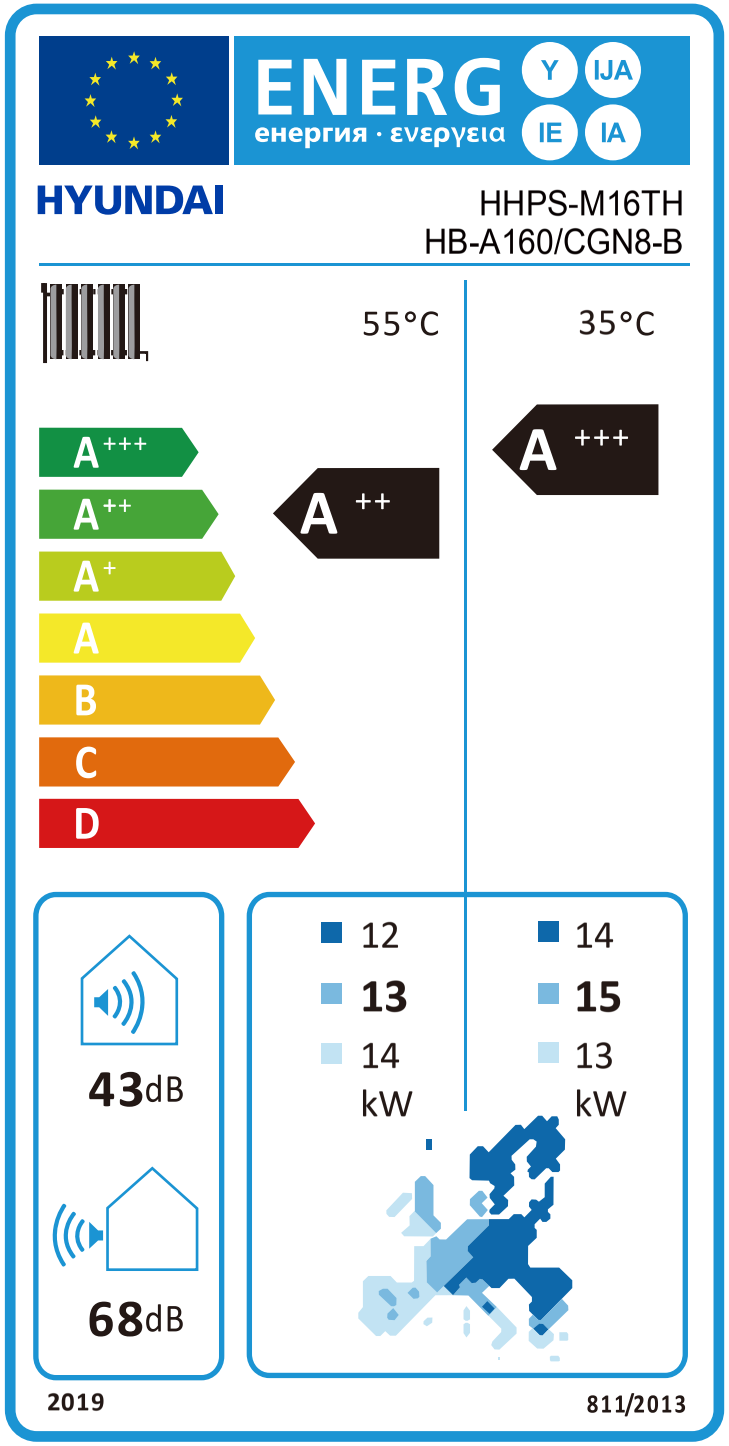
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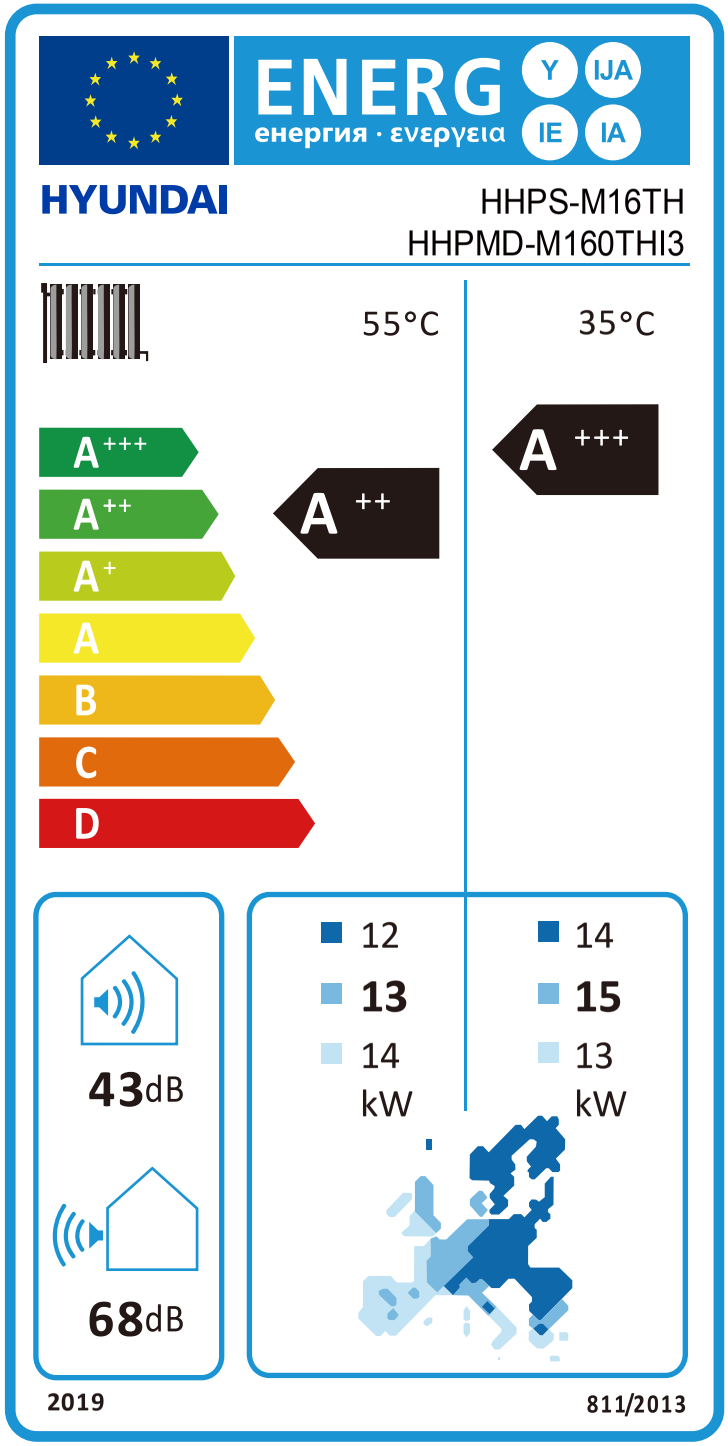
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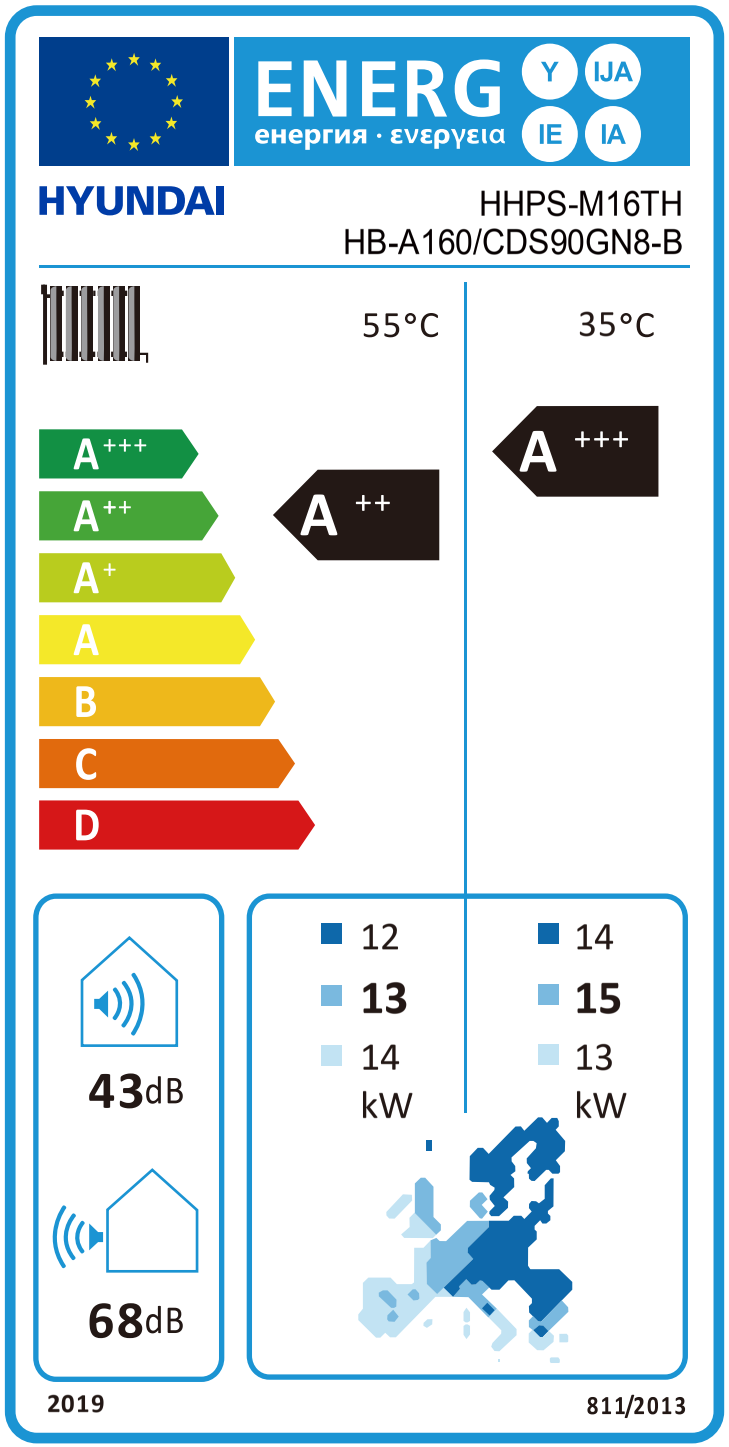
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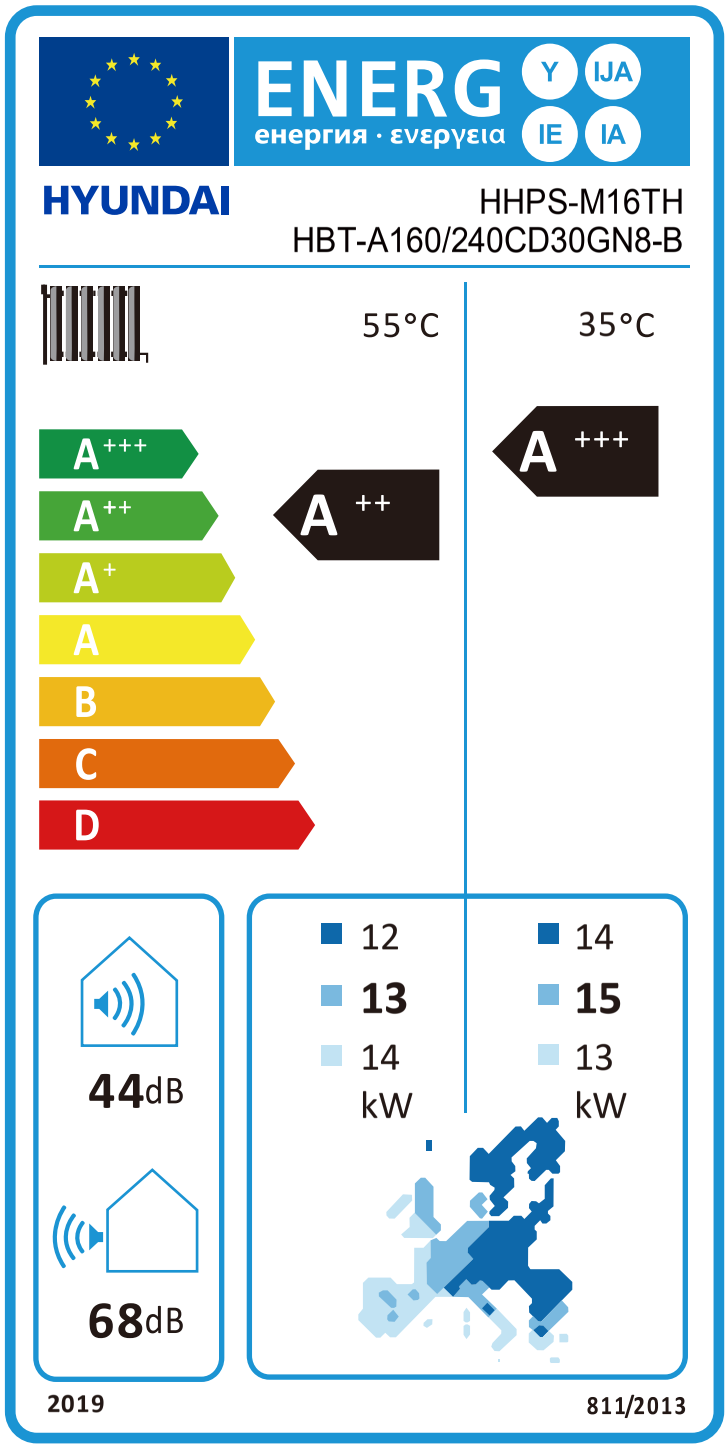
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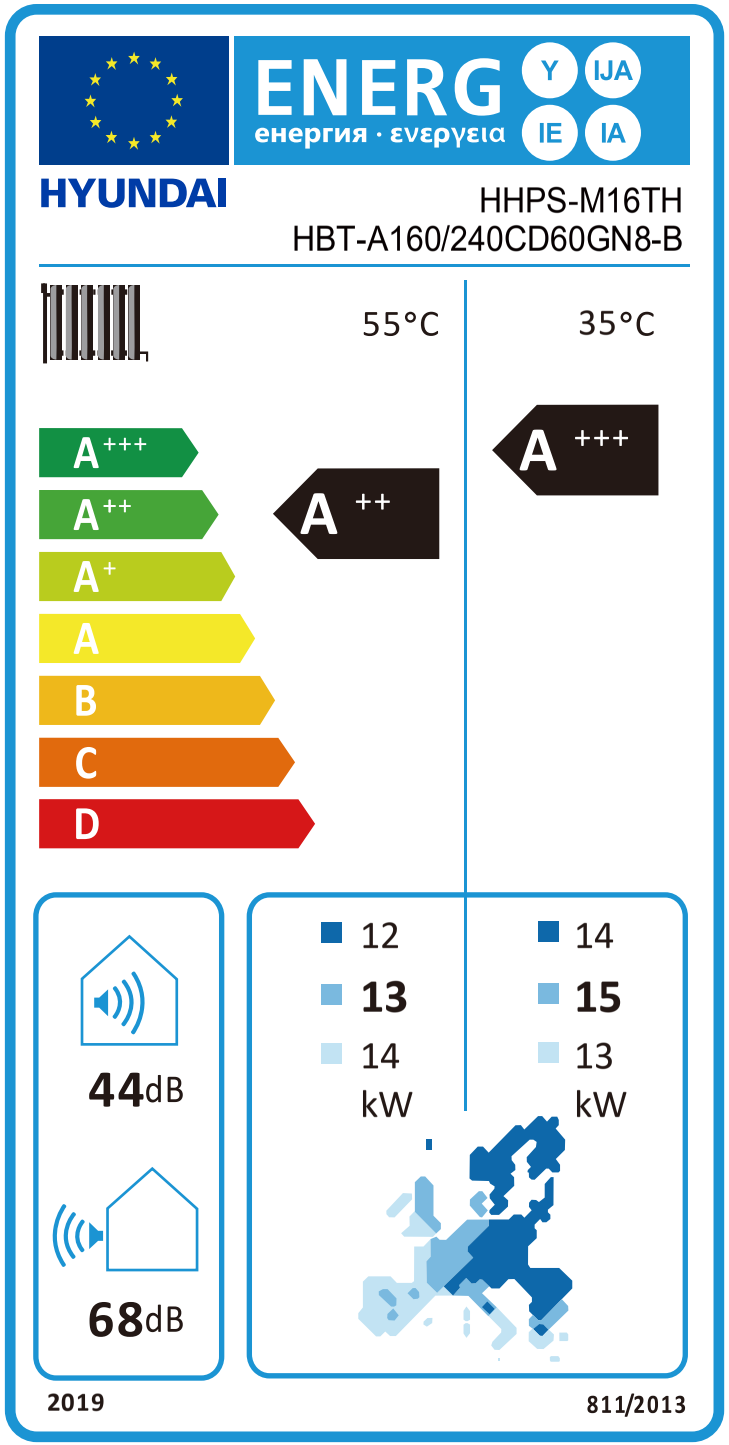
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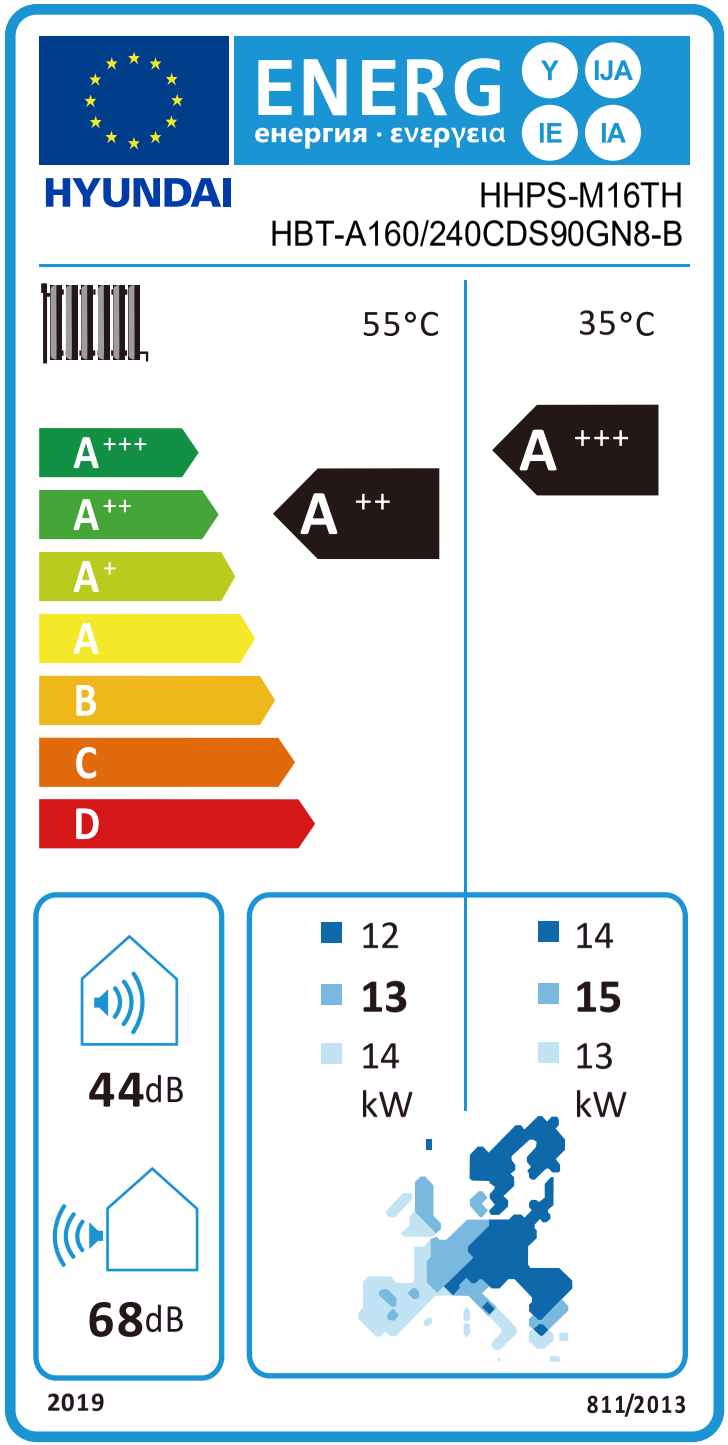
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HHPS-M16TH
HBT-A160/240CDS90GN8-B
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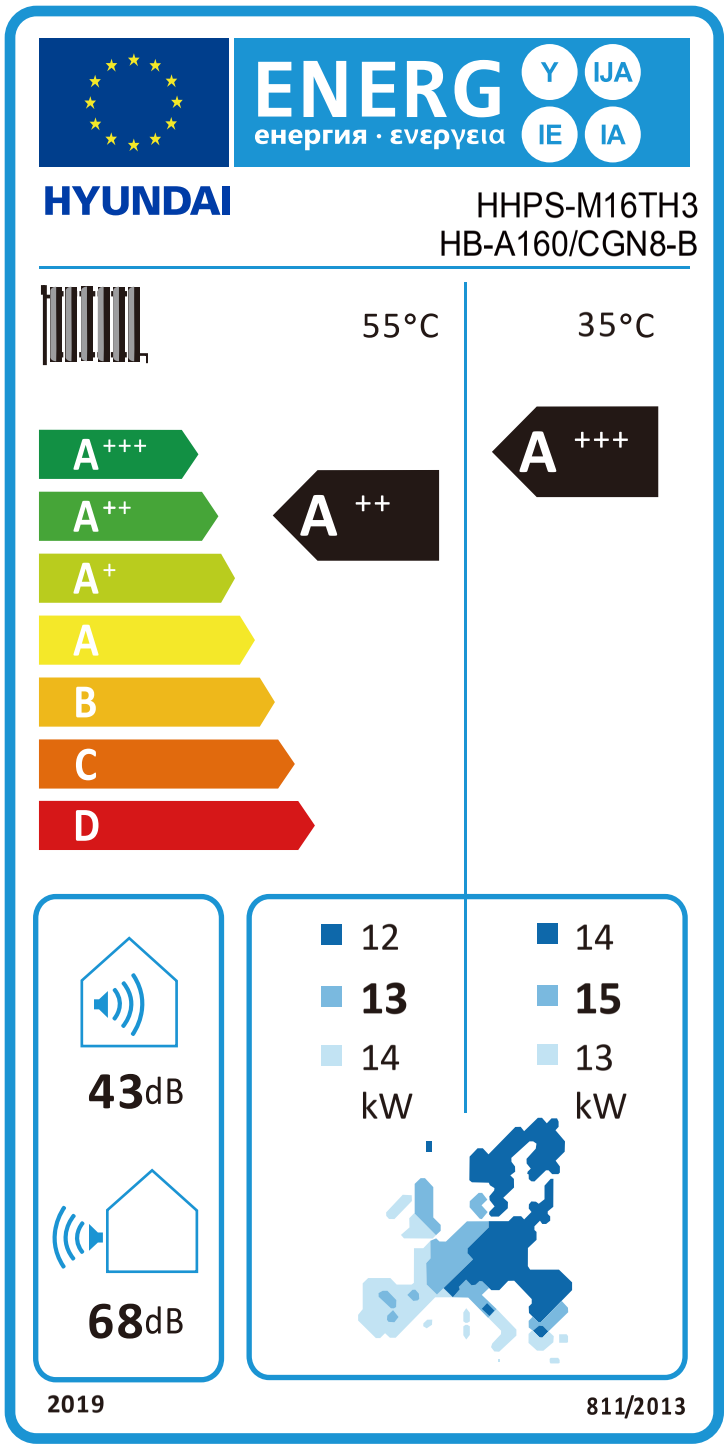
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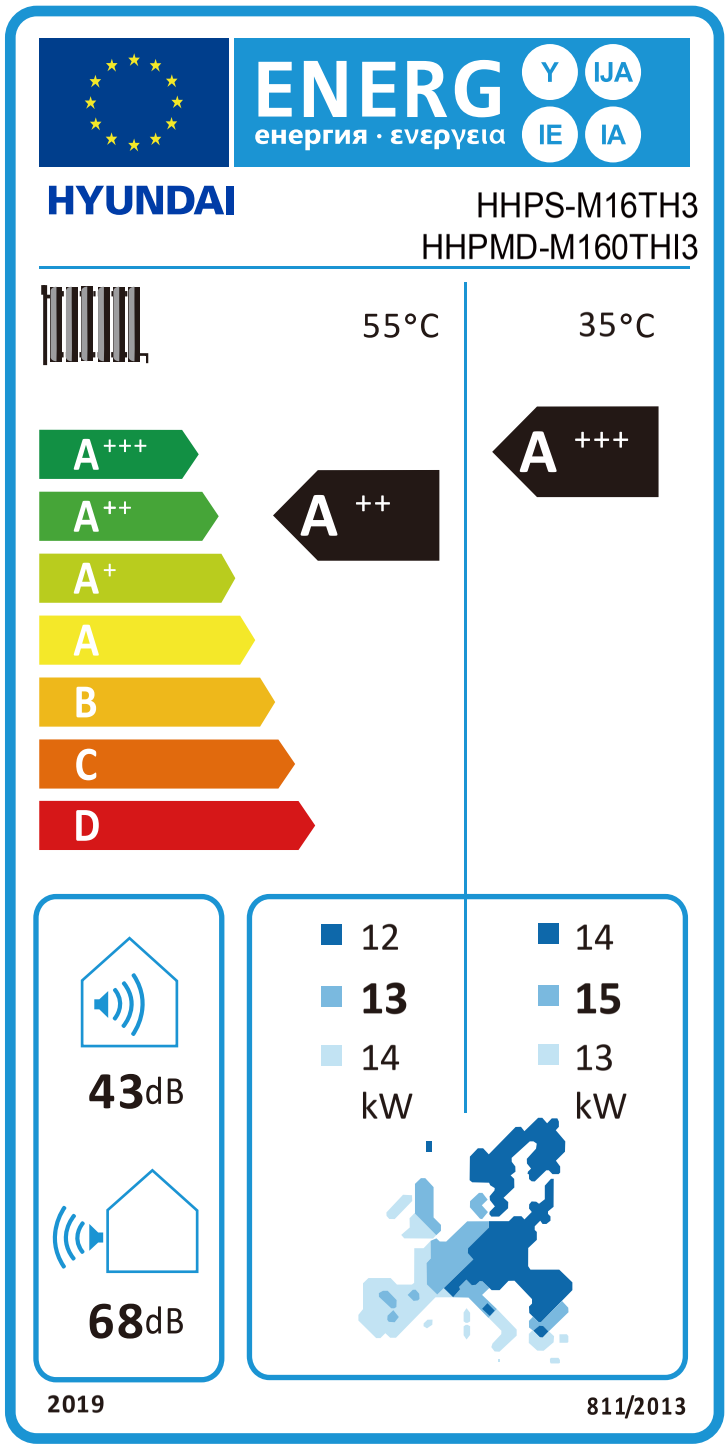
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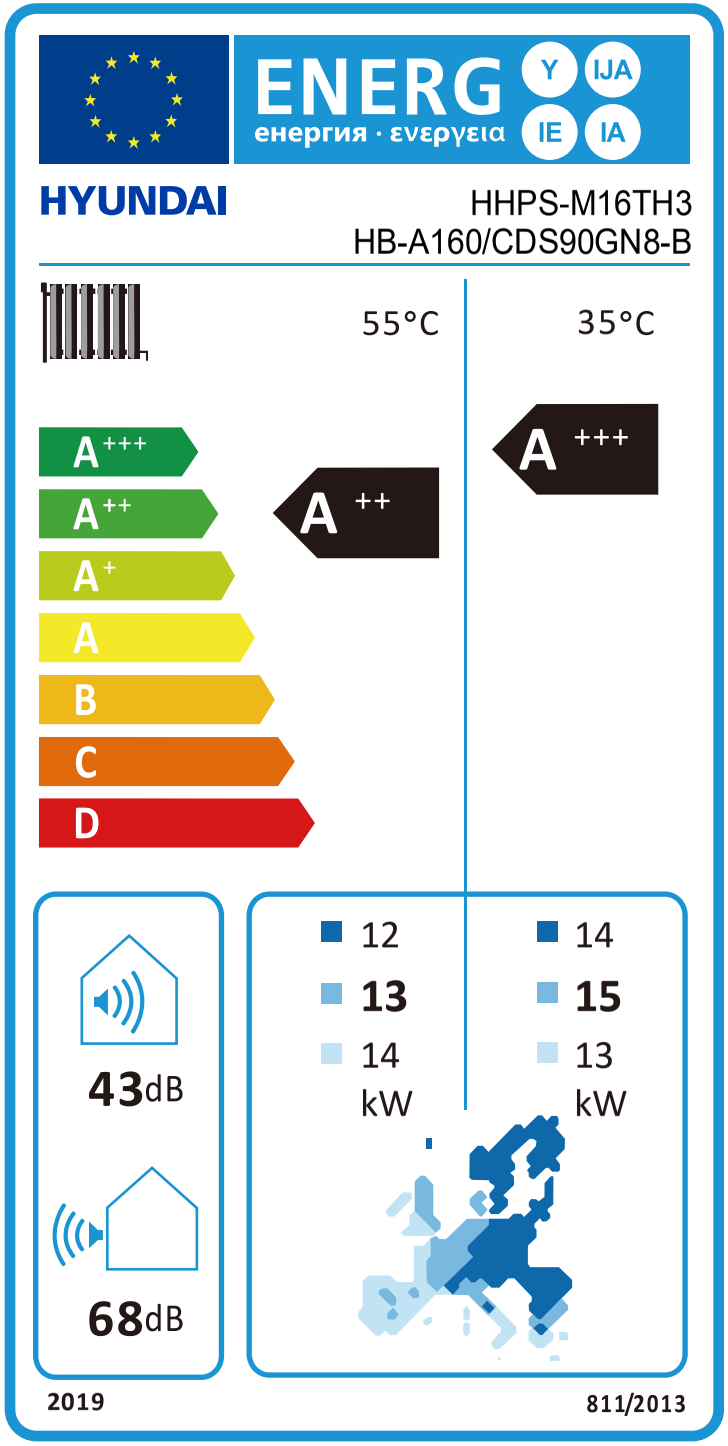
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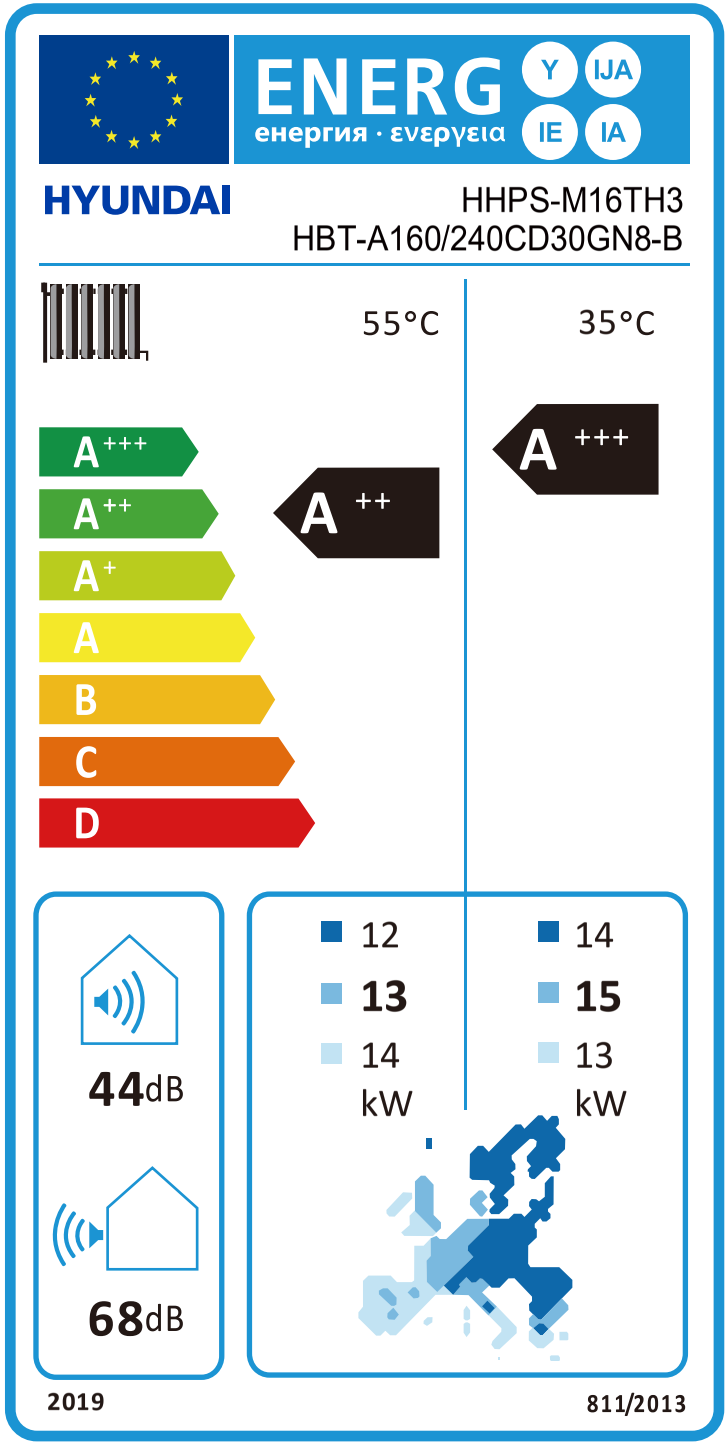
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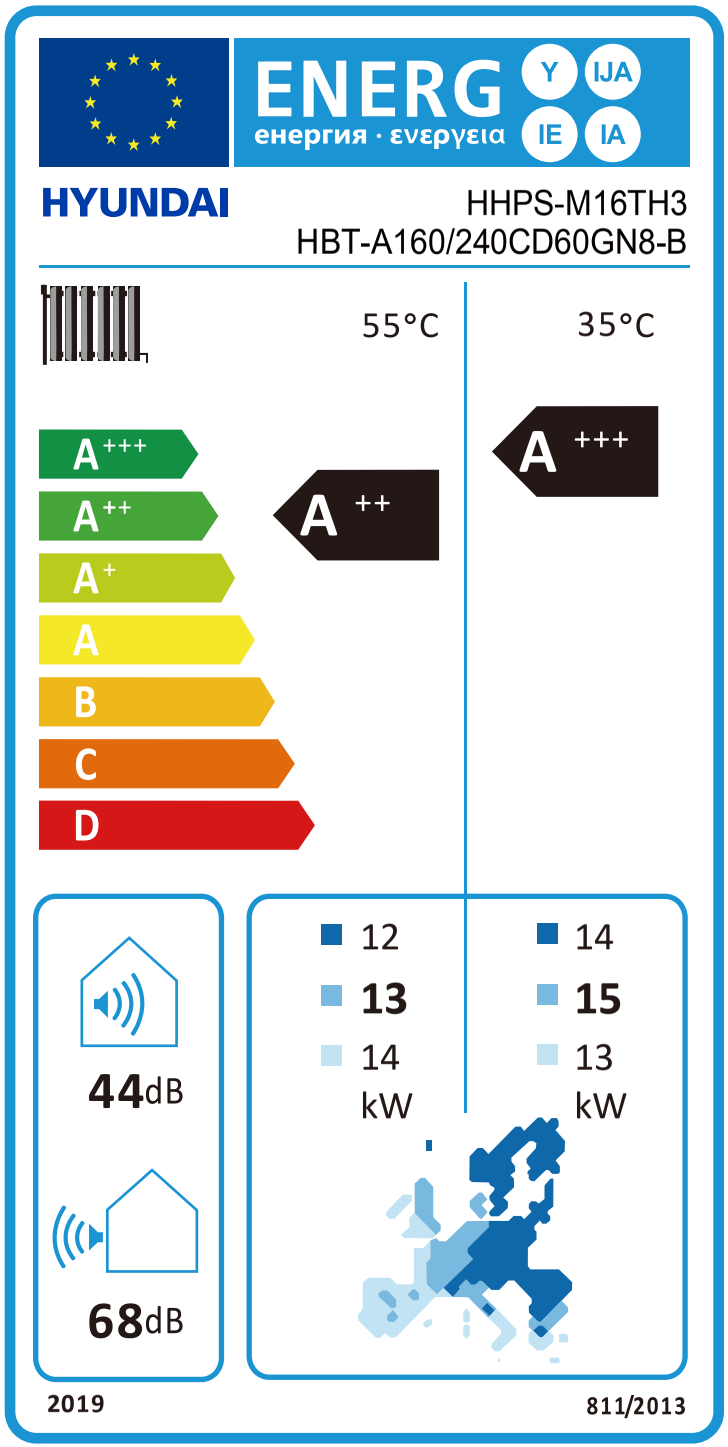
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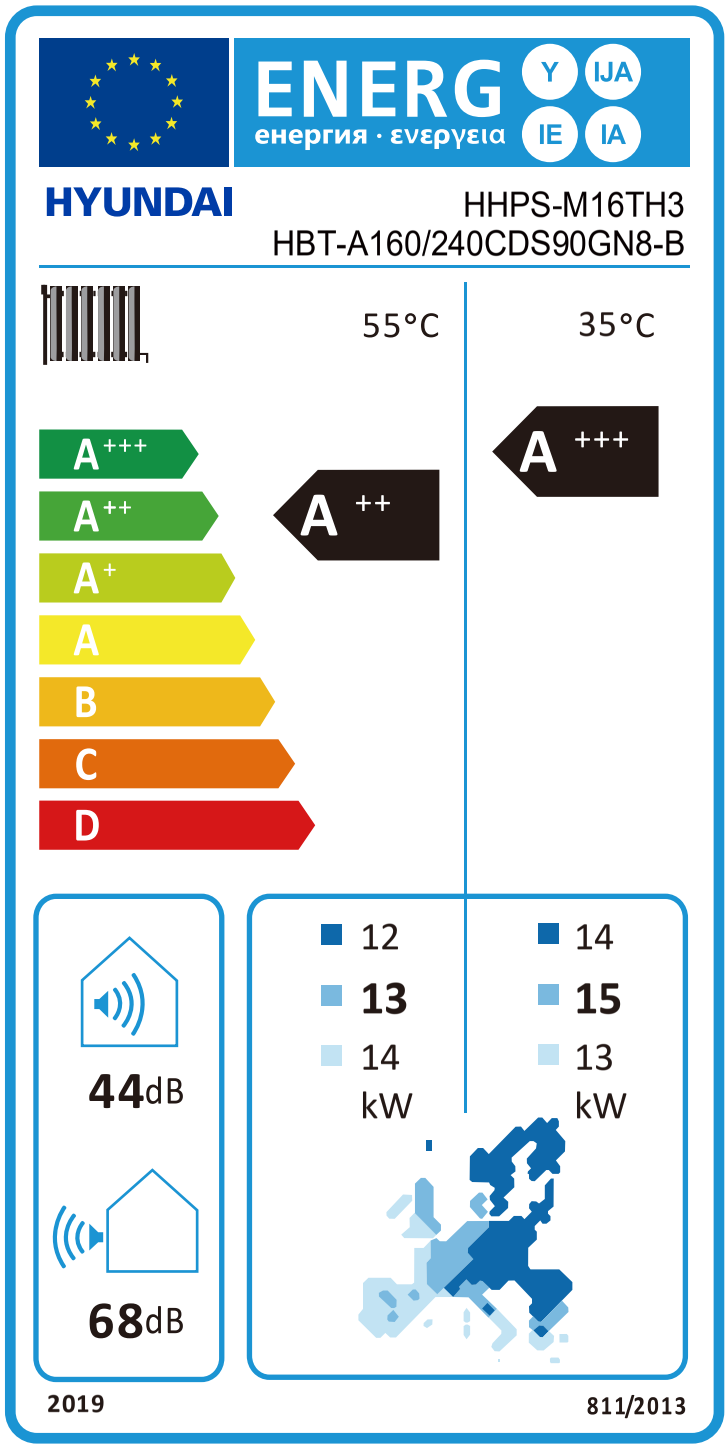
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811/2013

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
HHPS-M4TH	HB-A60/C***GN8-B	4.50	0.81	5.55	4.70	1.36	3.45	4.25	0.82	5.20	4.45	1.10	4.05
	HBT-A100/190CD***GN8-B	4.50	0.81	5.55	4.70	1.36	3.45	4.25	0.82	5.20	4.45	1.10	4.05
	HBT-A100/240CD***GN8-B	4.50	0.81	5.55	4.70	1.36	3.45	4.25	0.82	5.20	4.45	1.10	4.05
HHPS-M6TH	HB-A60/C***GN8-B	6.55	1.34	4.90	7.00	2.33	3.00	6.20	1.24	5.00	5.50	1.39	3.95
	HBT-A100/190CD***GN8-B	6.55	1.34	4.90	7.00	2.33	3.00	6.20	1.24	5.00	5.50	1.39	3.95
	HBT-A100/240CD***GN8-B	6.55	1.34	4.90	7.00	2.33	3.00	6.20	1.24	5.00	5.50	1.39	3.95
HHPS-M8TH	HB-A100/C***GN8-B	8.40	1.66	5.05	7.40	2.19	3.38	8.30	1.60	5.20	7.10	1.73	4.10
	HBT-A100/190CD***GN8-B	8.40	1.66	5.05	7.40	2.19	3.38	8.30	1.60	5.20	7.10	1.73	4.10
	HBT-A100/240CD***GN8-B	8.40	1.66	5.05	7.40	2.19	3.38	8.30	1.60	5.20	7.10	1.73	4.10
HHPS-M10TH	HB-A100/C***GN8-B	10.00	2.08	4.80	8.20	2.48	3.30	10.00	2.00	5.00	8.20	2.02	4.05
	HBT-A100/190CD***GN8-B	10.00	2.08	4.80	8.20	2.48	3.30	10.00	2.00	5.00	8.20	2.02	4.05
	HBT-A100/240CD***GN8-B	10.00	2.08	4.80	8.20	2.48	3.30	10.00	2.00	5.00	8.20	2.02	4.05
HHPS-M12TH	HB-A160/C***GN8-B	12.00	3.00	4.00	11.60	4.22	2.75	12.10	2.44	4.95	9.30	2.35	3.95
	HBT-A160/240CD***GN8-B	12.00	3.00	4.00	11.60	4.22	2.75	12.10	2.44	4.95	9.30	2.35	3.95
HHPS-M12TH3	HB-A160/C***GN8-B	12.00	3.00	4.00	11.60	4.22	2.75	12.10	2.44	4.95	9.30	2.35	3.95
	HBT-A160/240CD***GN8-B	12.00	3.00	4.00	11.60	4.22	2.75	12.10	2.44	4.95	9.30	2.35	3.95
HHPS-M14TH	HB-A160/C***GN8-B	13.50	3.74	3.61	12.70	4.98	2.55	14.50	3.09	4.70	11.40	3.12	3.65
	HBT-A160/240CD***GN8-B	13.50	3.74	3.61	12.70	4.98	2.55	14.50	3.09	4.70	11.40	3.12	3.65
HHPS-M14TH3	HB-A160/C***GN8-B	13.50	3.74	3.61	12.70	4.98	2.55	14.50	3.09	4.70	11.40	3.12	3.65
	HBT-A160/240CD***GN8-B	13.50	3.74	3.61	12.70	4.98	2.55	14.50	3.09	4.70	11.40	3.12	3.65
HHPS-M16TH	HB-A160/C***GN8-B	14.20	3.94	3.61	14.00	5.71	2.45	16.00	3.56	4.50	13.00	3.71	3.50
	HBT-A160/240CD***GN8-B	14.20	3.94	3.61	14.00	5.71	2.45	16.00	3.56	4.50	13.00	3.71	3.50
HHPS-M16TH3	HB-A160/C***GN8-B	14.20	3.94	3.61	14.00	5.71	2.45	16.00	3.56	4.50	13.00	3.71	3.50
	HBT-A160/240CD***GN8-B	14.20	3.94	3.61	14.00	5.71	2.45	16.00	3.56	4.50	13.00	3.71	3.50

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
HHPS-M4TH	HB-A60/C***GN8-B	4.80	1.52	3.15	4.35	1.14	3.80	5.10	1.70	3.00	4.30	1.83	2.35
	HBT-A100/190CD***GN8-B	4.80	1.52	3.15	4.35	1.14	3.80	5.10	1.70	3.00	4.30	1.83	2.35
	HBT-A100/240CD***GN8-B	4.80	1.52	3.15	4.35	1.14	3.80	5.10	1.70	3.00	4.30	1.83	2.35
HHPS-M6TH	HB-A60/C***GN8-B	6.10	2.00	3.05	6.35	1.69	3.75	5.80	1.93	3.00	5.40	2.25	2.40
	HBT-A100/190CD***GN8-B	6.10	2.00	3.05	6.35	1.69	3.75	5.80	1.93	3.00	5.40	2.25	2.40
	HBT-A100/240CD***GN8-B	6.10	2.00	3.05	6.35	1.69	3.75	5.80	1.93	3.00	5.40	2.25	2.40
HHPS-M8TH	HB-A100/C***GN8-B	7.10	2.18	3.25	8.20	2.08	3.95	7.40	2.28	3.25	6.60	2.59	2.55
	HBT-A100/190CD***GN8-B	7.10	2.18	3.25	8.20	2.08	3.95	7.40	2.28	3.25	6.60	2.59	2.55
	HBT-A100/240CD***GN8-B	7.10	2.18	3.25	8.20	2.08	3.95	7.40	2.28	3.25	6.60	2.59	2.55
HHPS-M10TH	HB-A100/C***GN8-B	8.25	2.62	3.15	10.00	2.63	3.80	7.85	2.45	3.20	7.35	2.88	2.55
	HBT-A100/190CD***GN8-B	8.25	2.62	3.15	10.00	2.63	3.80	7.85	2.45	3.20	7.35	2.88	2.55
	HBT-A100/240CD***GN8-B	8.25	2.62	3.15	10.00	2.63	3.80	7.85	2.45	3.20	7.35	2.88	2.55
HHPS-M12TH	HB-A160/C***GN8-B	10.00	3.33	3.00	12.30	3.24	3.80	10.70	3.57	3.00	10.20	4.25	2.40
	HBT-A160/240CD***GN8-B	10.00	3.33	3.00	12.30	3.24	3.80	10.70	3.57	3.00	10.20	4.25	2.40
HHPS-M12TH3	HB-A160/C***GN8-B	10.00	3.33	3.00	12.30	3.24	3.80	10.70	3.57	3.00	10.20	4.25	2.40
	HBT-A160/240CD***GN8-B	10.00	3.33	3.00	12.30	3.24	3.80	10.70	3.57	3.00	10.20	4.25	2.40
HHPS-M14TH	HB-A160/C***GN8-B	12.00	4.29	2.80	14.20	3.89	3.65	11.70	4.09	2.86	11.80	5.02	2.35
	HBT-A160/240CD***GN8-B	12.00	4.29	2.80	14.20	3.89	3.65	11.70	4.09	2.86	11.80	5.02	2.35
HHPS-M14TH3	HB-A160/C***GN8-B	12.00	4.29	2.80	14.20	3.89	3.65	11.70	4.09	2.86	11.80	5.02	2.35
	HBT-A160/240CD***GN8-B	12.00	4.29	2.80	14.20	3.89	3.65	11.70	4.09	2.86	11.80	5.02	2.35
HHPS-M16TH	HB-A160/C***GN8-B	13.30	4.93	2.70	16.00	4.44	3.60	12.80	4.49	2.85	12.90	5.78	2.23
	HBT-A160/240CD***GN8-B	13.30	4.93	2.70	16.00	4.44	3.60	12.80	4.49	2.85	12.90	5.78	2.23
HHPS-M16TH3	HB-A160/C***GN8-B	13.30	4.93	2.70	16.00	4.44	3.60	12.80	4.49	2.85	12.90	5.78	2.23
	HBT-A160/240CD***GN8-B	13.30	4.93	2.70	16.00	4.44	3.60	12.80	4.49	2.85	12.90	5.78	2.23

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
HHPS-M4TH	HB-A60/C***GN8-B	4.40	1.49	2.95	5.10	2.08	2.45	4.00	2.05	1.95
	HBT-A100/190CD***GN8-B	4.40	1.49	2.95	5.10	2.08	2.45	4.00	2.05	1.95
	HBT-A100/240CD***GN8-B	4.40	1.49	2.95	5.10	2.08	2.45	4.00	2.05	1.95
HHPS-M6TH	HB-A60/C***GN8-B	6.00	2.00	3.00	5.65	2.31	2.45	5.15	2.58	2.00
	HBT-A100/190CD***GN8-B	6.00	2.00	3.00	5.65	2.31	2.45	5.15	2.58	2.00
	HBT-A100/240CD***GN8-B	6.00	2.00	3.00	5.65	2.31	2.45	5.15	2.58	2.00
HHPS-M8TH	HB-A100/C***GN8-B	7.50	2.36	3.18	7.10	2.73	2.60	6.15	3.00	2.05
	HBT-A100/190CD***GN8-B	7.50	2.36	3.18	7.10	2.73	2.60	6.15	3.00	2.05
	HBT-A100/240CD***GN8-B	7.50	2.36	3.18	7.10	2.73	2.60	6.15	3.00	2.05
HHPS-M10TH	HB-A100/C***GN8-B	9.50	3.06	3.10	8.10	3.16	2.56	6.85	3.43	2.00
	HBT-A100/190CD***GN8-B	9.50	3.06	3.10	8.10	3.16	2.56	6.85	3.43	2.00
	HBT-A100/240CD***GN8-B	9.50	3.06	3.10	8.10	3.16	2.56	6.85	3.43	2.00
HHPS-M12TH	HB-A160/C***GN8-B	12.00	3.87	3.10	11.40	4.47	2.55	10.00	4.88	2.05
	HBT-A160/240CD***GN8-B	12.00	3.87	3.10	11.40	4.47	2.55	10.00	4.88	2.05
HHPS-M12TH3	HB-A160/C***GN8-B	12.00	3.87	3.10	11.40	4.47	2.55	10.00	4.88	2.05
	HBT-A160/240CD***GN8-B	12.00	3.87	3.10	11.40	4.47	2.55	10.00	4.88	2.05
HHPS-M14TH	HB-A160/C***GN8-B	13.80	4.60	3.00	12.40	5.06	2.45	11.00	5.37	2.05
	HBT-A160/240CD***GN8-B	13.80	4.60	3.00	12.40	5.06	2.45	11.00	5.37	2.05
HHPS-M14TH3	HB-A160/C***GN8-B	13.80	4.60	3.00	12.40	5.06	2.45	11.00	5.37	2.05
	HBT-A160/240CD***GN8-B	13.80	4.60	3.00	12.40	5.06	2.45	11.00	5.37	2.05
HHPS-M16TH	HB-A160/C***GN8-B	16.00	5.52	2.90	13.40	5.58	2.40	12.50	6.19	2.02
	HBT-A160/240CD***GN8-B	16.00	5.52	2.90	13.40	5.58	2.40	12.50	6.19	2.02
HHPS-M16TH3	HB-A160/C***GN8-B	16.00	5.52	2.90	13.40	5.58	2.40	12.50	6.19	2.02
	HBT-A160/240CD***GN8-B	16.00	5.52	2.90	13.40	5.58	2.40	12.50	6.19	2.02

ErP Information

Fan Types	Axial fan		
Directive (or Standard) for Regulation		ErP Directive 2009/125/EC COMMISSION REGULATION (EU) No 327/2011	
Model Name	WZDK170-38G-1+ ZL-580*190*15-3	Rev.	
Prepare by			

Specified Information of Fan:

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

ErP Information

Fan Types	Axial fan		
Directive (or Standard) for Regulation		ErP Directive 2009/125/EC COMMISSION REGULATION (EU) No 327/2011	
Model Name	WZDK170-38G-1+ ZL-580*190*15-3	Rev.	
Prepare by			

Specified Information of Fan:

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

ErP Information

Fan Types	Axial fan		
Directive (or Standard) for Regulation		ErP Directive 2009/125/EC COMMISSION REGULATION (EU) No 327/2011	
Model Name	WZDK170-38G-1+ ZL-580*190*15-3	Rev.	
Prepare by			

Specified Information of Fan:

No.	Information Item	Comment
1	ηtarget =	29.0%
2	Overall efficiency (ηe) =	34.6%
3	Pass or not (Criteria: ηe ≧ηtarget)	Pass
4	Measurement category (A-D)	A
5	Efficiency category (static or total)	Static
6	Efficiency grade at optimum energy efficiency point	N =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

For Inquiries, Please Contact:

Name of company: Alfasol d.o.o.
Address: Ulica kneza Branimira 189, 10040 Zagreb, Croatia
Tel. number: +385 (0)1 292 29 84
E-mail: sales@alfasol.hr
https://www.hyundaiequipment-adria.com

Manufacturer and Importer :
Imported / Distributed by Alfasol d.o.o.

GENUINE PRODUCT OF
HYUNDAI CORPORATION

16125300A15017 V1.2

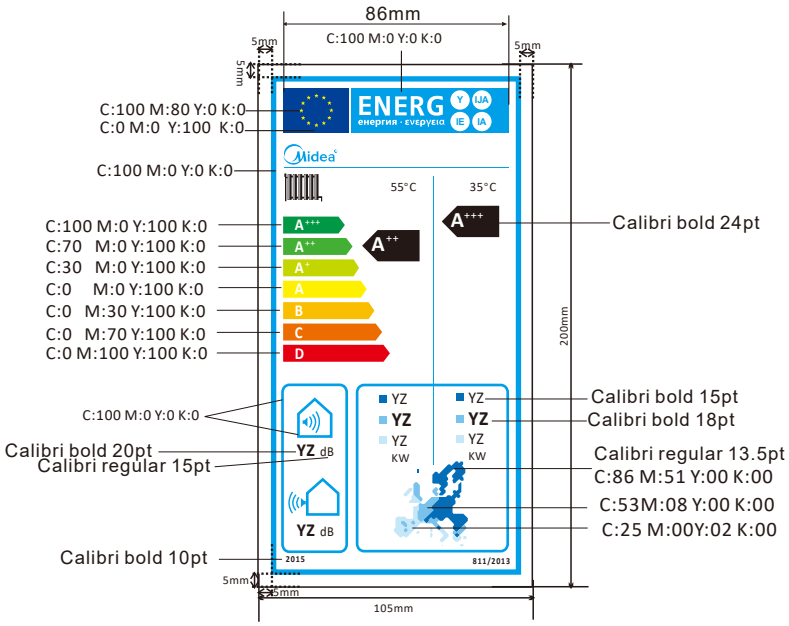
印刷技术要求

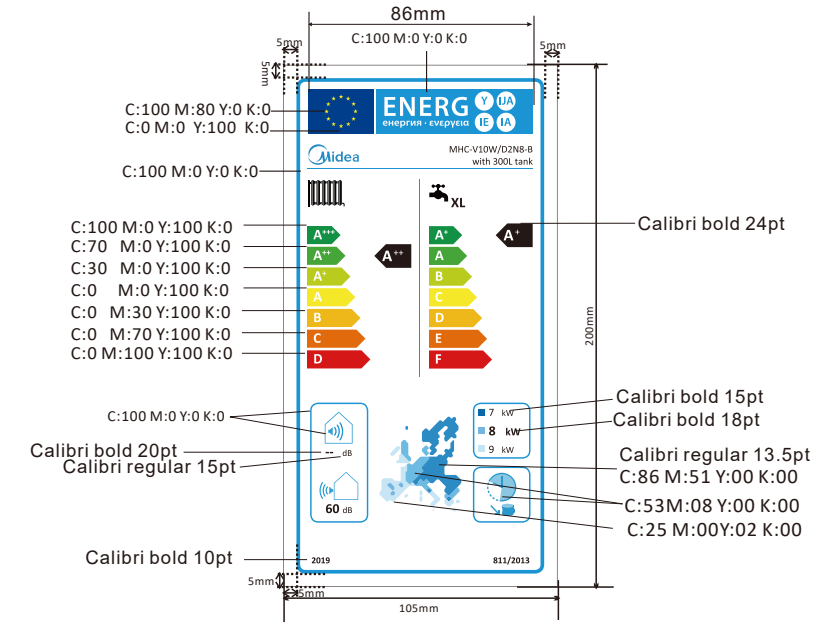
材质	封面封底双胶纸120g，内页80g双胶纸
规格	210*297(胶装，双面打印，沿短边装订)
颜色	彩色
其他	

设计更改记录表（仅做说明用，不做菲林）

版本升级	更改人	更改日期	更改主要内容	涉及更改页面（印刷页码）
V1.0-V1.1	李娟	2023.8.31	封底增加客户联系方式	
V1.1-V1.2	李娟	2024.8.1	随基准升级	

颜色标注, 请参照下图:





商标印刷颜色为 PANTONE 286C

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